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PSYCHOSOCIAL ASSESSMENT AND MANAGEMENT OF
NONORGANIC FAILURE TO THRIVE:
CONSENSUS RECOMMENDATIONS VERSUS ACTUAL PRACTICE
IN A COMMUNITY-BASED HOSPITAL SETTING

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NICHOLAS SALVATORE IALONGO

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PSYCHOSOCIAL ASSESSMENT AND MANAGEMENT OF NONORGANIC FAILURE TO THRIVE: CONSENSUS RECOMMENDATIONS VERSUS ACTUAL PRACTICE IN A COMMUNITY-BASED HOSPTIAL SETTING

By

Nicholas Salvatore Ialongo

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ABSTRACT

PSYCHOSOCIAL ASSESSMENT AND MANAGEMENT OF

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The purpose of the present study was to determine whether the clinical practices of a community-based hospital reflected the consensus in the literature regarding the need to consider psychosocial as well as biomedical factors in the diagnosis and management of nonorganic failure to thrive (NOFT). To that end, the charts of 17 of the 18 infants admitted to the hospital over a one year period for unexplained growth failure were reviewed to assess compliance with the psychosocial components of the Kerr and Kennel (1980) NOFT diagnostic protocol. Also assessed was the match between the psychosocial services provided and the corresponding needs of the 15 infants and families for which the diagnosis of NOFT was confirmed. Psychosocial need was determined by an evaluation consistent with Kerr and Kennel's (1980) NOFT diagnostic protocol. In addition to finding a general failure to comply with the psychosocial components of the Kerr and Kennel model, a relatively poor match was found between psychosocial need and the relevant services provided. Results were consistent with a previous report suggesting that hospital practices may not reflect the consensus in the literature regarding the diagnosis and management of NOFT.

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TABLE OF CONTENTS

LIST OF TABLES

TABLE

LIST OF FIGURES

FIGURE

INTRODUCTION

Nonorganic failure to thrive (NOFT) is a relatively common but serious disturbance in infant physical development that has multiple psychosocial concomitants, sequelae and determinants. Consistent with the biopsychosocial nature of this serious pediatric problem, there is a clear consensus in the literature regarding the necessity of a comprehensive biopsychosocial approach to its diagnosis and management. Yet the results of a recent study (Drotar, Malone, Negray, & Dennestaedt, 1981) raise serious doubts as to whether this consensus is reflected in actual practice. In their retrospective chart review of 30 infants hospitalized for NOFT over a two year period at a university based teaching hospital, Drotar et al. found an almost exclusively biomedical approach to assessment and intervention. Specifically, for nearly two-thirds of the cases reviewed, diagnosis and management consisted soley of the ruling out of organic cause and the provision of nutritional therapy. Drotar et al. (1981) note the importance of further studies to establish the generalizability of their results to community based hospitals, where the majority of NOFT infants are seen. The data presented here address the issue of the of the generalizability of the Drotar et al. findings to community-based settings. The specific questions addressed are: (1) Do community-based hospital practices adequately reflect the consensus in the literature regarding the necessity of considering psychosocial as well as biomedical factors in the diagnosis of NOFT? (2) How effective is the match between

the psychosocial needs of NOFT infants and their families and the services provided in a community-based hospital setting?

LITERATURE REVIEW

Failure to thrive (FTT) is a serious disturbance in infant physical growth, which presents in eighty per cent of cases before the age of 18 months, and accounts for an estimated one per cent of all pediatric hospitalizations (Berwick, 1980; Kotelchuck & Newberger, 1978). Although there are discrepancies in the diagnostic criteria for FTT, the term is typically used to describe infants whose weight is persistently below the third percentile for age on standardized growth charts or less than 85 per cent of ideal weight for age (Barbero & Shaheen, 1967; Berwick, 1980). FTT may also present as acute weight loss or a failure to gain weight with the loss of two or more major percentiles on the growth curve (Bithoney & Rathbun, 1983). In as many as 30 per cent of the cases an organic basis for the infant's growth failure is found (Homer & Ludwig, 1981; Sills, 1978)--with cogenital heart disease, central nervous system defects and malabsorption problems the most common organic causes. However, in the majority of FTT cases an organic etiology will be ruled out after extensive laboratory investigations (Homer & Ludwig, 1981; Sills, 1978). The diagnostic term used to refer to this latter group of infants is nonorganic failure to thrive (NOFT).

NOFT infants are frequently characterized by one or more of the following: food refusal, an atrophied sucking response, spitting up, vomitting, diarrhea, and irritability--especially during feeding. There appear to be a number of age related characterics as well. Among the reported characteristics of NOFT infants less than four months of age are unusual watchfulness, a lack of cuddliness, little

smiling, and few vocalizations, whereas a lack of appropriate stranger anxiety, few vocalizations (with delay in prespeech complex sound utterances), deficiency in motor skill development and extreme passivity have been identified in infants between four and ten months of age (Fischoff, Whitten & Pettit, 1971). It is extremely important to to note that some NOFT infants may not display any of the behavioral disturbances described above, while others may only display some. The severity of the disorder and the particular deficits present will vary for different children and circumstances.

Most NOFT cases show onset during early infancy, and the babies are usually hospitalized between six and 12 months of age--the primary reasons for hospitalization usually being the failure to identify the the cause of and to effectively treat the infant's growth failure on an outpatient basis. More extensive laboratory investigations can be be performed in the hospital. Furthermore, the infant's nutritional deficits can be treated more aggressively--with superalimentation, an important treatment option only available with hospitalization.

Although in as many as ten percent of hospital-admitted NOFT children, the infant will show evidence of fractures and contusions (Bullard, Glaser, Heagarty & Pivchik, 1967), the evidence is not convincing that NOFT is a by-product of battering. Retrospective studies of NOFT chilDen strongly suggest a history of adverse perinatal conditions (Shaheen, Alexander, Truskowsby & Barbero, 1968), but in most cases prior indications of gross neurological and physical abnormalities are absent or unremarkable (Bullard et al., 1967).

Long-term follow-up studies suggest a number of psychological and physical sequelae, including: standardized intelligence-score deficits, poor school performances and a high indidence of socioemotional disorders, and chronic physical illness (Glaser, Heagarty, Bullard & Pivchik, 1968; Elmer, Gregg & Ellison, 1969; Pollitt & Eicher, 1976; Hufton & Oates, 1977). Recently, however, Mitchell, Gorell & Greenberg (1980) presented evidence that runs counter to these findings. The current research on the effects of early adversity on later development (see Rutter, 1981, 1980; Kagan, Kearsley, & Zelazo, 1978; and Clarke and Clarke, 1976) suggests that the reason for this discrepancy may be that Mitchell et al.'s sample differed from those in the above studies in terms of the severity and duration of the insult, the age at which it occurred, and whether subsequent improvements were made in the caregiving environment at a sufficiently early age. None of the above studies, however, provide the necessary data on their samples to verify this hypothesis.

Research and theory on the etiology of NOFT have proceeded at a number of levels. A point of sustained contention at the most basic level has been whether NOFT is the result of inadequate caloric intake (Krieger, 1973; Whitten, Pettit, & Fischoff, 1969) or a neuroendocrine disorder, secondary to emotional deprivation (Gardner, 1972; Powell, Brasel, & Blizzard, 1967). Pollitt and Leibel (1980) recently took the position, however, that these alternative explanations are not mutually exclusive. Their stance is consistent with the theoretical work of Lester (1979) and Rossetti-Ferreira (1978), wherein the physical and psychological deficits associated with early malnutrition are seen to be the result of a synergistic

interplay between nutritional and stimulatory factors. Specifically, Lester (1979) and Rossetti-Ferriera argue that nutritional deficits gradually produce a state of energy deprivation in the infant. Consequently, the infant grows progressively less responsive to the caregiving environment and, in turn, fails to elicit the stimulation and nurturance necessary for adequate physical and psychological development development. Accelerating this process in synergistic fashion is the fact that with with decreased levels of infant activity, energy demands are lowered and, as a result, infant appetite is suppressed.

Martorell (1980) argues that an additional factor, infection, needs to be added to this synergistic equation. He presents evidence that chronic malnutrition adversely affects the immune system, consequently leaving the infant highly susceptible to infection. In turn, infection simultaneously suppresses infant appetite and activity level. Diarrhea, which is a frequent side effect of infection in malnourished infants, further intensifies the nutritional deficits. The addition of infection to the synergistic equation fits in nicely with Homer & Ludwig's (1981) notion of the existence of a subgroup of failure to thrive infants with a mixed organic/nonorganic etiology (Homer & Ludwig, 1981).

The explanation of the occurence of these nutritional and stimulatory deficits has been the subject of research and theory at a second level of analysis. Here, too, a unifactor model of causation has been superceded by an interactional one. This transition is consistent with evolving developmental theory and the empirical evidence supporting a multifactor, interactional theory of child development (see Sameroff & Chandler, 1975). Indeed, the view that these nutritional and stimulatory deficits are solely the result of parent psychopathology

(Fischoff, Whitten, & Pettit, 1971; Kerr, Bogues, & Kerr, 1968; Glaser, Heagarty, & Pivchik, 1966; Elmer, 1960) is no longer considered to have merit. The current view holds that these deficits are the result of a complex interplay of factors operating at the levels of the individual parent and child, the family, the community, and the culture (Vietze, Sherrod, Falsey, O'Connor, & Altemeier, 1980; Belsky, 1980; Parke & Lewis, 1981). In this view, interactions are seen as occurring across, as well as within levels. Furthermore, it is not necessary that deficits be present in all of these areas for NOFT to occur; as the equation may differ in each family in terms of the number, type and severity of the deficits present. Figure 1, (adapted from Parke & Lewis, 1981) provides a schematic overview of this model.

This current view of the etiology of NOFT is reflected in the treatment literature where a clear consensus exists as to the necessity of a multifactor, biopsychosocial approach to diagnosis and management (Bithoney & Rathburn,1983; Berwick, Levy, & Kleienerman, 1982; Moore, 1982; Berwick, 1980; Cupoli, Hallock, & Barness, 1980; Frailberg, 1980; Kleinberg, 1980; Drotar, Malone, & Negray, 1979; Roberts & Homer, 1979; Sills, 1978; Garfunkel, 1977; Paulsen,1976). Commonly agreed upon areas for psychosocial assessment and intervention--consistent with the model described in Figure 1--include infant cognitive and socioemotional development, infant temperament and feeding behavior, the parent-child interaction, parenting skills, parent psychopathology, family functioning, family and life stresses, and the availability and utilization of family and community support

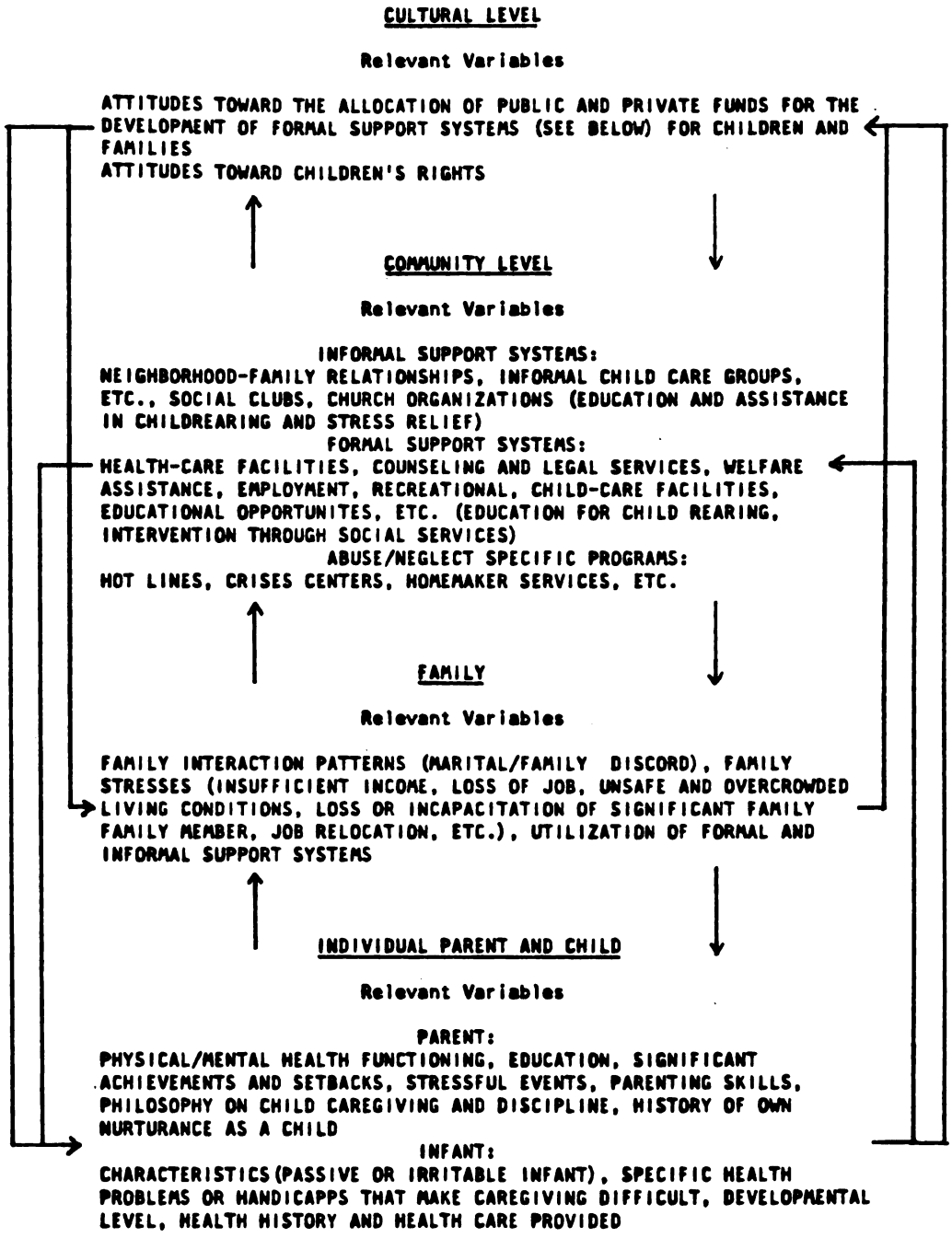

Figure 1. A multilevel, interactional model of NOFT

systems. Biomedical aspects of diagnosis and care include the ruling out of an organic basis for the infant's growth failure, the provision of nutritional therapy, and the treatment of any accompanying infections or other physical illnesses. It is generally recognized in the literature that the potentially wide range of biomedical and psychosocial needs in NOFT cases often necessitates a multidisciplinary approach to diagnosis and treatment. And in accord with the Joint Commission on Accreditation of Hospitals (1982, in Mickel, 1982), it is the responsibility of the primary care physician (PCP) to carry out a preliminary assessment of infant and family needs, and to order the necessary consults with or referrals to the appropriate health and social service providers for further assessment and/or treatment.

Despite this clear consensus regarding the diagnosis and treatment of NOFT, Drotar, Malone, Negray, & Dennestaedt (1981), in a retrospective chart review of 30 infants hospitalized for NOFT over a two-year period at a university based teaching hospital, found an almost exclusively biomedical approach to assessment and intervention. Specifically, for nearly two-thirds of the cases reviewed, diagnosis and management consisted soley of the ruling out of organic cause and the provision of nutritional therapy. Drotar et al. argue that their findings are attributible, in large part, to the well documented inadequacies in physician psychosocial training (Fischler, 1983; Friedman, Philips, & Parrish, 1983; Poole, 1983; Jewett, Greenberg, Champion, Gluck, Leikin, Altieri, & Lipnic, 1982; Jones, Badger, Parlour, & Coggins, 1982; Poole, Morrison, Adolf, & Reed, 1982; Cassata & Kirkman-Liff, 1981; National Institute of Medicine, 1980; American Academy of Pediatrics, 1978) and practice

(Cassata & Kirkman-Liff, 1981; Hesbacher, Rickels, Morris, Newman, & Rosenfeld, 1980; Jacobsen, Goldberg, Burns, Hoeper, Hankin, & Hewitt, 1980; Noren, Frazier, Altman, & DeLozier, 1980; Rieger, 1980; Goldberg, Reiger, McInerny, Pless, & Roghman, 1979; Goldberg, Babigan, Locke, & Rosen, 1978; Drotar & Malone, 1982; Lewis, 1978) and the almost exclusively biomedical model upon which physician training and practice is based (Schwartz, 1983; Engel, 1980, 1977). An obvious and important implication of Drotar et al's arguement is that their findings may be generlizable to other hospital setting, including community-based settings in which the majority of NOFT infants are seen. Drotar et al. note the importance, however, of further empirical studies to establish the generalizability of their results to community-based hospitals. The data presented here address this important issue. The specific questions addressed are: (1) Do community-based hospital practices adequately reflect the consensus in the literature regarding the necessity of considering psychosocial as well as biomedical factors in the diagnosis of NOFT? (2) How effective is the match between the psychosocial needs of NOFT infants and their families and the services provided in a community based hospital setting?

Kerr and Kennel's (1980) protocol for the diagnosis of NOFT serves as the standard for evaluating hospital psychosocial assessment practices and as a guide for collecting data on infant and family psychosocial functioning relevant to treatment. The Kerr and Kennel protocol is the only one of its kind to be published in the last five years and is the product of a comprehensive review of the current treatment literature--representing the consensus in that

literature as to the appropriate areas for NOFT assessment and intervention. The protocol specifies the biomedical and psychosocial procedures to be performed and the data to be collected in investigations of unexplained infant growth failure. In the current study, the charts of infants hospitalized for an investigation of growth failure were reviewed to determine whether the psychosocial procedures specified in the Kerr and Kennel protocol were performed by hospital staff and the appropriate data collected. Furthermore, in order to address the question of the match between psychosocial need and the relevant services provided, psychosocial assessments consistent with the Kerr and Kennel protocol were carried out for all infants and families in which the diagnosis of NOFT was confirmed. Data on the psychosocial services provided were then extracted from infant charts.

In contrast to the retrospective methodology employed by Drotar et al., charts were reviewed concurrent with an infant's hosptial stay or immediately thereafter. The advantage in employing a concurrent methodology is that confirmation by physicians and parents of the accuracy and completeness of medical charts is much more readily obtained and less subject to the effects of memory loss.

METHOD

Subjects

Conceptually, the present study was divided into two phases--with the criteria for subject selection varying by phase. In the first phase--wherein compliance with the Kerr and Kennell (1980) diagnostic model was assessed--the selection criteria were as follows: (1) An admitting diagnosis of failure to thrive without apparent cause, as confirmed by the attending physician; (2) A rate of growth since birth of weight relative to height at or below the tenth percentile on National Center for Health Statistics growth charts; and (3) An age between one and 24 months. Eighteen infants meeting this criteria were admitted to the unit over the year long course of the study. Seventeen of the 18 infants and their mothers participated in the study. One mother refused to take part. Although the number of subjects was small, the fact that these 17 infants represented all but one of the admissions for FTT over an extensive period of time strongly suggests that a representative sample of hospital practices was obtained.

Selection criteria for the second phase of the study included those outlined for the first phase and the additional criterion that organic causality was ruled out by the attending physician. This additional criterion was consistent with the question posed in the second phase of the study: Where the diagnosis of NOFT is confirmed, how effective is the match between the psychosocial needs of these infants and their families and the services provided? Fifteen of the 17 infants included in the first phase met this additional

criterion, and as such, were included in the second phase of the study. These 15 infants ranged in age from one to 23 months, with only two of them beyond 12 months of age. Six of the infants were white. Eight were black. One was mulatto. Only two of the mothers reported not having finished high school--with one completing the tenth grade and the other the 11th before leaving school. One mother reported having a year of business college. Fourteen of the 15 families were on some sort of public assistance, either welfare or unemployment. Six of the mothers were single parents, whereas nine reported having a live-in mate.

Setting

The regional pediatric care unit of a community based, teaching hospital was the setting for the present study. Although located in a midwestern city of 150,000, the unit serves a mixed urban/surburban/rural population of 500,000, which includes a large indigent population.

Measures

Listed below are the psychosocial proceedures specified in the Kerr and Kennel protocol and the data to be collected.

A. Observations of parent-infant interaction
   1. Inadequate affectional bonds
   2. Conflict and tension during feeding
B. Psychosocial history
   1. Personality characteristics of parents
      A. Depression
      B. Preoccupation with own needs
      C. Hostile
      D. Overburdened and unable to cope

2. History of the early nurturing of the parents
   A. Perceptions of family conflict
   B. Separation from their parents
3. Family adaptation to stress
   A. Financial crises--unemployment
   B. Marriage conflicts
   C. Conflicts with the extended family
   D. Substance abuse in the family
4. Resources available to parents
   A. Spouse
   B. Friends, neighborhoods, organizations
   C. Health care facilities, health workers

C. Developmental testing

Described below are the measures used to assess the areas of infant and family functioning specified in the Kerr and Kennel protocol.

Observations of Parent-Infant Interaction

Barnard and Eyres' (1978) nursing child assessment feeding scale (NCAFS) was used to assess infant and maternal interactional skills during a feeding. For each feeding observation, 21 seven-point scales (11 maternal and 10 infant scales) are scored, with the midpoint representing usual or expected behavior. The scales describe the ways the mother sets up the environment for feeding, the attentiveness of distractability of the mother and infant, the modes of stimulation and response used, the mood, tension, and irritability of the mother and baby, and the give and take of control of the interaction.

The 21 scales are reduced to a single feeding score for the mother and one for the infant at each data point by first "folding" each scale so that optimum behavior is scored highest, and any deviation from the optimal is scored lower, and then summing these scores across all scales for each participant. The mother's feeding score describes her sensivitity and adaptability to the infant; the infant's feeding score describes its adaptability and responsiveness. The scale was standardized on a sample of 193 "...basically healthy working class and middle class mothers and their infants" (Bee, Barnard, Eyres, Gray, Hammond, Speitz, Snyder, & Clark, 1982). Cronbach's alpha for the total mother score in the Bee et al. study was .86 when the infant was four months old and .80 when the infant was twelve months of age; for the infant scores, alpha was .70 and .67 at the same two ages.

Training in the use of the NCAFS consisted of having the observers jointly score a series of videotaped feeding interactions. Disagreements were discussed until a consensus was reached, which was consistent with the NCAFS training manual. To be judged competent in the use of the scale, each of the raters needed to achieve 80 per cent agreement within one point with the other trainees across the 21 items making up the scale over three consecutive observations. These observations were scored independently and percent agreement was calculated prior to any discussion of disagreements. The formula used was the number of agreements divided by the number of agreements plus the number of disagreements.

Psychosocial History

Altemeier et al.'s Maternal History Interview (MHI) was converted to a multiple choice format for use in the present study. The conversion obviated the need for extensive interviewer training and eliminated the the interviewer as a potential source of error. Although it's likely a greater amount of information may have been obtained with the use of the interview format, the limited resources available to the author in in terms of time, funding, and personnel made the conversion to the multiple choice format a necessity. The answers used in this adaptation of the MHI were the responses of the Altemeier et al.'s standardization sample of 1,400 prospective mothers, attending a prenatal clinic for low income families in Nashville, Tennessee. Neither the questions nor the system for scoring the scale were changed. The scale assesses nine areas found in the literature to be associated with the occurrence of NOFT as well as abuse and neglect. These eight areas are: mother's perception of her nurture as a child; personality factors of self-image, isolation, and tolerance to stress; social support available from others; positive and negative feelings about her pregnancy; knowledge of parent skills and philosophy about discipline; alcohol, drug and health problems found in the family; marital conflict and/or conflict with the extended family; life stresses. Altemeier et al. assigned a score to each response based upon arbitrary estimates of the degree of impairment or dysfunction reflected in the answer. Item scores are added within categories to yield eight subscale raw scores. These raw scores are then converted to standard scores. A score above the 95th percentile on any two of the eight subscales, above the 99th percentile

on one of the eight, or if the mean of all eight percentiles is above 75, indicates the presence of significant impairment or dysfunction. Using this system, Altemeier et al. accurately classified 79 percent of the cases where NOFT, abuse, or neglect occurred. Altemeier et al. state that per cent agreement between interviewers during the piloting of the scale was at or above 90 percent. No other data are available on the psychometric properties of the MHI. [Note as the MHI was converted to a questionnarie format by the author, it will be referred to henceforth as the Maternal History Questionnaire (MHQ).]

Developmental Testing

The Bayley Scales of Infant Development (Bayley, 1969) were used to assess infant mental and motor development. A pediatric psychologist trained the research assistants in their use. To be judged competent to administer the scales, a trainee needed to correctly administer and score 95 per cent of the items over three consecutive testings. The pediatric psychologist was present during all testings, judging the correctness of the administration and scoring of the items.

Procedure

The charts of new admittees to the unit were scanned on a daily basis to identify potential subjects for the study. Upon discovering an admittee who met the study criteria, the attending physician was contacted to confirm the admitting diagnosis and to obtain consent to approach the infant's parents regarding participation in the study. When the admitting diagnosis was confirmed and physician consent

obtained, the infant's mother was contacted and provided a written and verbal explanation of the study. Mothers wishing to participate were then asked to sign the informed consent forms. Following a successful recruitment effort, arrangements were made to carry out an assessment of infant and family psychosocial needs, based on the Kerr & Kennel protocol. Times were scheduled with the mother for the completion of the MHQ, an observation of the mother-infant interaction during feeding and the administration of the Bayley scales.

In all but one case, the above procedures were carried out during the infant's hospital stay. Regarding the one exception, the infant was released from the hospital before the above procedures could be carried out. The assessment was then performed in the infant's home approximately 48 hours after his release from the hospital.

The observation of the parent-child interaction during feeding was arranged to coincide with a regularly scheduled feeding. Mothers were simply told to ignore the observer present and to feed their infant as normally would. The observer sat facing the mother, approximately six feet away. The parent-child observation was scored by the observer immediately after its completion.

At, or shortly after the subject's discharge from the hospital, infants' charts were reviewed to determine the psychosocial services provided and compliance with the psychosocial specifications of the Kerr & Kennel protocol. Following this, the attending physician was contacted to confirm the diagnosis at discharge and the accuracy and completeness of chart notes regarding the diagnostic procedures employed and the treatment provided and/or treatment recommendations made. Subjects' mothers' were also contacted to verify the treatment provided and/or the treatment

recommendations made. In addition, mothers were asked if hospital personnel performed testing and observations similar to those performed by the research team.

RESULTS

Relative to the initial phase of the study and the assessment of compliance with the psychosocial specifications of the Kerr and Kennel diagnostic protocol, no evidence was found in the 17 charts reviewed that developmental testing or mother-infant observations were performed. (Chart notes, however, did indicate that in nine of the 17 cases observations were made of the quality of infant interactions with hospital personnel during routine caregiving and the provision of medical care.) Finally, only five of the charts reviewed contained evidence that a psychosocial history was taken. In each case, the history was taken by a member of the hosptial's pediatric social work staff, upon order of the attending physician. The worker who took the history was contacted in all five cases to determine whether the areas specified in the Kerr and Kennel model were covered The results of these queries suggested the following areas were assessed: family adaptation to stress and the social support available. However, since a formal protocol was not used in taking these histories, this finding must be interpreted cautiously. The results of this first phase of the study are summarized in Table 1. The accuracy of chart notes were confirmed in each case by the attending physician as well as by the 11 mothers able to be reached.

Regarding the psychosocial assessments of the 15 confirmed cases of NOFT, data relevant to all three areas of the assessment--psychosocial history, developmental level, mother and infant interactional skills--were obtained in only 8 of the 15 cases. However, data relevant to at

Table 1. Hospital Compliance with Procedures Specified in Kerr & Kennel's (1980) Protocol

SUBJECT * NAME	MOTHER/CHILD OBSERVATION	PSYCHOSOCIAL HISTORY	DEVELOPMENTAL TESTING
Lisa	No	Yes	No
Susan	No	Yes	No
Fred	No	No	No
Jimmy	No	Yes	No
Art	No	No	No
Billy	No	No	No
Carla	No	Yes	No
Mary	No	No	No
Kurt	No	No	No
Jerry	No	No	No
Oscar	No	No	No
Tommy	No	Yes	No
Paul	No	No	No
Jane	No	No	No
Ellen	No	No	No
Jill	No	No	No
Becky	No	No	No

* Fictious names are used

least one of these areas was collected for all 15 infants. As to the the specifics of the missing data, four mothers failed to complete the MHQ. One infant was discharged from the hospital before developmental testing could be performed--with the family moving out state almost immediately thereafter. And, finally, only nine mother-infant observations were completed: one infant was too old to be observed with the NCAFS, two mothers refused, two were banned from the hospital by court order, and one failed to show up at the scheduled time even after repeated attempts at rescheduling. The infants in these last five cases were were observed, however, while being fed by a member of the hospital staff. Thus data on the interactional skills of 14 of the 15 infants were obtained.

With respect to the available data, which is summarized in Table 2, the presence of significant impairment in at least one of the areas assessed was found in 13 of the 15 cases. Although there were no cases in which deficits in all three areas were discovered, there were three cases in which impairment in two of the areas assessed was found. It is important to note that had there been complete data available for all 15 cases the incidence of multiple impairments may have been higher. As to the areas of impairment in the three cases where multiple deficits were present, all three infants scored two standard deviations or more below the mean on the motor and mental scales of the Bayley and on the infant interactional scale of the NCAFS. Data on maternal psychosocial history and interactional skills were not available in any of these cases.

Table 2. Results of Psychosocial Assessments in the 15 Confirmed Cases of NOFT

SUBJECT NAME	BAYLEY SCORES MENTAL	BAYLEY SCORES MOTOR	FEEDING INTERACTION** MOTHER	FEEDING INTERACTION** INFANT	MATERNAL HISTORY QUESTIONNAIRE
Lisa	12*	13*	.64	-1.09	Family Conflict*** Life Stresses*** Substance Abuse***
Susan	65***	56***	NA****	-.43	NA****
Fred	104	110	NA****	-1.73	Family Conflict*** Life Stresses*** Substance Abuse***
Jimmy	18*	8*	-.77	-.89	Family Conflict*** Life Stresses***
Art	84	76	-1.56	-1.68	Family Conflict*** Life Stresses***
Billy	106	136	NA****		
Carla	103	106	-.24	-.47	Family Conflict*** Life Stresses***
Mary	91	104	-1.59	-1.06	Family Conflict*** Life Stresses*** Parenting Skills***
Kurt	50***	50***	NA****	-2.84***	
Jerry	NA****	NA****	-1.62	-1.71	Family Conflict*** Life Stresses***
Oscar	102	127	-.75	-.93	
Tommy	60***	62***	NA****	-2.93***	
Paul	102	85	-1.79	-1.84	Family Conflict*** Life Stresses***
Jane	80	66	1.87	1.90	Family Conflict*** Life Stresses***
Ellen	67***	64***	NA****	-2.03	

* Raw Score: Unable to obtain standard score due to child's age
** Standard score with a mean of 1 and a standard deviation of 0
*** Standard scores indicating significant impairment
**** Scores not available

In nine of the ten cases where impairment in a single area was found, the sole indicator of that impairment was a score above the 95 percentile on at least two of the subscales of the MHQ. While in the one remaining case, the single indicator was a score two or more standard deviations below the mean on the mental and motor scales of the Bayley. There were six cases in which the 95th percentile was exceeded on only two subscales of the MHQ and three cases where it was exceeded on three subscales. A score above the 95th percentile on the family conflict and life stresses subscales was reached in all nine cases; on the substance abuse and health problems in the family subscale in two; and on the parenting skills/attitudes subscale in one case.

As to the match between the psychosocial needs of these 13 infants and their families and the services provided, only three received psychosocial services of any kind (see Table 3). It is important to note however that two families were receiving psychosocial services prior to hospitalization-- a social worker in one case and a visiting nurse in the other (According to the agencies providing the service, in addition to infant medical care, the responsibilities of the visiting nurse include emotional support for the parents and advice on child caregiving). As such five (rather than three) of the 13 cases received psychosocial services following hospitalization. The accuracy of chart notes regarding treatment services provided was confirmed in each case by the attending physician as well as by the eight mothers available for confirmation.

As to the treatment services provided in the three other cases cited above, in two cases the infants were placed in foster care, while their mothers received psychotherapy through a community mental health center and attended parenting classes conducted by the hospital. In

Table 3. Psychosocial Needs of the 15 Confirmed Cases of NOFT and the Psychosocial Services Provided

SUBJECT NAME	BAYLEY SCORES MENTAL	MOTOR	FEEDING MOTHER	INTERACTION** INFANT	MATERNAL HISTORY QUESTIONNAIRE	PSYCHOSOCIAL TREATMENT
Lisa	12*	13*	.64	-1.09	Family Conflict*** Life Stresses*** Substance Abuse***	None
Susan	65***	56***	NA****	-.43	NA****	Foster care Psychotherapy Parenting Classes
Fred	104	110	NA****	-1.73	Family Conflict*** Life Stresses*** Substance Abuse***	Receiving Social Work Services Prior to Hospitalization
Jimmy	18*	8*	-.77	-.89	Family Conflict*** Life Stresses***	Visiting Nurse
Art	84	76	-1.56	-1.68	Family Conflict*** Life Stresses***	None
Billy	106	136	NA****			None
Carla	103	106	-.24	-.47	Family Conflict*** Life Stresses***	Visiting Nurse Parenting Classes
Mary	91	104	-1.59	-1.06	Family Conflict*** Life Stresses*** Parenting Skills***	None
Kurt	50***	50***	NA****	-2.84***		Visiting Nurse Prior to Hospitalization
Jerry	NA****	NA****	-1.62	-1.71	Family Conflict*** Life Stresses***	None
Oscar	102	127	-.75	-.93		None
Tommy	60***	62***	NA****	-2.93***		Foster Care Psychotherapy Parenting Classes
Paul	102	85	-1.79	-1.84	Family Conflict*** Life Stresses***	None
Jane	80	66	1.87	1.90	Family Conflict*** Life Stresses***	None
Ellen	67***	64***	NA****	-2.03		None

* Raw Score: Unable to obtain standard score due to child's age
** Standard score with a mean of 1 and a standard deviation of 0
*** Standard scores indicating significant impairment
**** Scores not available

the one other case, the mother also attended the parenting classes conducted by the hospital. In addition, the services of a visiting public health nurse were provided.

The question of the match between service and need remains relavent in these five cases. In three of the five cases, infant performance on the mental and motor scales of the Bayley and on the NCAFS was two or more standard deviations below the means of the respective standardization samples for these instruments--signifying severe deficits. The consensus in the literature is that when such deficits are found a program of developmental stimulation should be instituted, along with an assessment of the quality of the social and cognitive stimulation in the home and attempt at upgrading those aspects of the home environment found to be deficient (e.g., Bithoney & Rathbun, 1983; Drotar, Malone & Negray, 1979). However, in none of these cases were such services provided. This despite the fact that the research team informed the attending physician in each case of the developmental deficits present. In the two remaining cases where services were provided, scores on the MHQ indicated severe family conflict and life stresses. In one case, the services of a social worker were provided, while in the other a visiting nurse. Based on the MHQ data, social work intervention was appropriate in both cases.

In as much as the provision of psychosocial services is dependent on the availability of such services, an inventory of the relevant mental health and social service resources available within the hospital and in the community was made. The information presented below was obtained through personal communication with staff members from the following agencies: the hospital's pediatric and social work departments, the children's health center affiliated with the hospital, and

the county departments of mental health and social services. In addition to the social work department and parenting classes alluded to above, the hospital houses a pediatric psychiatry unit, which provides outpatient as well as inpatient care. The children's health clinic affiliated with the hospital and a community mental mental health center offer marital and family counseling, as well as individual child and adult psychotherapy. The former agency also operates a developmental assessment clinic consistent with the Early and Periodic Screening, Diagnosis, and Treatment model (American Orthopsychiatric Association, 1978): Where developmental deficits are found, remediative services in the areas of cognitive, language, and motor development are available in the community. A number of substance abuse programs are in operation in the community. In addition, the services of a visiting nurse are available through a non-profit private agency, as well as the department of public health. Finally, both public and private agencies offer help in meeting needs for food, clothing, medical expenses, and housing.

To summarize, compliance with the psychosocial specifications of the Kerr and Kennel diagnostic protocal was limited to psychosocial histories being performed in five of the 17 cases reviewed. Developmental testing and mother/child observations were not carried out in any case. As to the match between psychosocial need and the services provided, only five of the 13 infants and families found to have significant psychosocial needs were provided services relevant to those needs. In four of these five cases, the services provided failed to completely match the level and/or type of need present.

DISCUSSION

The results of the present study suggest that the clear consensus in the literature regarding the necessity of considering psychosocial factors in the diagnosis and management of NOFT was not reflected in the practices of this community-based hospital. In addition to finding a general failure to comply with the psychosocial components of the Kerr and Kennel diagnostic model, a relatively poor match was found between psychosocial need and the relevant services provided.

The fact that primary care physicians (PCP) are in a strategic position to see that the psychosocial needs of their patients are met is clearly recognized by the National Institute of Medicine (1980), The American Academy of Pediatrics (1978), and the American Academy of Family Practitioners (1979). Indeed, these organizations agree that PCP's should regularly screen for psychosocial impairment, intervene in cases of mild disorder, and consult and/or refer where there are indications of severe disturbances. Obviously, this did not occur here. Adding to the disquieting nature of this finding is that the psychosocial services necessary to meet the needs of these infants and families were readily obtainable within the hospital and the community. Indeed, members of the pediatric psychiatry and social work staffs were available to consult with attending physicians at all times. Furthermore, a number of screening measures of infant (Rosenbaum, Chuu-lim, Wilhite, & Mankad, 1982) and family functioning (Smilkstein, Ashworth, & Montana, 1982) are currently available to assist the PCP in making the decision to order a behavioral consult or referral. These instruments can be easily

incorporated into a standard medical history as they take little time to administer and require little or no training to use. If the PCP is pressed for time, a member of the nursing staff could easily administer the measures.

It may be argued that the provision of psychosocial services to all NOFT infants and families is not justified by the data on the long-term effects of NOFT. Indeed, long-term follow-up studies indicate that a substantial proportion of NOFT infants will go on to develop normally without psychosocial intervention. Ideally, health care providers could predict from an assessment at hospitalization which specific infants will have later psychosocial impairments. Psychosocial services would then be provided only to this subgroup of at risk NOFT infants. Unfortunately, however, predictions of this nature are virtually impossible to make, as the predictive power of any single psychosocial assessment wanes considerably over time (Parke, 1981; Daniel, Newberger, Reed, & Kotelchuck, 1978; Parmelee, Sigman, Kopp, & Haber, 1976). Consequently, the most reasonable course of action to follow in providing psychosocial services to NOFT infants would be to: First, screen for psychosocial impairment/need in all cases; second, where the results are negative continue to screen in the context of followup or well baby visits to the PCP; when the results are positive, proceed with a comprehensive assessment; third, treat in line with the results of the assessment; fourth, regularly justify the continued provision of care based on current infant and family functioning. When functioning is adequate, terminate services but screen periodically for renewed dysfunction.

Where is the money to come from for the multiple assessments proposed above, given that a significant proportion of NOFT families are indigent? The answer to this important question is the Early Periodic Screening,

Diagnosis, and Treatment program, the nation's largest preventive child health screening program designed to detect and treat early childhood medical and developmental conditions in indigent children. This program is presently mandated by the federal government to provide preventive health screening services and diagnosis and treatment of of problems found in screening to all children between the ages of 0 to 21 years who are eligible for the Medicaid program.

With regard to the generalizability issue, the results of the present study lend clear support to the notion of the generalizability of the Drotar et al. (1981) findings to community-based hospitals. However, as the study of a single setting is the equivalent of a single subject design, repeated replications at other hospitals will be necessary to assure generalizabilty. An important question at this juncture is whether there is sufficient justification beyond the data presented here for these necessary replications. The research summarized below on physician psychosocial training and practices has an important bearing on the answer to this question:

> (1) Studies of ambulatory (Cassata & Kirkman-Liff, 1981; Hesbacher et al., 1980; Jacobsen et al., 1980; Noren et et al., 1980; Reiger, 1980; Goldberg et al., 1979; Goldberg et al. 1978) and hospital (Drotar & Malone, 1982; Lewis, 1978) care settings indicate the rate of PCP ordered psychosocial consults and/or referrals is significantly lower than would be expected, given the prevalence of impairment in these settings warranting such action. In fact, Rieger (1980) estimates that a PCP is likely to make a psychosocial referral for only one in ten to twenty patients in need of such a referral.

(2) In 1978, the American Academy of Pediatrics (AAP) Task Force on Pediatric Education concluded that physician training in the psychosocial aspects of health care was inadequate. Indeed, the task force found that more than half of newly practicing pediatricians rated their residencies as providing insufficient experience with psychosocial and behavioral problems. In 1980 the National Institute of Medicine (NIM) reached the same conclusion as the AAP task force. More recent reports suggest that inadequacies in physician psychosocial training continue to exist (Fischler, 1983; Friedman, Philips, & Parrish, 1983; Poole, 1983; Jewett, Greenberg, Champion, Gluck, Leikin, Altieri,& Lipnic, 1982; Jones, Badger, Parlour, & Coggins, 1982; Poole, Morrision, Adolf, & Reed, 1982; Cassata & Kirkmann-Liff, 1981).

The above documentation of widespread inadequacies in physician psychosocial training and practices lends plausibility to the notion that the results of Drotar et al. are generalizable to community based settings. As such, relative to the question posed above, there does appear to be sufficient justification for the multiple replications necessary to confirm this notion.

Documenting the generalizability of the present study's findings is undoubtly important as well as justified. However, Maccoby, Kahn, & Everret (1983) contend that if public policy affecting child welfare is to be changed, the researcher must not only document the existence of a problem but provide cost-effective and cost-feasible remedies as well.

Accordingly, in the ensuing discussion the clear possibilty that the present study's findings are generalizable is entertained and solutions to this potential problem are proposed. Consistent with the above discussion on generalizabilty, the documented inadequacies in physician psychosocial training are viewed as responsible, in large part, for the deficiencies in NOFT psychosocial care observed in the present study and Drotar et al. (1981). Consequently, the ensuing discussion begins with the question of why do inadequacies exist in physician training in the psychosocial aspects of health care?

The answer to the question why are physicians inadequately trained in in the psychosocial aspects of health care is undoubtly a complex one. However, one factor that seems to be of paramount importance is the failure of agencies such as the American Academy of Pediatrics and the American Academy of Family Practitioners to modify their training program accredidation requirements to reflect the consensus in the literature regarding the ways to upgrade physician psychosocial training (Jones et al., 1982; Poole et al., 1982). This consensus is reflected in the recommendations of a recent National Institute of Medicine (1980) report regarding this important issue of improving physician psychosocial training:

> (1) Revising the content of standard medical school curriculum in terms of both orientation and instruction in specific (psychosocial) skills; (2) Offering more more appropriate clinical training experiences to prepare medical students and residents for the practice of integrated health/mental health care; (3) Providing appropriate and effective role models throughout the educational and training process; and (4) Upgrading continuing education for practicing physicians (NIM, 1980, p. 193)

Importantly, a number of training curricula have been developed which reflect the NIM recommendations (Fischler, 1983; Poole, 1983; Fink, 1980, 1977; Freeman & Sack, 1979; NIMH, 1977; Fink & Strosnider, 1976)--with perhaps the most comprehensive of these in the area of pediatric psychosocial care (Fischler, 1983; Poole, 1983). Particularly impressive about the latter is that not only do they specify what to teach but the most effective ways of teaching it, as well.

Regarding the failure to modify existing accreditation guidelines and to disseminate these training curricula, it is likely that the cost to training programs is an important factor. Yet the continued efforts of the National Institute of Mental Health (NIMH, 1983) to determine the nature and prevalence of psychosocial impairment in medical settings, as well as the factors influencing its detection and management, suggest a strong committment on the part of the federal government to increasing the quality of psychosocial care provided in medical settings. This, in turn, bodes well for government funding to support efforts to provide more comprehensive physician psychosocial training. Furthermore, the rising number, indeed, the mere existence of family practice residencies, attests to the power of intensive lobbying efforts by allied health professionals at the federal level (Geyman, 1981). Perhaps a similar effort at this time could result in legislation that would provide the funding necessary to achieve quality training for physicians in the behavioral sciences. The professional mix of its members--physicians, nurses, social workers, psychologists--makes the Society for Research in Child Development (SRCD) an excellent vehicle for such a collaborative effort. That the Society might look

favorably on such a role is clearly indicated in the Congressional Fellowship Program it has run since 1977, and with its recent decision to increase the size and scope of its Washington liason office.

Private foundations may be a second source of funding for improvements in physician psychosocial training. An excellent example of this is the W.T. Grant Foundation's funding of the development of a behavioral pediatrics component in 11 of the nation's leading pediatric residency programs (Friedman et al., 1983). However, as Brim and Dustan (1983) note, perhaps the most efficient strategy would involve collaborative funding efforts on the part of the private and public sectors, of which there are a number of successful examples.

As it is a time of dwindling public and private resources, it is extremely important to develop strategies for reducing the cost of improved physician psychosocial training. One potential method for reducing costs is the sharing of faculty. Most universities which contain a medical school also house programs in the behavioral sciences. As such, appropriate behavioral science faculty could serve in the medical school on some part-time basis, with the two departments sharing faculty costs. This would preclude the need for the medical school to make the costly move of hiring additional full-time faculty to meet training requirements. The utilization of community mental health personnel in a similar way is a possibility as well. Additional strategies to cut down faculty costs include the use of teleconferences, television, and audio and videotapes to present lecture material. Indeed, given the current state of the art in telecommunications, a uniform curriculum in the behavioral sciences for the

nation's medical students-- taught by the experts in the field--is economically as well as technically feasible.

Importantly, however, while necessary, adequate training in the behavioral sciences may not be sufficient to insure the provision of quality psychosocial care in medical settings. Studies have shown that physician detection of psychosocial impairment as well as orders for psychosocial consults and/or referrals increase dramatically where mental health and medical care services are integrated professionally, administratively, and structurally (Burns, 1980). In addition, it is more likely for a patient to follow through on a physician ordered referral where medical and mental health services are integrated (Jacobsen, Regier, & Burns, 1978). In apparent recognition of the benefits of integrated health care services, the department of Health, Education, and Welfare had supported a number of activities to encourage linkages between health services and alcohol, drug abuse, and mental health services to promote a comprehensive health system. Notable among these is an agreement between the Alcohol, Drug Abuse and Mental Health administrations to spend 1.5 million dollars in Community Health Center (CHC) funds to provide on-site mental health personnel, and encourage linkages of community health centers with a nearby mental health center. According to the administrating agencies, these arrangements should allow for:

> (1) Mental health personnel to provide direct care and treatment in the health care setting to patients with emotional disorders whose problems exceed the skills of non-psychiatric health care practioners;

(2) Consultation directed toward altering behavioral patterns that increase the risk of physical illness;

(3) Collaborative treatment with non-psychiatric health care practioners for those patients with combined physical and mental illnesses;

(4) Training non-psychiatric physicians and other health care personnel to enhance their skills in the treatment of patients with relatively mild emotional disorders (report to the President from the President's Commission on Mental Health, 1978, p. 20).

Preliminary data from this model program suggest these objectives are being realized (Burns, 1980; Orso, 1979). Of particular importance is the finding that unlike non-integrated settings, physician detection of psychosocial impairment and orders for consults and referrals adequately reflect existing prevalence data. Also emerging from this model program are data necessary for the successful dissemination and implementation of such linkages (Burns, 1980; Orso, 1979).

As the above discussion would indicate, the failure in the present study to find effective linkages between pediatrics and the mental health/social service resources available within and outside the hospital cannot be attributed to a lack of innovation in this area. Indeed, beyond what was presented here, Drotar (1982) and others (Lewis, 1978; Anders, 1977) have described a number of models for effective liasions between medical and mental health/social service providers in hospital settings. Once again the salient issue is the dissemination and implementation of existing innovation. From the

above discussion it seems the CMH would be the ideal agency for disseminating effective models for hospital liasions between medical and mental health/social services. Circumscribing its efforts to public hospitals, the CMH could determine the existence of such liasons; establish them where none exist; and evaluate and give input regarding improvements where they do exist. As few hospitals will likely have the resources to completely meet the mental health and social service needs of their patients, creating liasions with community agencies will be of vital importance. The CMH could serve as "clearing house" for information on such community agencies, as well as facilitate the development of linkages bewteen these agencies and the hosptial. In those instances where there are no existing mental health resources within the hosptial, the CMH could play a similar role to that described in Burns (1980), providing on-site personnel for treatment, consultative and teaching purposes.

The cost of the linkages discussed here and above will undoubtly vary with the characteristics of the setting and the linkage. Creating a linkage similar to that described in Burns (1980) should be relatively inexpensive in a setting where medical and mental health/social services already exist. However, such an endeavor would be considerably more expensive in a setting without coexisting medical and psychosocial services. Nevertheless, in both cases the benefits clearly outweigh the the cost; as these linkages can provide a rapid--albeit partial--solution to an immediate and significant problem. The addition of adequate training for medical students, interns, and residents in the psychosocial aspects of health care would complete the solution. However, the benefits of the latter would not be shortcoming, as it would take at least ten

years before the students receiving this improved training would make up a significant proportion of practicing physicians. Thus the attractiveness of the linkage model.

Clearly, this discussion has gone well beyond the issue of whether community based hospital practices adequately reflect the consensus in in the literature regarding the appropriate approach to the diagnosis and and management of NOFT. To summarize, evidence was presented which strongly suggests that the results of the present study are merely reflective of overall shortcomings in the provision of psychosocial care in medical settings. Cited as major contributors to these pervasive deficiencies were inadequate physician psychosocial training and the near absence of linkages between medical and mental health/social service providers. It was argued that the continued existence of the training and linkage problems was not due to a lack of innovative solutions, but because of a failure to disseminate and implement these solutions. Cost was hypothesized to be a major stumbling block to dissemination and implementation of these solutions. Cost-effective ways of upgrading the quality of physician psychosocial training were discussed.

An important note--immediately following the termination of the present study, an hoc committee of hospital personnel--consisting of physicians, nurses, and social workers--concluded the psychosocial care provided NOFT infants in their hospital was inadeqate. The committee made a number of recommendations for improvements, including the adoption of a formal protocol, similar to Kerr & Kennel (1980), for diagnosing and treating NOFT cases and the requirement that pediatric residents demonstrate proficiency in screening for abnormalities in psychosocial development and functioning.

Limitations of the present study and implications for future research

The present study suffers from a number of limitations. What follows is a discussion of these limitations and suggestions for future studies of this kind.

Perhaps the most serious limitation of the present study is that the attending physicians were aware prior to data collection of our intention to perform psychosocial evaluations. Thus, physicians may have been expecting to receive psychosocial assessment data from the researchers and therefore did not obtain such information independently. On the other hand, there are several reasons to suspect that physicians in fact had no such expectations with respect to psychosocial data from the current study. First, an ad hoc committee composed of members of the hospital's medical and social work staffs had recently concluded--independent of the present investigation--that the pediatric staff was insufficiently trained to provide adequate psychosocial care to NOFT infants and their families. Second, the attending physicians were told that the assessment data were being collected solely for research purposes and that the research team should not be viewed as a clinical entity, in that none of the staff were trained mental health professionals and their clinical experience with the assessment instruments was limited. Third, if physicians were expecting to receive psychosocial assessment data from the research staff one suspects that they would have requested the information when it was not forthcoming. No such requests were made. In retrospect, a better approach may have been to review the charts of FTT infants seen at the hospital during the year preceding the current study and then compare the number of psychosocial evaluations during this time with the number

performed or ordered over the course of the current study. This comparison would have provided an opportunity to determine the presence of artifacts in the current findings.

A second limitation of the present study was that although a a number of the explanations were offered for the results obtained, the data necessary to test these hypotheses were not collected. For instance, the "training" hypothesis could have been evaluated in the present study by comparing the training histories of the physicians who ordered psychosocial workups with those who didn't. Future investigations might explore the effects of the training factor as as well as the effects of other variables hypothesized to influence physician psychosocial practices. Among these variables are the role perceptions of physicans who maintain a biological orientation in contrast to biopsychosocial orientation, physicians' personality characteristics (e.g., Burns & Cromer, 1978), and their sensitivity to the negative social consequences of labelling a parent inadequate or an infant as developmentally retarded (e.g., Goldberg, 1979). As pointed out previously, patient and contextual factors may also affect physician psychosocial practices. The severity of an infant's growth failure and the presence or absence of other signs physical abuse or neglect are examples of patient variables that may have that may have affected physician psychosocial practices in the current study. The staff-to-patient ratio is an example of a contextual variable that also may have exerted an important influence.

Consistent with the above discussion future studies should provide more comprehensive descriptions of physician, contextual and patient variables hypothesized to influence the provision of psychosocial care

in medical settings. Such data would help to evaluate the extent to which one can generalize the results of one study to other hospital settings. Ultimately, studies of this kind should include multiple settings across communities and regions. Such a study is currently being designed by a research group composed of individuals from a number of the nation's leading medical institutions (Drotar, personal communication).

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APPENDIX

Consent Letter (NOMT Subjects)

Dear Parent or Guardian:

We would like your help in getting a better idea of how effective Hurley Medical Center's treatment program has been for your infant. There are three things which we need your help with.

First, we'd like to observe you feeding your infant. We'd like to make this observation as soon as possible. Our reason for doing this observation is to better understand just what about your infant is causing his/her feeding problems. To make sure we don't lose any important information, we would like to record the observation on videotape. Of course, we will make this observation in the hospital.

The second thing we'd like for you to do is to fill out some questionnaires. These questionnaires will provide us with information which we feel is important for developing the best treatment program for your baby and other children like him/her. The questionnaires will cover the following areas: your feelings about your child and yourself, the ways in which you discipline your child, whether you feel you receive enough support from family and friends, how you get along with your spouse or boyfriend/girlfriend, and whether you're facing any special problems at the present time. We realize this information is very personnal, and as such, we'd like to assure you that all information collected by us concerning you and your baby will be kept strictly confidential. Furthermore, if you find any of the questions contained in these questionnaries to be offensive or too personal, feel free not to answer them. But please try to answer all the questions you can.

The third way you can help us is by letting us come to your home to observe and test your child about a month after he/she is released from the hospital. This home visit will consist of 1) our weighing your infant, 2) the administration of a test of infant development (this test generally involves watching an infant play with a variety of toys), 3) observing you and your infant going about your daily routine, 4) an observation of you feeding your infant (again, we would like to record this observation on videotape), and 5) having you complete the same questionnaires you filled out while your child was in the hospital. The visit should take no more than three hours of your time.

<u>For your help in this study, you will be given a coupon good for one case of Gerber baby food</u>.

Rest assured, we will also share any important findings with you.

<u>Participation is voluntary</u>. Neither you nor your infant has to participate in this program. In addition, you may decide to remove him/her from the research at any time. However, we hope that you will talk to us about your concerns first. Call either Jolie Brams or Nick Ialongo at 766-0460.

Most important, whatever you decide, it will not affect the care or your infant. Your infant will receive the same medical care whether he/she is involved in the research or not.

If you want your infant to participate in this important research, please fill out the attached form.

We truly appreciate your time in reading this.

Sincerely,

Nick Ialongo
Graduate Student
Clinical-Child Psychology
Michigan State University

Jolie Brams, Ph. D.
Child Clinical Psychologist