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**ABSTRACT**

This is an executive summary of the interim report on National Home Start Evaluation. Home Start, a federally-funded 3-year (1972-1975) home-based demonstration program for low-income families with 3- to 5-year-old children was designed to enhance a mother's skills in dealing with her own children and to provide comprehensive social-emotional, health and nutritional services. The following questions dealt with: What is the nature and cost of the Home Start Program? How do projects vary from site to site? What effects has Home Start had on families during the first 12 months? How do 12-month cost and effects of Home Start compare to corresponding cost and effects of the Head Start programs? Recommendations and future study issues are also presented. (Author/MS)

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NATIONAL HOME START EVALUATION: INTERIM REPORT VI

EXECUTIVE SUMMARY

FINDINGS AND RECOMMENDATIONS

March 24, 1975

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## INTRODUCTION

In 1971 the Office of Child Development initiated the National Home Start Demonstration Program to demonstrate "alternative ways of providing Head Start-type comprehensive services for young children in their homes" (Guidelines, 1971, p. 1). Home Start was designed to enhance a mother's skills as teacher of her own children in her own home. At the same time, comprehensive social-emotional, health and nutritional objectives for child growth and development were adopted as part of the core program.

The evaluation of the Home Start Program was established to address several key questions relating to the home visit process, program costs and program effects:

- Do families who participate in Home Start for two years achieve greater progress toward program objectives than families in Home Start for one year?
- How do the effects of two years of Home Start compare with two years of Head Start?
- Is Home Start equally effective for children who enter at age four as at age three?
- How do the costs of Home Start compare to those of Head Start?
- What effects do variations in services have on program effects?

Complete data bearing on these and related questions will be presented in the final report, to be submitted to OCD in November 1975.

Interim Report VI, which is summarized here, presents preliminary findings based on the second full operational year of the program (from fall 1973 to fall 1974), after allowing the project a year to become operational. The analyses described in this report are intended to provide answers to four major questions:

- What is the nature and cost of the Home Start Program?
- How do projects vary from site to site?

- What impact has Home Start had on families during the first 12 months?
- How do 12-month cost and effects of Home Start compare to corresponding cost and effects of the Head Start programs?

Readers already familiar with the national Home Start program and its evaluation can turn directly to chapter II, the presentation of findings.

### Home Start Program Overview

Home Start is a program for disadvantaged preschool children and their families which is funded by the Office of Child Development, U. S. Department of Health, Education, and Welfare. The program started in March of 1972 and has been funded for a three-year demonstration period. Home Start is a home-based program providing Head Start-type comprehensive (nutrition, health, education, and social/psychological) services to low-income families with 3-5 year old children who are considered focal children. A home-based program provides services in the family home rather than in a center setting.

A unique feature of Home Start is that it builds upon existing family strengths and assists parents in their role as the first and most important educators of their own children.

The Home Start program has four major objectives, as stated in the national Home Start Guidelines (December 1971):

- to involve parents directly in the educational development of their children;
- to help strengthen in parents their capacity for facilitating the general development of their own children;
- to demonstrate methods of delivering comprehensive Head Start-type services to children and parents (or substitute parents) for whom a center-based program is not feasible;
- to determine the relative costs and benefits of center- and home-based comprehensive early childhood development programs, especially in areas where both types of programs are feasible.

Presently 16 Home Start programs, funded by the Office of Child Development, are in operation. Each program receives approximately \$100,000 with which to serve 80 families for a 12-month period. Participating families come from a wide variety of locales and many different ethnic and cultural backgrounds -- including white, black, urban, rural, Appalachian, Eskimo, Navajo, migrant, Spanish-speaking, and Oriental.

Home Start program staff consist primarily of "home visitors", who visit the homes of enrolled families once or twice a week. In addition to working with the mother on matters of child development, the home visitors discuss nutrition, health, and social and psychological needs of family members. When needed, home visitors or other program staff refer families to community agencies for specialized services.

Families enrolled in Home Start also participate in group activities or meetings on specific topics, such as parent effectiveness or health. Each program has a policy-making council, which includes Home Start parents as members, to set policy for the local Home Start project.

Further information on the Home Start program can be found in:

"The Home Start Demonstration Program: An Overview" (February, 1973), Office of Child Development. This booklet acquaints the reader with the overall Home Start program as well as introducing the 16 individual projects.

"A Guide for Planning and Operating Home-Based Child Development Programs" (June, 1974), Office of Child Development. Based on the 16 Home Start projects, this guide details what is involved in planning and operating a home-based child development program.

### Home Start Evaluation Overview

The National Home Start Evaluation incorporates three distinct components: the formative evaluation, the summative evaluation, and the information system. The three are complementary ways of viewing the effects of Home Start. While all sites participate in the formative evaluation and information system, only six, selected as being representative of the rest of the programs, are involved in the summative evaluation due to funding restrictions on the evaluation.

Formative evaluation. The formative evaluation provides basic descriptive information about key aspects of individual Home Start projects. This information is used to give feedback about project implementation and to establish a context for the statistical and analytical findings. Elements of the formative evaluation include project-by-project case studies, observation



of home visits, analysis of staff time-use patterns, and development of cost models. Trained interviewers gathered formative data by visiting each of the 16 projects to interview staff and to review project records. They visited the six summative sites each fall and spring, and visited the remaining 10 sites each spring.

Summative evaluation. The summative evaluation provides information about Home Start's overall effectiveness by measuring changes in parents and children. Two features characterize this kind of evaluation in the Home Start program. First, there are "before-and-after" measurements of parent and child performance along criteria provided in the Home Start Guidelines. Measures used for the evaluation include:

- Preschool Inventory
- Denver Developmental Screening Test
- Schaefer Behavior Inventory
- High/Scope Home Environment Scale
- 8-Block Sort Task
- Parent Interview
- Child Food Intake Questionnaire
- Height and Weight Measures
- Pupil Observation Checklist
- Mother Behavior Observation Scale

Second, there is a randomly assigned, delayed-entry "control" group who did not enter the Home Start program until after they participated in one complete cycle of fall and spring testing. Control families are receiving a full year of Home Start benefits now that their "control" year is finished. Some additional comparison data were gathered from Head Start families in four sites where there was a two-year Head Start program. Data also were obtained from Head Start families in the two urban sites operating one-year programs in the fall of 1974 to be reported on in the final report of the national Home Start evaluation.

Before-and-after measurements have been collected from the six summative sites each October and May to coincide with most regular school testing programs. Data reported here were collected at three time points: fall 1973 (pretest), spring 1974 (7 months later), and fall 1974 (12 months later). The outcomes for Home Start families who had received full benefits were compared after 7 months<sup>1</sup> and again after 12 months to outcomes of control and Head Start families. The data were gathered by locally hired community interviewers who received special training twice each year.

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<sup>1</sup>A summary of 7-month findings and recommendations can be found in Appendix A.

Information system. An information system, designed to gather basic statistics about each of the 16 programs, forms the third component of the national evaluation. Information is gathered quarterly on family and staff characteristics, services provided to families, and program financial expenditures. These statistics are needed to help local and national staff make better administrative decisions, to assist in the interpretation of summative evaluation outcomes, and to serve as input to the cost-effectiveness analysis of the Home Start program. The necessary information is gathered by local program staff members as part of their routine record-keeping activities; then the information is summarized into quarterly reports which are sent to national staff.

Previous evaluation reports. Further information on the national Home Start evaluation can be found in reports prepared for the Office of Child Development by the High/Scope Educational Research Foundation and Abt Associates Inc. Recommendations about which reports are most relevant to particular questions can be obtained by calling staff in the Evaluation Branch of the Office of Child Development, DHEW (202/755-7750). Home Start evaluation reports available through the ERIC Document Reproduction Service (P. O. Box 190, Arlington, Virginia 22210) are listed in Appendix B.



## II

### FINDINGS

Evaluation findings are presented according to their relevance to the following questions:

- A. What is the nature and cost of the Home Start Program?
- B. How do projects vary from site to site?
- C. What effects has Home Start had on families during the first 12 months?
- D. How do 12-month cost and effects of Home Start compare to corresponding cost and effects of the Head Start programs?

Each of these questions is discussed below:

A. What is the nature and cost of the Home Start Program?

- What kind of families do projects serve?

The focal parent served by Home Start is most often the mother. She is typically in her mid-twenties and has some high school education. The average focal family consists of four or five members. The family's income is generally less than \$6,000 a year. About one quarter of the Home Start families are single-parent households.

- How large is Home Start overall?

--Families: In the quarter ending September 30, 1974, Home Start served 1,082 families in 16 projects, and 1,946 children between the ages of zero and five. Of these children, 1,339 were between the ages of three and five and were considered focal.

--Staff: 163 staff served the 1,082 families, with an average staff/family ratio of 1:6. There were 103 home visitors among the total staff, with each home visitor serving an average of 10 families.

● What is the "typical" Home Start project like?

--Families: During the second year of operation<sup>1</sup>, Home Start projects served an average of 74 families per quarter (93% of the originally intended 80 families per project). The average project reached 140 children between the ages of zero and five and 93 focal children per quarter. On the average, a total of 126 different families participated in each project during the year, indicating a relatively high turnover rate as kindergarten-age children left the project in the fall of 1974.

--Staff: The typical Home Start project has eleven staff members: a director, a specialist, a home visitor supervisor, a secretary/bookkeeper, and seven home visitors. The typical home visitor is a female who is 34 years old, has completed high school and spent some time in college. Before joining the Home Start project, she was employed in a job which in some way related to her work as a home visitor. She serves 10 families, has been with the project for approximately 20 months, and has a family of her own.

● What kinds of services do Home Start families receive?

--Home Visit: The typical home visit occurs weekly and lasts one hour and a half. Home visiting with the typical family is being conducted for the equivalent of 8 months out of the year (or an average of 34 home visits). The reason home visiting does not take place for 12 months is that there is a definite shift in program activities during the summer months from regular home visiting to an increased number of group activities; in addition, summer is a time for family and staff vacations.

Although the home visitor, focal child, and the focal parent always participate in home visits, in 85% of the homes in which there are siblings, they are also involved in home visiting activities. Over half of the home visit time addresses child activities, with most of this time being spent on either school

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<sup>1</sup>October 1, 1973 to September 30, 1974.

readiness or physical development. The remainder of the home visit is devoted to parent activities, emphasizing primarily parental concerns. These data confirm previous conclusions that Home Start is a family development program, aimed not only at educating children, but also at helping the entire family.

During the home visit, the home visitor interacts with the focal child 42% of the time and with the focal parent 28% of the time. Most of the remaining time is spent in three-way interactions. Home visitors are encouraging parents and children to work together on Home Start-type activities between home visits.

--Other Home Start Activities: Although the primary emphasis of the program is the weekly home visit to each family, projects plan other activities for families, such as group meetings for children and/or parents and Parent Policy Council meetings. Occasionally, home visitors and other staff provide transportation services for families enabling them to visit a doctor, dentist, or social service agency.

--Community Services: Families receive a number of community services through referrals by home visitors or other staff. During the past year, an average of seven referrals which resulted in service delivery were made per family: four for health needs, two for psychological and social services, and one in the area of nutrition. About half the families were referred for educational needs of the parent or child to such agencies as Adult Basic Education or special classes for handicapping conditions. The focal child was the primary recipient of referral services, receiving more than half of all referrals made. During the past year, 15,277 referrals which resulted in service delivery were made in 15<sup>1</sup> of the Home Start projects, an average of 1,018 per project.

Although families are using a wide variety of community resources and services, it is unclear that utilization increased as a result of family participation in Home Start. Major reasons why

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<sup>1</sup>Data on referral services from one project were incomplete.

some eligible families are not using such services as Food Stamps and Medicaid (17% and 4% respectively) are inaccessibility of Food Stamp offices, especially in rural areas, and family pride.

--Nutrition Services: Although there is no evidence to suggest that children are benefiting from the projects' efforts to improve their nutritional intake, the nutrition activities being carried out appear to be consistent with the Home Start guidelines. Information about nutrition is shared primarily through parent group meetings, with more emphasis being placed on educating parents about their family's nutritional needs than on assisting them with the planning and preparation of meals. Over half of the summative projects have attempted to assess the nutritional needs of families and provide vitamin supplements for at least some families.

- What are the per-family costs of providing Home Start services?

The table below provides an overview of the average spending patterns across the six summative Home Start projects for the 12-month period from October 1, 1973 to September 30, 1974:

| AVERAGE COST<br>(six summative projects) |                    |                   |
|--|--------------------|-------------------|
|  | <u>Per Project</u> | <u>Per Family</u> |
| Federal Expenditures                     | \$112,000          | \$1,320 (80%)     |
| Local Contributions                      | <u>30,000</u>      | <u>340</u> (20%)  |
| Total Cost                               | \$142,000          | \$1,660 (100%)    |

Personnel costs represented approximately 75% of local project's costs; 12% was spent on materials/supplies, 7% on travel to home visits, and 6% for other costs (e.g., space and equipment).

- B. How do projects vary from site to site?

Although the sixteen projects are surprisingly uniform in terms of program implementation, there are some across-site variations along a number of program dimensions. These are the direct result of individual interpretation of the Home Start Guidelines by project staffs as they seek to tailor the projects to meet specific site and family needs. Variations in project

operations across the six summative sites are described below, although no attempt will be made to determine the effect of these variations on outcomes, since they were not "planned" in the traditional sense.

- Average quarterly enrollment of families ranged from 64 to 139<sup>1</sup> in the six summative projects, with the total number of different families served during the course of the year varying from 112 to 218.
- Administrative Staffing<sup>2</sup> and Home Visitor Caseloads: Although the average project has an administrative staff of three (director, a specialist and home visitor supervisor), staffing patterns vary widely. They range from a project with only a director, or 40 administrative hours per week, to a project employing eight administrative staff (two directors and six specialists). Although not all eight staff are working full-time on Home Start, they spend an average of 221 hours per week on the project. The number of families home visitors work with ranges from 9 to 12 in the six summative sites.
- Project Activities: All six summative projects make weekly visits to families, although the amount of time home visitors spend with families ranges from 70 to 90 minutes. The number of home visits that home visitors can be expected to make during the year to each family varies from 27 to 39. In half of the six sites, the number of other Home Start activities families participate in exceed the number of home visits, with one project conducting weekly group meetings for children. Five of the six projects focus over half of the home visit time on the child, with the other site placing slightly more emphasis on parent activities.
- Federal costs ranged from a low of \$1,114 to a high of \$1,553 per family for one year of service. Total resource costs for these two projects were \$1,325 and \$1,904 per family, respectively. Site-to-site differences in cost per family suggest that families served by low cost-per-family projects are receiving substantially smaller in-kind income transfers via the Home Start program than families served by higher cost-per-family projects.

<sup>1</sup>The large number of families served by one project is possible as a result of supplementary Federal funds which the project receives.

<sup>2</sup>Based on findings from Interim Report V.



C. What impact has Home Start had on families during the first 12 months?

The impact of Home Start after 12 months is summarized below. One important factor should be kept in mind when interpreting 12-month findings: the control families entered the Home Start program in September 1974, about one month before testing began. When the 12-month outcomes show no group differences and there has been an increase in performance on the part of the control group, an immediate program effect may be partly responsible for this.

The consistency of 12-month findings with those reported after 7 months is also discussed. Where there has been a change in impact from 7- to 12-month outcomes, an attempt has been made to determine whether the change was due to movement on the part of the Home Start group or the control group, or due to changes in both groups. In the majority of cases where findings changed, the change was due to improved performance in the control group while the Home Start level remained the same or improved slightly. In only three cases was the change in the nature of the finding due to declining scores among the Home Start group.

The central question is, after 12 months did Home Start have an effect on families?

- YES, in school readiness: After 12 months in the program Home Start children gained significantly more than the control group on one of four school readiness measures--the Preschool Inventory (the PSI is a measure of children's achievement in skill areas commonly regarded as necessary for success in school). Gains on the other three measures--the DDST Language Scale, the 8-Block Child Talk Score, and the 8-Block Placement Score, favored the Home Start children but were not statistically significant. The 7-month findings showed the Home Start children scoring significantly higher than control children on three of these four measures. However, the school readiness scores of both groups increased since the 7-month findings. When the four school readiness measures were tested simultaneously using multivariate analysis of covariance, a significant difference favoring the Home Start children was found.<sup>1</sup>

<sup>1</sup>Tables presenting group means and analysis of covariance results for the 12-month effects are included in Appendix C.



- YES, in child medical and dental care: In three out of four indicators, Home Start children were found to have better medical and dental care than the control children. Home Start children had been to a doctor more recently, the visit was more likely to have been for preventive reasons and Home Start children had seen a dentist more recently than had control children. These same three indicators had also shown a significant effect favoring Home Start at 7 months.
- YES, in home materials for the child: After 12 months in the program, Home Start mothers reported having significantly more of some common playthings available for their children than control mothers reported for theirs, but, in contrast to the 7-month findings, there was no difference in the number of children's books they reported having available. The change in findings from the 7-month outcome on books available was due to an increase for control families rather than to a decrease for Home Start families.
- YES, in child social-emotional development: Home Start mothers rated their children as having higher task orientation and greater tolerance, compared with the ratings control mothers gave their children. Confirming this finding, testers rated the Home Start children as higher in "test orientation" (an indication of task orientation in the testing context) than control children. After 7 months only one of the six social-emotional measures had shown a significant difference between the Home Start and control groups. The two additional measures reached significance because the scores improved for Home Start while the control group remained the same or declined. These findings support the idea that social-emotional changes take longer to occur than school readiness changes.
- PERHAPS, in child physical development: The weight difference between Home Start and control observed at 7 months was no longer evident at 12 months, but the Home Start group is now significantly taller (by .4 inches) than the control group. These height and weight findings are ambiguous and there are no measurable nutrition differences that might be causing them.

- PERHAPS, in mother as teacher: Neither the Mother Teaches scale nor any of the 8-Block mother score differences were significant after 12 months, but the change in the Mother Teaches finding is due to an increase on the part of control mothers between 7 and 12 months rather than to a decrease by Home Start mothers.
- PERHAPS, in family use of existing community resources: In general there is little evidence for overall program effectiveness in this area, although two resources were used more by Home Start families than by control families. A closer examination of the questionnaire revealed that the wording of the questions may be underestimating program effects in this area (see Part A: Program Analysis of this report).
- PERHAPS, in mother-child relationship: The two measures in this area that were significant after 7 months were no longer significant after 12 months-- the Mother Involved scale (how often mothers spend time with their children in games and other activities) and Household Task scale (how often children "help" their mothers with simple household tasks) of the Home Environment Scale. In addition, after 12 months Home Start mothers were observed to scold their children in the presence of a tester more often than control mothers were (MBOS Punitive Scale), although in absolute terms the difference is not large. The lack of a difference in the Mother Involved scale was due to a slight decline in the reported involvement of Home Start mothers, whereas the lack of difference on Household Tasks was partly due to an increase on the part of control families. The negative outcome on the Punitive scale was entirely due to a decrease among the control mothers while the frequency of observed punitiveness of Home Start mothers did not change from the 7-month findings.
- PERHAPS, in child nutrition: Although there was no significant difference between Home Start and control children in the nutrition total score, Home Start children did consume more citrus fruit than control children (as reported by their mothers). As discussed in Laterim Report V, the quality of diets in absolute terms is still low among both Home Start and control children. There has been an increase in the emphasis placed on nutrition by the Home Start program following the 7-month findings, but the 12-month data were collected before the increase could have had an effect.

- NO, in family community involvement: After 12 months there was no difference between Home Start and control in the number of organizations belonged to, in contrast to the 7-month findings. A slight decline among Home Start families combined with a slight increase for control families produced this effect.
- NO, in child motor development: There were still no significant differences between Home Start and control children in gross motor and fine motor development as measured by the Denver Developmental Screening Test.

In summary, although the 12-month effects are generally not as strong as the 7-month outcomes, there is still considerable evidence that the national Home Start Demonstration Program is having a beneficial effect on the families it serves. These effects can be seen along a number of important child and parent dimensions, particularly in the child's school readiness and in indicators of social-emotional development, in medical and dental care, and in home materials provided for the child.

D. How do 12-month cost and effects of Home Start compare to corresponding cost and effects of the Head Start programs?

- Comparative costs of Home Start and Head Start

The method used to evaluate the cost/effectiveness of the Home Start Program is known as "constant cost" analysis. The various types of benefits that are typically produced by the program have been identified and, from data on the cost of Home Start per family served, the number of families for whom these benefits can be replicated for a given level of public spending has been estimated. Costs and outcomes have also been estimated for the Head Start projects located in Home Start communities. With this information it is possible to compare the types and quantities of benefits produced by the two programs for a constant level of public spending.

Had the results indicated that one of the programs produced all of the benefits produced by the other but in significantly larger quantities and at substantially lower cost, then policy makers would have to give serious consideration to adopting that program as the most cost-effective approach for a child development program. The results indicate, however, that the choice between the two programs is not at all clear cut. They have somewhat different primary

foci, and each program produces certain unique benefits. Center-based Head Start programs focus primarily on the child and provide day care opportunities not available from Home Start. Home Start focuses primarily on the focal parent/focal child relationship. It appears that Home Start and Head Start are not competing alternatives; local communities should be permitted to choose between them on the basis of local circumstances.

Our estimates of the relative cost of Home Start and Head Start must be interpreted carefully. First, there is a problem in defining "unit" cost for the two programs. Since the primary focus of Home Start is on the family (or, at least, the focal parent/focal child pair), it seems appropriate to measure unit cost for Home Start on a per family basis. Head Start places primary emphasis on the child, so its unit cost should be measured on a child basis. Since the unit of analysis is not the same for both programs, comparisons of unit cost for the two programs must be used with care. The second uncertainty in the comparison of cost is that the results are based on budget data from a sample of only five Head Start sites--a fairly small sample upon which to base estimates of the average cost of the program nationwide.

Mindful of the problems listed above, the following statements characterize the comparative cost of the two programs:

--Depending on the type of staff employed, the type of service provided and the duration of recipients' tenure in the program, costs for Head Start will range from "nearly twice as high" to "about equal to" unit cost for Home Start.

--Based on a relatively small sample of data (5 sites), a full year of the type of service provided by Head Start per child will cost the federal government 25-35% more than a full year of the type of service provided by Home Start per family.

Compared to the number of children who can be served by Head Start, at least as many and perhaps 25-35% more families can be served by Home Start for the same level of federal spending. It appears that Home Start has at least a slight cost advantage over Head Start, but site-to-site variations in the cost of both programs is large enough to preclude any precise estimate of how large this advantage may be.

● Comparative effects of Home Start and Head Start

Although data were collected from Head Start programs in four of the Home Start communities for comparative purposes, the analyses reported here are less powerful than the Home Start/control comparisons since random assignment of children to Home Start and Head Start was not possible. Of 54 variables on which the programs were compared (see Appendix C, Tables 3 and 4), statistically significant differences were found for 15; in four cases the result is interpreted as favorable to Home Start and in the other cases it appears as though Head Start has produced the more favorable outcome. For most variables, however, there was virtually no difference between the children and families from these two programs.

--School readiness. None of the measures in this important area showed any difference between Home Start and Head Start.

--Social-emotional development. On two of the six measures ("test orientation" and "sociability" from the POCL ratings) Head Start children received more favorable ratings than Home Start children.

--Physical development. Head Start children showed greater fine motor development, but did not differ from Home Start children in gross motor development or in height and weight.

--Nutrition. This area showed the greatest differences favoring Head Start children of any of the areas examined. On the nutrition total score (a composite of the amounts of food eaten in each of the food groups) and in four of the seven food groups, Head Start children were found to have significantly better diets than Home Start children, as reported by their mothers. In some cases the magnitude of this difference was not large, and the diets of Head Start children were still less than ideal. The vitamin intake of Home Start children was reported to have been better than that of Head Start children. The meals provided by the center-based Head Start programs may well have influenced various nutrition variables.

--Medical care. No differences were found in the quality of medical and dental care.



--Mother-child relationship, mother as teacher and home materials for the child. Of the 13 measures analyzed in these areas, 11 showed no group differences, one difference favored Head Start and one favored Home Start. It seems fair to conclude that, with the restrictions placed by the samples included in this study, the two programs were equally effective in enhancing the mother-child relationship.

--Use of community resources. For most of the community resources listed, Home Start and Head Start were equally effective in helping families make use of the available resources.

● Summary

Home Start may have a slight cost advantage over Head Start, but site-to-site variations in the cost of both programs preclude any precise estimate of how large this advantage may be. Home Start is effective compared to Head Start on a number of dimensions, including the important school readiness area. The primary difference between the effects of the two programs was in the nutrition area, where Head Start children were found to have better diets.

In spite of these findings, one should not argue that Home Start is in general a more cost-effective program than Head Start. All comparisons with Head Start in this evaluation should be made with caution since data from only four Head Start programs are included, and they were not selected as being representative of all Head Start programs. More importantly, however, it should be kept in mind that Home Start and Head Start are two very different programs. Because benefits provided by the two programs do not always overlap, the relative cost-effectiveness of the two cannot be judged by comparing unit costs alone.



### III

#### RECOMMENDATIONS AND FUTURE STUDY ISSUES

The findings after 12 months of Home Start show less clearly than after 7 months that Home Start is an important cost-effective innovation in the area of early childhood intervention. The ambiguity of the findings may partly be the result of an immediate program effect on control families who entered Home Start in September 1974, one month before testing began. Additional data are needed to formulate conclusive findings for the Office of Child Development regarding the relative cost-effectiveness of the program.

The Executive Summary for Interim Report V indicated a need for additional research in two areas which may demonstrate increased program cost-effectiveness. These two study areas are:

- The continuity of Home Start treatment on parents-as-educators as they work with younger siblings of focal children;
- The continuity of effects over time on Home Start children who have gone on to public schools.

Although both issues are outside the scope of the current evaluation study, data are being obtained in the spring of 1975 which may provide some preliminary insights. Home visitors in all sixteen sites are asked to rate parents on a scale of 1 to 4 indicating expected parent behavior and involvement after the demonstration program ends in such areas as educating young children, providing good health care and nutritious meals, as well as participating in community affairs. Although this does not measure Home Start treatment continuity directly, the results may guide researchers in a possible follow-up study. An attempt will be made in the final report to assess the continuity of effects over time on Home Start children who have gone to public schools by analyzing data collected on a small sub-sample of Home Start children who entered school after having been involved in the program for one year. Similar data will be available on a sub-sample of control children who did not receive any Home Start services before entering public schools. There are no children in this study who have had two years of Home Start before entering kindergarten, but the continuity of effects following two years of Home Start could be the subject of a follow-up study.

As the Home Start demonstration enters its final year, it is important to ask the following questions:

- To what extent can the achievements of the Home Start demonstration be assumed to be occurring in Head Start projects operating with the home-based option?

- What is the most appropriate role, form, organization and delivery of OCD policies (the Guidelines) and services to the home-based options?
- How can OCD systematically allow, or perhaps even initiate, program variations that will test other Home Start implementation approaches, that could well be more effective at equal or lower cost than the current Home Start model?

Each of these issues is discussed briefly below.

### Generalizability to Other Home-Based Programs

A question of importance is whether the outcomes obtained in the Home Start program can be anticipated in other home-based programs. The application of findings from the Home Start demonstration to other home-based programs must be carefully limited for two reasons:

- The research design and selection of demonstration sites makes statistically generalizable results impossible although some strong logical inferences can be made.
- The Home Start demonstration was planned and implemented as a single program model.

Many Head Start home-based options are being initiated or are currently in operation across the country. Little is known about program elements of these projects operated under the Head Start option. Therefore, it is difficult to address this question in a rigorous way at this time.

Among the most important differences, for example, is the fact that Head Start options are not operated under a unified set of guidelines like Home Start, nor are they given the same intensive support and guidance that a dedicated national staff can give when their attention is focused on 16 projects. In addition, there are apparently many "mixed model" projects, combining center and home activities, and the duration and intensity of family exposure to home-based activities can vary drastically from Home Start. No data are currently available which indicate cost and program effectiveness of these program variations.

- In view of the need for more information about the existing Head Start home-based options, it is recommended that OCD undertake a survey of their basic features. This information can provide a starting point for a cost-effectiveness investigation to determine whether the Head Start funds are being used as efficiently as Home Start funds appear to have been used.

## National Office Support and Program Guidelines

The National OCD staff has played an important role in the demonstration program in initiating and continually shaping local projects. Without the same intensive national OCD support, future home-based projects may not be able to meet common program objectives or identify and implement necessary project improvements. The Home Start Guidelines, for example, while concisely stating goals, do not provide measurable indicators of achievement which would aid projects in self-evaluation efforts. The Home Start Guidelines might be expanded to provide more specific guidance to local projects about the kinds of services to be provided to families and for judging the success of these services.

The nutrition findings reported in this executive summary illustrate the limitations of the existing Guidelines. For example, after failing to find any 7-month nutrition outcomes, additional information about local nutrition activities in the six summative sites was collected. This information was reviewed in light of recommendations in the Guidelines and existing activities were judged to correspond adequately to the intent of the Guidelines. Yet there is no measurable evidence to suggest that children are benefitting from these project efforts.

This discrepancy between adequate services and inadequate results poses a difficult problem. It is difficult to know with certainty that local activities meet the service delivery Guidelines since little detail about content is provided, and little information is given about the relative level of effort local projects are expected to spend delivering services in each goal area. Since it is impossible to pursue every Home Start goal at the same intensive level of effort because the overall funding levels are simply not adequate, priority decisions need to be made. The Guidelines, however, do not attempt to define these priorities --every goal is equally important.

Another area in which the Guidelines are not concise is the project's role in getting families to utilize existing community resources. If inaccessibility of service agencies and family pride are major reasons why eligible families are not using the services, OCD might consider the possibility of concentrating project resources on providing transportation should it prove an OCD priority. Likewise, OCD needs to determine the desirability of adopting a more aggressive educational program going beyond basic education on community resources toward attempts to change family attitudes.

Based on these findings and considerations:

- Staff in the national Home Start office should take the initiative for gathering information from experienced Home Start staff at all levels, and assembling a revised set of Guidelines that might be used by Head Start projects adopting the home-based option.

The final report of the evaluation study will address the issue of National OCD involvement in future home-based programs more extensively after data are obtained from Home Start project directors indicating the types of support OCD provided that were most helpful to them in terms of program implementation at the site level.

### Program Variations

There are a number of program variations from the Home Start model to be considered for future home-based programs which affect the cost of the program and the benefits received by local families. Some factors that need to be considered by policy-makers and administrative personnel in the planning, implementation and operation of future home-based programs are the following:

#### 1. Duration and Intensity of Service Delivery

- The current policy of encouraging families to remain in the program for 24 months would, if successful, make the program twice as expensive as a program of one-year duration. No research evidence is currently available on the additional benefits accruing to families during their second year in the program. This issue will be addressed in the final evaluation report.
- A policy of closing down projects during a four-month period over the summer would reduce the cost of the program by as much as 33%. The evidence that is available with which to measure the additional benefits from operations during summer months is too ambiguous to serve as a guide to policy. Perhaps project administrators should not decide the issue of summer programs on the basis of whether an additional four months' worth of services would help families. Often a more realistic question is whether summer operations are inevitably too curtailed by circumstances (vacations, presence of school-age siblings in home, etc.) to be worth the resources consumed.
- Increases in the frequency and/or length of home visits would require a reduction in the number of families served per home visitor; reduction in frequency and/or length would permit an increase in the number of families served. Home visitors currently serve an average of 10 families. A reduction in the number of families served per home visitor to 8 would increase costs by 11%; an increase to 12 would reduce costs by 7%. The available evidence on child outcomes indicates that assignments of less than 9 families and more than 13 families per home visitor would not be cost-effective. Further analysis for the next report may be able to narrow this range of uncertainty.



- By reducing the time home visitors spend on staff meetings, training sessions and other non-direct-service activities from the current level of 5-1/2 days per month to one day per month would permit an increase in caseloads from 10 families to 13 without reducing contact time with families. Costs would decline by 26%. No data are available to determine how time spent on non-direct-service activities influences the effectiveness of home visitors.

## 2. Credentials Sought in Hiring Home Visitors

A policy of paying wage premiums to recruit home visitors with college degrees and/or substantial previous job-related experience could increase the cost of Home Start by 15-20%. Since there is no evidence that effectiveness is related to educational attainment or previous work experience, there appears to be no justification for paying wage premiums for more "professional" credentials.

## 3. Number and Type of Support Staff

Many local projects currently employ various types of support staff and many retain local professionals (accounts, educational specialists, etc.) on a consulting basis. Hiring a home visitor supervisor, coordinator/supervisor and a nurse/nutritionist and paying consultants increase project costs by 25-32%. There is only indirect and fragmentary evidence available to evaluate the impact of support staff on the effectiveness of the program.

## 4. Supplementary Goods and Services Provided

Costs could be reduced by 6-7% by eliminating the current expenditure of \$100 per family on supplementary goods and services (largely medical and dental care). These services are probably badly needed and worth the expense, but no data are available to measure their impact on Home Start families.

## 5. Target Sites for Funding of Local Projects

- Regional variations in the cost of labor, space and materials can have a substantial effect on the cost of operating Home Start projects in different locations. Although a policy of locating projects in low cost-of-living areas could save money, this would be inconsistent with the national responsibilities of federal agencies.

- Active encouragement to local project administrators to maintain enrollment at maximum levels could substantially reduce the cost of the program. Projects could reduce cost per family served by 10% by increasing enrollment from 50 to 80 families and reduce cost by 33% by increasing enrollment from 50 to 110. It is obvious that potential enrollment is at least partly determined by population density in the area chosen as a target site.
- The policy of requiring matching-fund contributions from local communities has increased essential resources available for the operation of local projects. Had projects not obtained such contributions, OCD expenditures would have had to increase by 25% in order to maintain project operations at the actual level found in this program.



APPENDIX A

SUMMARY OF 7-MONTH FINDINGS AND RECOMMENDATIONS  
INTERIM REPORT V

October 1974

This summary groups key findings and recommendations according to three central policy questions based on data collected 7-months after the pre-test:

- Is Home Start a wise expenditure of public funds?
- How can the existing Home Start program be improved?
- How can future home-based programs be made most effective?

Brief answers are presented to each question in turn below.

Is Home Start a wise expenditure of public funds?

YES, with respect to services currently provided in the areas of:

- child school readiness;
- child medical and dental care;
- mother/child relationship;
- mother as teacher;
- home materials for the child;
- family community involvement.

NO, with respect to services currently provided in the areas of:

- child nutrition;
- child immunizations;
- family use of existing community resources.

PERHAPS, with respect to services currently provided in the areas of:

- child social-emotional development;
- child physical-motor development.

YES, in terms of Home Start's cost/effectiveness compared to Head Start in the following areas:

- child school readiness;
- child social-emotional development;
- child physical-motor development;
- child dental care:

- mother/child relationship;
- mother as teacher;
- home materials for the child;
- family community involvement;
- use of existing community resources.

NO, in terms of Home Start's cost/effectiveness compared to Head Start in the following areas:

- child nutrition;
- child medical care;
- day care services.

NO, with respect to internal Home Start improvements in cost/effectiveness that can be made within the existing program:

- content of the home visit;
- use of staff time;
- allocation of budget funds.

How can the existing Home Start program be improved?

- Maintain full project enrollment of 80 families;
- Maintain home visitor caseloads at 9 to 13 families;
- Consistently spend 1 1/2 hours/week with each family;
- Provide bi-weekly in-home supervision of home visitors;
- Slightly decrease home visit time spent on general education;
- Increase home visit time spent on nutrition;
- Provide immediate vitamin and mineral supplements as needed;
- Arrange for necessary child immunizations;
- Provide lending books to families now having few;
- Encourage adults to read to child in lower 25% of families.

How can future home-based programs be made most effective?

- Incorporate the essential features of the existing Home Start program, including the recommended improvements above;
- Give funding priority to home-based projects where service populations are too dispersed for practical center-based operation (rural or low density urban);
- Increase program enrollment size to as near to 110 families as possible to benefit from economies of scale;

- Adjust project funding levels to regional variations in the cost-of-living index;
- Adjust salary scales for each personnel category to regional variations in the cost-of-living index;
- Avoid an overly heavy concentration of project staff or other resources in a single service delivery area;
- Employ a full time staff person specifically for in-home home visitor supervision.

APPENDIX B

HOME START EVALUATION REPORTS

- Interim Report I (August, 1972)
  - Formative and Summative Evaluation (ED 069 439)
  - Case Studies IA (ED 069 440)
  - Case Studies IB (ED 069 441)
  
- Interim Report II (July, 1973)
  - Program Analysis (ED 091 074)
  - Summative Evaluation Results (ED 085 398)
  - Case Studies IIA (ED 091 081)
  - Case Studies IIB (ED 092 225)
  
- Interim Report III (August, 1973)
  - Evaluation Plan 1973-1974 (ED 092 227)
  - Program Analysis (ED 092 226)
  - Summative Evaluation Results (ED 092 229)
  - Case Study Summaries (ED 092 228)
  
- Interim Report IV (May, 1974)\*
  - Program Analysis
  - Summative Evaluation Results
  - Field Procedures Manual
  
- Interim Report V (November, 1974)\*
  - Executive Summary
  - Program Analysis
  - Summative Evaluation Results
  - Cost Effectiveness Analysis
  - Field Procedures Manual

\* Not yet in the ERIC system.

APPENDIX C

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TABLES SUMMARIZING 12-MONTH FINDINGS

Table 1

**TWELVE MONTH HOME START CHILD OUTCOMES: HOME START TO CONTROL**  
**Analysis of Covariance for Fall 1974 Scores,**  
**Using Pretest as the Covariate**  
**(Six Summative Sites Included)**

|  | HOME START |           |                | CONTROL |           |                | F     | p    | $\omega^2$ | Summary              |
|--|------------|-----------|----------------|---------|-----------|----------------|-------|------|------------|----------------------|
|  | N          | Fall Mean | Adj. Fall Mean | N       | Fall Mean | Adj. Fall Mean |       |      |            |                      |
| <b>School Readiness</b>                |            |           |                |         |           |                |       |      |            |                      |
| Preschool Inventory                    | 119        | 17.4      | 17.7           | 77      | 15.3      | 14.9           | 20.0  | <.05 | .09        | HMS>CNT              |
| DDST Language                          | 137        | 31.0      | 31.0           | 95      | 30.1      | 30.3           | 3.8   | NS   | .01        |                      |
| 8-Block Child Score                    | 119        | 5.4       | 5.3            | 77      | 4.7       | 4.8            | 3.3   | NS   | .01        |                      |
| 8-Block Child Talk                     | 141        | 2.9       | 2.9            | 89      | 2.4       | 2.4            | 2.9   | NS   | .01        |                      |
| <b>Social-Emotional Development</b>    |            |           |                |         |           |                |       |      |            |                      |
| SBI Task Orientation <sup>1</sup>      | 159        | 19.7      | 19.7           | 109     | 18.6      | 18.7           | 4.4   | <.05 | .01        | HMS>CNT              |
| SBI Extra-Introversion                 | 158        | 22.8      | 22.9           | 109     | 23.2      | 23.2           | < 1   | NS   | .00        |                      |
| SBI Hostility Tolerance                | 157        | 17.9      | 17.7           | 109     | 19.3      | 19.6           | 9.4   | <.05 | .03        | HMS<CNT              |
| POCL Test Orientation                  | 155        | 25.8      | 25.8           | 107     | 23.4      | 23.4           | 8.5   | <.05 | .03        | HMS>CNT              |
| POCL Sociability                       | 158        | 18.4      | 18.3           | 106     | 16.9      | 17.0           | 3.1   | NS   | .01        |                      |
| DDST Personal-Social                   | 154        | 11.2      | 11.2           | 106     | 11.2      | 11.2           | < 1   | NS   | .00        |                      |
| <b>Physical Development</b>            |            |           |                |         |           |                |       |      |            |                      |
| Height (inches)                        | 155        | 42.1      | 42.2           | 106     | 41.9      | 41.8           | 6.3   | <.05 | .02        | HMS>CNT              |
| Weight (pounds)                        | 156        | 38.3      | 38.5           | 108     | 38.2      | 37.8           | 2.5   | NS   | .01        |                      |
| DDST Gross Motor                       | 126        | 12.3      | 12.3           | 86      | 12.3      | 12.3           | < 1   | NS   | .00        |                      |
| DDST Fine Motor                        | 155        | 12.8      | 12.8           | 106     | 12.6      | 12.6           | 2.4   | NS   | .01        |                      |
| <b>Nutrition</b>                       |            |           |                |         |           |                |       |      |            |                      |
| Milk Group                             | 158        | 1.4       | 1.4            | 108     | 1.3       | 1.3            | 1.4   | NS   | .00        |                      |
| Meat Group                             | 158        | 1.3       | 1.3            | 108     | 1.2       | 1.2            | 1.0   | NS   | .00        |                      |
| Egg Group                              | 158        | .20       | .20            | 108     | .22       | .22            | < 1   | NS   | .00        |                      |
| A-Vegetables                           | 158        | .10       | .10            | 108     | .10       | .10            | < 1   | NS   | .00        |                      |
| Citrus Fruits                          | 158        | .34       | .34            | 108     | .23       | .23            | 4.2   | <.05 | .01        | HMS>CNT              |
| Other Vegetables                       | 158        | 1.8       | 1.8            | 108     | 1.7       | 1.7            | < 1   | NS   | .00        |                      |
| Breads & Cereals                       | 158        | 3.4       | 3.4            | 108     | 3.3       | 3.3            | < 1   | NS   | .00        |                      |
| Nutrition Total                        | 158        | 8.5       | 8.5            | 108     | 8.1       | 8.1            | 3.1   | NS   | .01        |                      |
| Vitamins                               | 141        | .38       | .38            | 106     | .31       | .32            | < 1   | NS   | .00        |                      |
| <b>Medical Care</b>                    |            |           |                |         |           |                |       |      |            |                      |
| Immunizations since May <sup>3</sup>   | 159        | .30       |                | 107     | .36       |                | < 1   | NS   |            |                      |
| Months since Doctor Visit <sup>2</sup> | 104        | 5.7       | 5.7            | 63      | 8.0       | 8.1            | 6.8   | <.05 | .03        | HMS<CNT <sup>2</sup> |
| Checkup/Something Wrong                | 149        | .60       | .59            | 103     | .31       | .32            | 19.2  | <.05 | .07        | HMS>CNT              |
| Been to Dentist <sup>3</sup>           | 150        | .89       |                | 107     | .21       |                | 226.6 | <.05 |            | HMS>CNT              |

<sup>1</sup>One item has been dropped from this scale, consequently Fall 1974 scores are lower than Spring 1974 scores presented in Interim Report V, Table VI-1.

<sup>2</sup>Low score is favorable.

<sup>3</sup>Analysis of variance on post scores.



Table 2

TWELVE MONTH HOME START MOTHER OUTCOMES: HOME START TO CONTROL  
 Analysis of Covariance for Fall 1974 Scores  
 Using Pretest as the Covariate  
 (Six Summative Sites Included)

|                                   | HOME START |           |                | CONTROL |           |                | F    | p    | $\omega^2$ | Summary |
|-----------------------------------|------------|-----------|----------------|---------|-----------|----------------|------|------|------------|---------|
|                                   | N          | Fall Mean | Adj. Fall Mean | N       | Fall Mean | Adj. Fall Mean |      |      |            |         |
| <u>Mother/Child Relationship</u>  |            |           |                |         |           |                |      |      |            |         |
| H/S HES Mother Involvement        | 156        | 10.2      | 10.1           | 102     | 10.0      | 10.1           | < 1  | NS   | .00        |         |
| H/S HES Household Tasks           | 157        | 3.5       | 3.5            | 108     | 3.2       | 3.3            | < 1  | NS   | .00        |         |
| MBOS Supportive                   | 136        | 7.3       | 7.3            | 107     | 7.1       | 7.1            | < 1  | NS   | .00        |         |
| MBOS Punitive                     | 144        | 5.4       | 5.4            | 109     | 5.0       | 5.0            | 4.8  | <.05 | .01        | HMS>CNT |
| <u>Mother as Teacher</u>          |            |           |                |         |           |                |      |      |            |         |
| H/S HES Mother Teaches            | 159        | 3.9       | 3.8            | 109     | 3.6       | 3.6            | 1.1  | NS   | .00        |         |
| 8-Block Request Talk              | 141        | .69       | .70            | 89      | .66       | .64            | < 1  | NS   | .00        |         |
| 8-Block Diagnostic                | 141        | 1.1       | 1.1            | 89      | 1.1       | 1.1            | < 1  | NS   | .00        |         |
| 8-Block Talk About                | 141        | 1.3       | 1.3            | 89      | 1.2       | 1.2            | < 1  | NS   | .00        |         |
| 8-Block Interactions/min          | 137        | 8.5       | 8.6            | 80      | 7.8       | 7.8            | 1.4  | NS   | .00        |         |
| 8-Block Mean Length String        | 140        | 3.7       | 3.7            | 83      | 4.3       | 4.3            | 1.3  | NS   | .00        |         |
| 8-Block Feedback                  | 141        | 1.5       | 1.5            | 89      | 1.4       | 1.4            | < 1  | NS   | .00        |         |
| <u>Home Materials for Child</u>   |            |           |                |         |           |                |      |      |            |         |
| H/S HES Books                     | 159        | 4.2       | 4.2            | 110     | 4.0       | 4.0            | 1.6  | NS   | .00        |         |
| H/S HES Playthings                | 159        | 3.6       | 3.5            | 109     | 2.8       | 2.9            | 11.4 | <.05 | .04        | HMS>CNT |
| <u>Use of Community Resources</u> |            |           |                |         |           |                |      |      |            |         |
| Welfare department                | 152        | .41       | .40            | 101     | .34       | .36            | < 1  | NS   | .00        |         |
| Food Stamps Program               | 152        | .51       | .51            | 98      | .48       | .49            | < 1  | NS   | .00        |         |
| Medicaid                          | 153        | .25       | .23            | 102     | .25       | .29            | 1.4  | NS   | .00        |         |
| Food commodities                  | 150        | .01       | .01            | 102     | .01       | .01            | < 1  | NS   | .00        |         |
| Local hospital                    | 144        | .78       | .79            | 95      | .68       | .68            | 3.8  | NS   | .01        |         |
| Public health clinic              | 147        | .73       | .71            | 101     | .64       | .66            | < 1  | NS   | .00        |         |
| Mental health clinic              | 158        | .06       | .05            | 104     | .03       | .04            | < 1  | NS   | .00        |         |
| Family counseling agencies        | 156        | .03       | .02            | 104     | .00       | .00            | 1.8  | NS   | .00        |         |
| Planned Parenthood                | 154        | .29       | .27            | 99      | .16       | .18            | 4.0  | <.05 | .01        | HMS>CNT |
| Day care program                  | 153        | .03       | .03            | 103     | .07       | .07            | 1.8  | NS   | .00        |         |
| Recreational programs             | 157        | .08       | .08            | 103     | .04       | .04            | 1.4  | NS   | .00        |         |
| Legal aid program                 | 155        | .05       | .04            | 103     | .04       | .04            | < 1  | NS   | .00        |         |
| Housing authority                 | 157        | .21       | .20            | 100     | .13       | .14            | 5.1  | <.05 | .02        | HMS>CNT |
| State employment office           | 147        | .11       | .11            | 98      | .10       | .10            | < 1  | NS   | .00        |         |
| Job training programs             | 158        | .04       | .04            | 106     | .02       | .02            | < 1  | NS   | .00        |         |
| Organization Total                | 142        | 5.7       | 5.7            | 92      | 5.6       | 5.7            | < 1  | NS   | .00        |         |

<sup>1</sup>Low score is favorable.

Table 3

TWELVE MONTH HOME START CHILD OUTCOMES: HOME START TO HEAD START  
 Analysis of Covariance for Fall 1974 Scores,  
 Using Pretest as the Covariate  
 (Four Summative Sites Included)

|  | HOME START |           |                | HEAD START |           |                | F    | p    | $\omega^2$ | Summary |
|--|------------|-----------|----------------|------------|-----------|----------------|------|------|------------|---------|
|  | N          | Fall Mean | Fall Adj. Mean | N          | Fall Mean | Fall Adj. Mean |      |      |            |         |
| <b>School Readiness</b>                |            |           |                |            |           |                |      |      |            |         |
| Preschool Inventory                    | 84         | 18.9      | 18.7           | 74         | 17.4      | 17.6           | 2.3  | NS   | .01        |         |
| DDST Language                          | 97         | 31.7      | 31.5           | 78         | 31.1      | 31.4           | < 1  | NS   | .00        |         |
| 8-Block Child Score                    | 85         | 5.8       | 5.8            | 63         | 5.4       | 5.4            | < 1  | NS   | .00        |         |
| 8-Block Child Talk                     | 98         | 3.1       | 3.1            | 80         | 2.5       | 2.5            | 3.0  | NS   | .01        |         |
| <b>Social-Emotional Development</b>    |            |           |                |            |           |                |      |      |            |         |
| SBI Task Orientation <sup>1</sup>      | 111        | 20.5      | 20.3           | 85         | 19.6      | 19.8           | < 1  | NS   | .00        |         |
| SBI Extra-Introversion                 | 110        | 22.7      | 22.8           | 86         | 23.3      | 23.2           | < 1  | NS   | .00        |         |
| SBI Hostility Tolerance <sup>2</sup>   | 109        | 18.0      | 18.0           | 85         | 18.6      | 18.6           | < 1  | NS   | .00        |         |
| FOCL Test Orientation                  | 106        | 25.7      | 25.6           | 86         | 27.2      | 27.3           | 4.4  | <.05 | .02        | HMS<HDS |
| FOCL Sociability                       | 109        | 18.4      | 18.3           | 86         | 20.2      | 20.2           | 6.2  | <.05 | .03        | HMS<HDS |
| DDST Personal-Social                   | 106        | 11.2      | 11.2           | 82         | 11.2      | 11.2           | < 1  | NS   | .00        |         |
| <b>Physical Development</b>            |            |           |                |            |           |                |      |      |            |         |
| Height (inches)                        | 107        | 42.5      | 42.6           | 88         | 42.3      | 42.3           | 1.1  | NS   | .00        |         |
| Weight (pounds)                        | 108        | 38.9      | 39.5           | 88         | 40.3      | 39.5           | < 1  | NS   | .00        |         |
| DDST Gross Motor                       | 90         | 12.7      | 12.7           | 72         | 12.4      | 12.4           | 1.6  | NS   | .00        |         |
| DDST Fine Motor                        | 108        | 13.1      | 13.1           | 88         | 13.3      | 13.4           | 4.2  | <.05 | .02        | HMS<HDS |
| <b>Nutrition</b>                       |            |           |                |            |           |                |      |      |            |         |
| Milk Group                             | 109        | 1.5       | 1.5            | 82         | 1.9       | 1.9            | 11.4 | <.05 | .05        | HMS<HDS |
| Meat Group                             | 109        | 1.3       | 1.3            | 82         | 1.3       | 1.3            | < 1  | NS   | .00        |         |
| Egg Group                              | 109        | .23       | .23            | 82         | .25       | .26            | < 1  | NS   | .00        |         |
| A-Vegetables                           | 109        | .12       | .11            | 82         | .24       | .25            | 12.8 | <.05 | .01        | HMS<HDS |
| Citrus Fruits                          | 109        | .29       | .29            | 82         | .54       | .54            | 12.4 | <.05 | .06        | HMS<HDS |
| Other Vegetables                       | 109        | 1.8       | 1.8            | 82         | 2.1       | 2.1            | 6.0  | <.05 | .03        | HMS<HDS |
| Breads & Cereals                       | 109        | 3.4       | 3.4            | 82         | 3.4       | 3.4            | < 1  | NS   | .00        |         |
| Nutrition Total                        | 109        | 8.6       | 8.6            | 81         | 9.7       | 9.7            | 20.3 | <.05 | .09        | HMS<HDS |
| Vitamins                               | 95         | .46       | .50            | 80         | .38       | .34            | 4.8  | <.05 | .02        | HMS>HDS |
| <b>Medical Care</b>                    |            |           |                |            |           |                |      |      |            |         |
| Immunizations since May <sup>3</sup>   | 110        | .32       |                | 89         | .45       |                | 3.6  | NS   |            |         |
| Months since Doctor Visit <sup>2</sup> | 68         | 6.6       | 6.5            | 63         | 4.6       | 4.7            | 3.3  | NS   | .02        |         |
| Checkup/Something Wrong                | 103        | .39       | .35            | 86         | .43       | .47            | 2.9  | NS   | .01        |         |
| Been to Dentist <sup>3</sup>           | 102        | .94       |                | 88         | .94       |                | < 1  | NS   |            |         |

<sup>1</sup>One item has been dropped from this scale, consequently Fall 1974 scores are lower than Spring 1974 scores presented in Interim Report V, Tables VI-3.

<sup>2</sup>Low score is favorable.

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<sup>3</sup>Analysis of variance on post scores.

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Table 4

TWELVE MONTH HOME START MOTHER OUTCOMES: HOME START TO HEAD START  
 Analysis of Covariance for Fall 1974 Scores,  
 Using Pretest as the Covariate  
 (Four Summative Sites Included)

|                                   | HOME START |           |                | HEAD START |           |                | F     | p    | $\omega^2$ | Summary              |
|-----------------------------------|------------|-----------|----------------|------------|-----------|----------------|-------|------|------------|----------------------|
|                                   | N          | Fall Mean | Adj. Fall Mean | N          | Fall Mean | Adj. Fall Mean |       |      |            |                      |
| <u>Mother/Child Relationship</u>  |            |           |                |            |           |                |       |      |            |                      |
| H/S HES Mother Involvement        | 109        | 10.1      | 10.2           | 86         | 10.1      | 10.1           | < 1   | NS   | .00        |                      |
| H/S HES Household Tasks           | 108        | 3.6       | 3.5            | 87         | 3.3       | 3.3            | 1.8   | NS   | .00        |                      |
| MEOS Supportive                   | 97         | 7.2       | 7.2            | 61         | 7.7       | 7.7            | 2.6   | NS   | .01        |                      |
| MEOS Punitive                     | 102        | 5.5       | 5.5            | 62         | 4.8       | 4.8            | 10.2  | <.05 | .05        | HMS>HDS <sup>1</sup> |
| <u>Mother as Teacher</u>          |            |           |                |            |           |                |       |      |            |                      |
| H/S HES Mother Teaches            | 110        | 4.0       | 4.1            | 88         | 3.6       | 3.5            | 5.0   | <.05 | .02        | HMS>HDS              |
| 8-Block Request Talk              | 98         | .70       | .69            | 80         | .61       | .62            | < 1   | NS   | .00        |                      |
| 8-Block Diagnostic                | 98         | 1.1       | 1.1            | 80         | 1.1       | 1.1            | < 1   | NS   | .00        |                      |
| 8-Block Talk About                | 98         | 1.1       | 1.2            | 80         | 1.4       | 1.3            | 1.1   | NS   | .00        |                      |
| 8-Block Interactions/min.         | 74         | 8.7       | 8.6            | 57         | 7.8       | 8.0            | < 1   | NS   | .00        |                      |
| 8-Block Mean Length String        | 76         | 3.6       | 3.7            | 57         | 3.7       | 3.6            | < 1   | NS   | .00        |                      |
| 8-Block Feedback                  | 98         | 1.3       | 1.3            | 80         | 1.3       | 1.3            | < 1   | NS   | .00        |                      |
| <u>Home Materials for Child</u>   |            |           |                |            |           |                |       |      |            |                      |
| H/S HES Books                     | 110        | 4.2       | 4.4            | 88         | 4.5       | 4.3            | < 1   | NS   | .00        |                      |
| H/S HES Playthings                | 110        | 3.5       | 3.6            | 87         | 3.5       | 3.4            | 1.0   | NS   | .00        |                      |
| <u>Use of Community Resources</u> |            |           |                |            |           |                |       |      |            |                      |
| Welfare department                | 104        | .24       | .26            | 87         | .31       | .29            | < 1   | NS   | .00        |                      |
| Food Stamps Program               | 104        | .43       | .44            | 88         | .42       | .41            | < 1   | NS   | .00        |                      |
| Medicaid                          | 105        | .11       | .15            | 88         | .28       | .24            | 4.8   | <.05 | .02        | HMS<HDS              |
| Food commodities                  |            |           |                |            |           |                |       |      |            |                      |
| Local hospital                    | 98         | .82       | .82            | 83         | .88       | .88            | 1.3   | NS   | .00        |                      |
| Public Health Clinic              | 101        | .74       | .75            | 85         | .65       | .64            | 2.5   | NS   | .01        |                      |
| Mental Health Clinic              | 109        | .06       | .07            | 87         | .02       | .02            | 2.3   | NS   | .01        |                      |
| Family Counseling agencies        |            |           |                |            |           |                |       |      |            |                      |
| Planned Parenthood                | 106        | .30       | .31            | 84         | .20       | .20            | 4.9   | <.05 | .02        | HMS>HDS              |
| Day care program                  | 105        | .02       | .09            | 86         | .69       | .60            | 100.0 | <.05 | .34        | HMS<HDS              |
| Recreational programs             | 108        | .10       | .11            | 88         | .11       | .11            | < 1   | NS   | .00        |                      |
| Legal Aid program                 | 107        | .05       | .05            | 87         | .03       | .03            | < 1   | NS   | .00        |                      |
| Housing authority                 | 110        | .10       | .15            | 87         | .11       | .06            | 6.8   | <.05 | .03        | HMS>HDS              |
| State employment office           | 100        | .15       | .15            | 84         | .08       | .08            | 2.0   | NS   | .01        |                      |
| Job training programs             | 109        | .03       | .03            | 86         | .05       | .04            | < 1   | NS   | .00        |                      |
| Organization Total                | 100        | 5.8       | 5.9            | 81         | 6.2       | 6.0            | < 1   | NS   | .00        |                      |

<sup>1</sup>Low score is favorable.