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Sustaining Employment Among Low-Income Parents: Options for Child Care Research

Final

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I. INTRODUCTION

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Welfare reform has increased the urgency of child care policy issues affecting low-income families. The large number of parents of young children who are now subject to work or schooling requirements has increased the need for good-quality, affordable chdd care that will support employment activities. Financial assistance to families for chdd care expenses and policies that may affect the supply, cost, and quality of chdd care are receiving greater scrutiny as state welfare administrators seek to remove obstacles welfare recipients may face as they try to enter employment or maintain stable employment over time.

Child care may be an important factor that *can* either **suggert** or undermine efforts to remain employed The cost of child care can be significant in relation to wages from low-skilled jobs, so the cost of child care can be a deterrent to work. Poor-quality child *care* or unreliable child care may also lead to interruptions in employment. In addition, the stability of chdd *care* arrangements may be threatened by complex, inefficient administrative practices that interrupt payments to child care providers, or it may be threatened by unexpected changes in work schedules. Instability in child *care* arrangements *can*, in turn, lead to disruptions in employment. Jobs with nonstandard hours may not match the standard schedules of child care providers, and jobs without leave may provide few options for parents who need to *care* for **an** ill child.

The Role of Child Care in Low-Income Families' Labor Force Participation is a project that was developed to create a stronger idormation base for child care policymaking in the new welfare reform environment, where an important goal is securing and retaining employment among low-income parents. As part of this project, MPR has produced three research review papers synthesizing research on aspects of child care that may affect the ability of low-income

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parents to obtain jobs, to retain employment over time, and to obtain higher earnings under welfare reform. The papers discuss the following *aspects* of child care and how they relate to employment

- *The Cost of Child Cure*. This paper examines how the *cost* of child care and the structure of child care subsidy programs affect low-income parents' decisions about employment.
- *The Quality of Child Care.* This **paper** examines what child care quality means to parents and professionals and how the quality of child *care* affects the employment decisions of low-income **parents**.
- *The Flexibility of Child Care*. This paper examines the extent to which lowincome parents face inflexibility in **jcbs**, child *care*, and family situations, and the effect of inflexible jobs and child *care* on employment.

The papers discuss what we know about each of these topics from the research literature, and what questions need further research in order to inform child care policy. In this final report, we identify the major areas in which the papers identified research gaps, and we propose several design options for research studies that could address these gaps.

In the next section, we summarize the major findings of the three working papers. We discuss what is known about how the cost, quality, and flexibility of child care influences the employment of low-income parents, and how well policies designed to improve these *aspects* of chdd care actually meet their goals in terms of improving child care and influencing employment outcomes. We also note the gaps in research knowledge that led to the current set of recommendations for further child care research. A subsequent section summarizes the major research questions that remain after our review of the literature, and a final section outlines the research designs described in this report.

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A. SUMMARY OF FINDINGS FROM THE RESEARCH REVIEW PAPERS

The research review papers provide a comprehensive discussion of the current status of the literature linking chdd care with employment among low-income **parents**. In this section, we summarize the major conclusions of the papers to provide the background and rationale for the recommended research designs in this report.

1. Child Care Costs And Subsidies

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Most parents leaving welfare for jobs are likely to need child care while they work In 1995, over 60 percent of the parents receiving welfare had **an** infant, toddler, or preschool-age child who would need child *care* during all of the parent's work hours. Another 24 percent of parents receiving welfare had a child in elementary school who would need supervision outside of school hours if the parent worked at that time.

The cost of chdd care is widely recognized as a major banier to employment for low-income mothen of young children. Even modest child care costs can strain the budgets of low-income families. In fall 1993, the average cost of child care for a preschool-age child was \$4,000 per year, or 25 to 30 percent of earnings from full-time work at a wage of \$5 to \$6 per hour. While many low-income families find free sources of chdd care, low-income single mothen are more often forced to pay for chdd care because most do not have other adults in the household who could help care for children. This problem is complicated by the fact that, because the skills of parents leaving welfare for work are low, their *earnings* are not expected to increase significantly over the long term. This means that low-income parents will probably have inadequate resources for child care for the entire $\mathbf{p} \circ \mathbf{d}$ over which their children are young, and the chdd care costs they face are substantial.

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Child care costs are likely to affect employment decisions because these costs effectively reduce the amount of income a parent can *earn* from work outside the home. Empirical studies have focused on the employment decisions of mothers, and there is consensus that higher child care costs will reduce the likelihood that mothers will work, although the size of the response of low-income single mothers is uncertain. More information on the employment response of low-income mothers to child *care costs* is needed, particularly in the new welfare environment, when welfare is not a viable alternative to working over the long term. Moreover, very little is known about the price sensitivity of **parents**' choices of child *care*, or about how the quality and reliability of these choices may affect the parent's ability to sustain employment.

Child care subsidies **are** probably the most important policy tool affecting the child care choices and employment decisions of low-income families because these subsidies directly affect the child care prices faced by families participating in subsidy programs. State policies for chdd care subsidy programs include income eligibility requirements, sliding fee schedules (the amount parents must contribute to the cost of chdd care, which **depends** on income), and maximum payment rates to providers. Income eligibility limits provide the most **basic'** definition of who may receive subsidies. **States** currently set these limits on the basis of **equity** — which families are most needy — not on the basis of **an** assessment of those for whom the subsidy would yield the greatest change in employment because we lack information on the latter. Sliding fees tend to be low for families with income below the poverty he, but beyond that point, many **states** increase fees quickly util the point at which families become ineligible for subsidies in order to prevent a sharp increase in child care costs when the family becomes ineligible. However, the steep increase in sliding fees at incomes above the poverty line, combined with large reductions in other benefits for low-income families over the same income levels, means that net income

(earnings, income transfers, and child care costs) increases only slightly with employment. This is likely to create a **disincentive** to work in the income ranges over which benefit reductions and sliding fee increases are large. Maximum payment rates are typically set at the 75th percentile of the market cost of child care, by type of care and age of child, but some states set lower rates. When maximum payment rates are below the provider's rate, the provider is unlikely to serve families receiving a subsidy. However, we do not know the extent to which reductions in payment rates from the 75" percentile limit parents' choices of child care.

Although many welfare recipients entering work activities have young children and very low income, rates of participation in child care subsidy programs appear to be low. We currently lack sufficient data to understand the low participation rates in child care subsidy program. Possible reasons include a lack of information, administrative difficulties that increase transactions costs associated with participation, program rules regarding payments to caregivers related to the child and to unregulated providers, and high sliding-fee scales.

Two types of child care policies may have important effects on the supply of child care for low-income families. Incentives for providers, including **maximum** payment rates in child care subsidy programs, and financial assistance to providers through state child care quality and supply enhancement programs, may increase the supply of good-quality child care for lowincome families. Higher **maximum** payment rates may lead more providers either to serve families receiving a child care subsidy or to provide the features (such as quality or nonstandard hours) that are encouraged by variations in the payment rate, but we do not know the size of providers' responses to payment rates. Funding fiom state programs to improve quality and supply is designed to expand the supply of good-quality child care in low-income neighborhoods, but we do not know how much displacement occurs because of these programs.

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Regulations that seek to raise the standards for child care settings may have unintended effects on the price, quality, andquantity of child care. The **cost** of providing care is likely to increase for the type of child care targeted by regulation. This will lead to adjustments in quantity, price, and quality both within that type of child care and among competitors, who **adjust** in response to the changes made by the targeted chdd care providers. Research on the size and direction of these effects is not conclusive, however, due to **data** limitations. More information is needed about providers' responses to regulation so that this tool can be used more effectively to meet policy goals.

2. The Quality of Child Care

Quality in chdd care refers to children's experiences in the chdd care environment and to features of this environment that are believed to affect children's development. There is broad agreement among professionals about what constitutes quality in formal settings for infants, toddlers, and preschool-age children, but more work is needed to define and measure quality for young chddren in informal home-based settings, for care at nonstandard hours, for school-age children in non-institutional settings, and across types of chdd care.

Parents and professionals agree that quality child care arrangements include a nurturing environment and educational opportunities, but parents tend to evaluate particular chdd care settings as having higher quality than professionals would. We do not know the extent to which parents' perceptions of the quality of a child care setting change over time as they obtain more experience with and idormation about a child care setting.

A parent's decision about whether and how much to work will depend in part on her perception of the quality of the child's *care* setting. Thus, to the extent that improvements in the

quality of child *care* as measured by developmental psychologists go unnoticed by the parent, we would not **expect** to **observe** an improvement in employment outcomes.

There is very little empirical research on the relationship between child care quality and employment. A study of welfare recipients indicates that bust and safety issues affected the parents' continued involvement in welfare-to-work activities, but this study preceded welfare reform policies implemented in 1997, and parents in the study may not have had access to the full range of quality chdd care. A *study* of mothers of low-birthweight infants and toddlers indicates that mothers with lower education and more medically fragile infants entered employment earlier and were employed for a greater number of months when they were provided with high-quality, center-based child care for their chddren. More research is needed on the employment effects of high-quality chdd care in a broader welfare and low-income population in the new welfare reform environment.

Policies to improve the quality of chdd care need to be informed by an understanding of the current quality of child care in the U.S., the key features of a quality child care setting, a better understanding of how to improve the quality of child care, and the **cost** of quality chdd care. Four large, multi-site studies of the quality of chdd care conclude that good-quality chdd care is relatively rare, and for infants and toddlers and for nonregulated home-based settings, fairly large proportions of child care arrangements may be characterized **as** having poor quality. However, these studies were not nationally representative, response rates tended to be low, and questions have been **raised** about the measures used for home-based care. More work is needed to improve response rates in studies of child care providm and to measure q d t y in a nationally representative sample of child care settings. We currently know little about the factors that affect the quality of center-based care, and we know even less about factors that **affect** the quality of

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home-based care. More work is needed to understand what makes a difference in producing a quality child care setting and how child care policies can **affect** quality.

While parents' evaluations of the quality of a child care arrangement may affect their employment decisions, we do not know how important quality is to their choice of a particular child care setting. If child care policies were to make good-quality child care available to **low**income parents, would they use these settings? Because low-income parents often face constraints imposed by work schedules, lack of resources, and lack of transportation, they may need to choose a child care arrangement that is flexible, affordable, and conveniently located even though it does not provide the level of quality they desire.

3. The Flexibility of Jobs, Child Care, and Family support

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Low-income parents may have difficulty combining their employment and child rearing responsibilities because low-wage jobs often have inflexible schedules, nonstandard work hours, and no sick leave or annual leave. At the same time, regulated child care arrangements tend to be inflexible, with standard hours and little ability to adjust to changing work schedules. To further complicate this situation, low-income single parents often do not have another adult in the household who can share child-rearing responsibilities, leaving them with few options when jobs and child care arrangements are inflexible.

Our review of the literature on the extent of the flexibility problem for low-income families found that the problem is an issue for many of them. About half of all low-income parents have inflexible family situations in which other adults are not available to help when child care arrangements break down or when children are sick. About half of parents leaving welfare for work are likely to work nonstandard schedules, and the proportion is growing. Parents may also have variable work schedules, either because of job requirements or because frequent job changes lead to changes **in** schedule. The supply of regulated child care is very limited during nonstandard hours and days, and does not respond well to variable work schedules. However, we do not have any information on the demand for regulated child care during nonstandard hours or on the supply of nonregulated child care, which tends to be more flexible. In addition to the lack of flexible scheduling by regulated child care providers, parents may have additional difficulties finding child care **for** times when their provider takes a day off, when their child is sick, when their child has special health needs or behavioral problems, or when school-age children have a school vacation.

Evaluating the extent of the problem of flexibility is not a straightforward task. For instance, the research provides estimates of the frequency of the problem of inflexibility in jobs, child care, and family support individually for low-income parents. But some of the information needs to be updated, and more important, the information needs to be combined in order to provide an accurate sense of whether flexibility is a problem for the parent. Emlen points out that inflexibility is only a problem if it occurs in all three areas at once. "If a parent has an inflexible job but very flexible child care, then employment can be sustained (Oregon Child Care Research Partnership 1997). Therefore, to assess the magnitude of the problem of inflexible jobs, child care, and family support, we need to measure the degree of flexibility across all three dimensions at once for each individual.

In addition to not knowing how much flexibility low-income working parents have across the three major sources, we do not know how the degree of flexibility in one or more of these sources is related to employment outcomes. We suspect that inflexibility in employment, child care, and family situations may be most significant **as** a barrier to retaining employment, rather than a barrier to entering employment. Parents may initially begin worlung at an inflexible job and make child care arrangements that are either unreliable or not as flexible as the job requires. The parent may be able to continue working up until a child care crisis occurs or until an unexpected change in work hours, and then she may not be able to resolve the conflict without losing her job.

While these hypotheses are plausible, empirical evidence to support them is not available. Emlen has measured the degree of flexibility in each area for several distinct samples of parents, including a low-income sample of families receiving child care subsidies, but all of these parents were employed (Oregon Child Care Research Partnership 1997). Since inflexibility may be a problem that affects employment retention, we need to measure flexibility for a sample of welfare recipients who are entering employment and follow them to see how long they retain their jobs in order to learn how much flexibility is needed to sustain employment.

Several policy options could address the flexibility problem. Emlen notes that a "fourth source" of flexibility is parents' initiative in developing creative solutions to the problem flexibility in their child care, family support, or job. In addition, low-income parents could be offered assistance in making child care arrangements that would guide them in thinking through their potential child care needs and in developing backup arrangements to accommodate these needs. Employers could be encouraged through financial or other incentives to provide greater flexibility in jobs to help parents continue working while meeting their child- rearing responsibilities. Finally, incentives could be provided to child care providers directly or to employers to offer flexible child care. Many of these policy options could be accomplished at the initiative of governments, employers, or community organizations, and they could be financed by some combination of these players.

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Little research is available on the effects of initiatives to improve the flexiiility of jobs or chdd care for low-income:families. The research that exists is based on pre-post or comparisongroup designs that provide relatively weak evidence of policy effects. Although a random assignment design could provide stronger evidence, it may be difficult to use to study employer initiatives because individuals cannot be randomly assigned to employas.

B. SUMMARY OF CRITICAL RESEARCH QUESTIONS

Our summary of the research review papers has identified many critical policy questions that are left unanswered in the research. This section summarizes the major research questions that remain after our review of the literature. On most , some research provides helpful information, but many important gaps exist.

1. The Role of Child Care Costs and Subsidies

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Compared with research on quality of chdd care, relatively more attention has been focused on the role of chdd care costs and subsidies in the parent's employment decision and in the supply of chdd *care*. The available research concurs that parents generally are less likely to be employed .or to choose paid child care **as** the **price** of child care rises. Nevertheless, several important gaps in the research remain, including:

- What is the cost of child carefor low-income families? What are child care costs for center-based and home-based child care in low-income neighborhoods, by age of child and by quality of care, in different regions of the country and in cities, suburbs, and **rural** areas? We need more current information on prices charged by chdd care providers and amounts paid by parents with and without child care subsidies. We need information on prices in the regulated and unregulated sectors of the child care market.
- How sensitive is the employment of low-income parents to child care costs? This issue needs more attention in the new welfare environment, since mothers onwelfare

are now required to work, welfare is time limited, and there may be fewer relatives available to care for chddren

- What are the child care preferences of low-income parents? When parents are given more resources to pay for child care, what types of care do they choose? Do they choose higher-quality chdd care? How do these choices vary across ethnic groups?
- *How are child care subsidy policies in the states affecting tow-income families?* What are the participation rates of families in child *care* subsidy programs and what factors affect those rates? What are the characteristics of eligible participating and nonparticipating families? How do subsidies affect choices of child *care* and employment outcomes over time?
- What is the current supply of child care, and how do providers react to child care policies? How do regulations and subsidy policies affect the quantity, quality, and price of chdd care for low-income families? We need a more current chdd care supply study that covers all sectors of the chdd care market for low-income families.

2. The Quality of Child Care

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While **quite** a large **body** of research **has** examined the effects of chdd *care* quality on children's development, much less research **has** explored the links between the quality of child *care* and employment decisions of parents. Several important gaps **in**, **the** literature need attention, including:

• How should we measure child care quality? We have widespread agreement about what constitutes quality in formal child care settings but less agreement about quality in home-based settings. For preschool-age children, we need to reach consensus on measures of quality that are appropriate across settings so that quality can be compared across a wide range of settings and research studies. These measures could also be used to develop low-cost proxy measures of quality so that chdd care quality could be measured in more labor-market-oriented studies, in which the cost of directly measuring quality is now prohibitive. We also need to learn how to increase response rates in chdd care quality, studies because the response rates in recent studies of child care settings are well below what is acceptable in research on individuals and households. For school-age care, we need to further conceptualize quality and develop measures of quality that are appropriate

across ages and settings. We also need to learn more about what features of care parents want for school-age children.

- *How can quality child care be developed in low-income neighborhoods?* What combination of features best predict high quality in a child care setting? What are the most effective strategies for improving the existing quality of a child care arrangement?
- What is the effect of child care quality on the employment of low-income mothers? If good-quality child care were made available and affordable in low-income neighborhoods, would parents use it? What is the effect of the availability of good-quality child care on employment decisions (decisions about whether to work, the number of hours to work, and the stability of employment over time)?

3. The Flexibility of Jobs, Child Care, and Family Support

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Mothers of young children need some flexibility in their job schedules and child care arrangements in order to respond to emergency needs both at work and at home. We know that many low-wage jobs have nonstandard or rotating job schedules, and child care must be arranged to cover these work hours. We also know, however, that many low-income mothers have very inflexible family situations that provide little assistance with child care; many have very inflexible jobs; and most formal child care arrangements keep standard and very inflexible hours. Still, several questions about flexibility remain:

- How much flexibility in family situations, jobs, and child care do women have who are leaving welfare? In the current welfare reform environment of work requirements and time limits, what proportion of women have flexible family situations? Among those with less flexible family situations, what proportion have inflexible jobs and inflexible child care options?
- *How can public policy improve the flexibility of jobs and child care?* What public policies would encourage employers to help improve the flexibility of jobs or child care for their low-wage workers? What public policies would encourage child care providers to offer flexible, nonstandard -hours?
- How would greater flexibility of jobs and child care affect job retention and progression for low-income mothers? How does the degree of flexibility across

jobs, child care, and family situations affect job retention and progression? What other aspects of employment (for example, absenteeism) are **affected** by the degree of flexibility?

C. SUMMARY OF RESEARCH DESIGNS FOR DISCUSSION

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Our review of the child care literature, summarized above, identifies several areas in which research is needed to improve the basis on which child care policy is made by the federal government and states. To address these areas, we have identified several research designs that would be feasible given the current level of knowledge in each area. We have also identified the methodological and design issues associated with each. Our selection of research designs was informed by discussions with ACF and with several child care researchers. (Appendix A lists the individuals consulted regarding research designs for this report.) In addition, a meeting of child care researchers and policymakers sponsored by the Child Care Bureau October 27-28 provided additional information for this report.

We have proposed three different types of research designs to examine the questions summarized in the previous section. The first set of research designs are research demonstrations to test the relationship between child care and employment decisions, and more specifically, how policy changes can affect employment outcomes. These demonstrations would enable us to systematically vary certain child care policies for families by randomly assigning families to groups to which different policies are applied and by studying the child care choices and employment outcomes for these families. Because of random assignment to different child care policy groups, differences in average measured outcomes for different groups of families can be attributed to the differences in child care policy with a high degree of reliability. **A** second set of research designs would provide more information about child care providers and parents' child

care choices by expanding ow descriptive, national-level data collection on child care issues. A third set of research designs would let us begin to explore topics about which we know very little. First, we would conduct small-scale studies in a limited number of communities and on a limited number of families or child care providers. Gradually, as we develop better measures and sharpen the research questions, the studies would be expanded to focus on more representative communities and populations.

The research designs proposed in this paper are summarized in Table 1.1. The table shows the type of research that is proposed — a research demonstration, national data collection, or a process study — and the research questions discussed in Section B that are addressed by each research design.

Each of the three chapters in this paper addresses a type of research methodology. In Chapter II, we discuss the designs for two different social experiments that would test the impacts of **specificpolicy** interventions on the economic decisions and the well-being of families and children. The first demonstration would test the effects of three changes on employment outcomes: a change in subsidy policy parameters (slidmg fee scales and income eligibility limits), an improvement in idormation provision, and an improvement in the **administration** of subsidy programs. The second demonstration would test the effects on employment outcomes of offering flexible, reliable child care with quality variations (basic quality and high quality). For each demonstration research design, we present an overview and rationale, a description of how the research would be conducted, and a discussion of the strengths and weaknesses of specific alternative research design and implementation decisions. In Chapter III, we discuss ideas for expanding the database of national-level information about child care, including modifications to SUMM®RY CH®R®OTERISTICS OF TH€ ₽ROPOSED R≲SEPROH ⊙≤SIGNS

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t of Child		Flexible, Reliable, and	Augmenting Existing National	National Study	Participation in	An Agenda for		Policies to
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ongoing national household surveys, improvements in state administrative data on child care and welfare programs, and **periodically** repeating the national surveys on the supply and demand for child care, which were first conducted a decade ago. Chapter IV describes exploratory studies that would examine issues that are currently less well-understood, including participation in child care subsidy programs, the need for school-age child care to support employment, techniques for developing quality child care, and employer policies intended to improve the flexibility of jobs and child care for low-income parents. For each topic, we describe a sequential research plan that would begin by gathering information on a relatively small scale through process studies or focus groups and build toward a larger-scale project that would be more representative of child care providers or families in the U.S.

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II. EXPERIMENTAL RESEARCH DESIGNS

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Several of the child care questions outlined in the previous chapter **pertain** to the employment responses of families to certain child care **policies** or conditions. The best way to learn about these responses is to systematically vary policies and then measure the employment outcomes that result from this experiment. If families *can* be randomly assigned to different experimental child *care* policies, **then** families in each **group** will initially be very similar **so** that group differences that emerge over time can be attributed, with a **high** degree of confidence, to the differences in child care policies.

The cost, quality, flexibility, and reliability of chdd care arrangements have all been identified **as** problems for low-income **parents** seeking to maintain employment and become independent of welfare. This chapter describes experimental research designs that would enable us to **test** the impacts of policies intended to address each of these major chdd care issues — cost, quality, and flexibility/reliability of child care — in terms of a range of labor force, family, and child outcomes.

A. A DEMONSTRATION TO TEST THE LABOR SUPPLY EFFECTS OF SELECTED SUBSIDY POLICIES AND EFFICIENT PROGRAM ADMINISTRATION

States have a large degree of latitude in designing child care subsidy policies, and as a result, policies vary considerably across states. Major policies controlled by states (within broad guidelines *set* by federal legislation and regulations) include income eligibility limits, the structure of sliding fee *scales*, and maximum payment rates. These limits, fees, and rates tend to be set on the basis of equity considerations, state experience, and available funding. Unfortunately, they are not based on how they affect employment decisions because' states do not

have information on this critical issue. States (and sometimes communities within states) also set policies governing the eligibility determination process and cless for paying child care providers for subsidized *care*. Therefore, depending on the state (or community), eligible families may readily access child care assistance, or they may experience a disruption in child care because of inefficient administration of the program.

Therefore, we recommend that a research study examine how increases in the generosity of **state** child care subsidy policies and **better** administrative practices would affect the employment decisions of low-income mothers. The design of such a *study* would involve four steps: (1) selecting communities within different **states**, where the communities (and states) have suitable characteristics; (2) identifying an appropriate group of low-income (welfare and nonwelfare) chdd **care** users in a given **state**; (3) randomly assigning these f d e s to one of three groups – an experimental group that receives 'a relatively generous subsidy, better information, and smoother program administration; a second experimental group that receives the **state**'s normal child care subsidy but better information and smoother program administration; and a control group that receives the state's normal child care subsidy; and (4) following the chdd care choices and employment outcomes of the three p ups over time.

The major research questions to be addressed by this demonstration include the following:

- How would a change in child care subsidy policies affect the employment rates, job stability, earnings, job flexibility, and self-sufficiency of low-income mothers?
- How would a change in child care subsidy policies affect the choice of chdd care, including type of care, hours of care, quality of care, **parents'** perceptions of quality and flexiiility of care, cost of care, continuity of care, and other features?

- How would a change in child care subsidy policies **affect** family well-being, including income levels, parent's psychological well-being, child support, adult relationships **artd** conflict, and parenting stress?
- How would a change in child care subsidy policies affect child well-being, including school readiness and performance, behavior, health, and involvement with the noncustodial parent?

This research project would also support a descriptive study of job characteristics and child care use by welfare recipients in several sites **as** they make the transition to employment.

We considered whether it would be possible to evaluate variations in child care subsidy policy by simply examining a nonexperimental contrast between states with different child care policies but decided against it because so many other factors vary across states that we could not be sure that differences across states could be attributable to the variations in child care policy. For instance, data are available on major TANF and child care assistance policies in the states [see, for example,; the Urban Institute's Assessing the New Federalism state database and National Child Care Information Center (1998)]. However, the policy variation and other differences between states leave us with too many potential sources of differences in outcomes between states. Changing child care policies experimentally *within* states will enable us to hold the other state conditions constant so that differences in outcomes can be attributed to the change in specific child care policies with a high degree of confidence.

1, The Intervention: Specific Policies to Be Tested

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This research project could be designed to examine the effects of several different experimental policy changes on employment. Examples of such policy changes and a rationale for each type of change follows:

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- *Higher income eligibility.* The state's income eligibility limit could be increased from an existing low level (for example, **120** percent of poverty) to a higher level (for example, **250**-percent of poverty) on an experimental basis. This would extend policies to make child care more affordable to a broader population of low-income families.
- Lower Sliding Fee Scales. The state's sliding fee scales could be reduced from a relatively steep fee schedule to a more gradual increase in fees with increases in income on an experimental basis. In another variation, the fee scale could be reduced throughout the eligible income range without changing the slope. These policies would increase child care affordability by reducing what low-income parents pay for subsidized care.
- Change Type of Sliding Fee Scale. States that express the sliding fee as a percentage of the cost of chdd care could change the type of fee scale to a percentage of family income (a rate that varies only with family income, and not with the cost of child care). This option would essentially test the effect of eliminating the variation in the cost of child care to the family receiving subsidized care.
- Improve Information and Administrative Efficiency. Some states have administrative procedures that make it difficult for families to learn about the subsidy programs or to find out what they need to do to apply for the programs. Some states also have administrative rules that make it difficult for families to meet re-certification requirements and difficult for child care providers to receive regular, timely payments for subsidized care. This option would provide better information to parents and improve administrative efficiency so that disruptions in chdd care eligibility and payments will be much less kely.

We considered whether it would be useful to test policy options that would change the maximum payment rates for child *care*, since papent rates may **influence** the number of providers willing to offer subsidized chdd *care*. However, it is not clear how to implement an experimental policy regarding payment rates. If child care providers are not informed that **maximum** payment rates **are** being **experimentally** increased, **then** they will behave according to the current, less generous payment **rate** schedule, and we would not expect to see a change in behavior under the experiment. If providers are informed that some subsidized families will receive child care at a higher payment rate, **then** providers may seek out these families and **refuse**

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to serve the others, even if they previously accepted the lower payment **rate**. A different basis for research on the effects of **variation** in payment **rate** levels must be devised.

Given the list of possible subsidy policy variations, which does it make sense to test? It would be best to develop a very short **list** of **policy** variations with the highestpriority for testing because we would want to test each policy change in multiple sites in order to increase generalizability of the results. One criterion for selecting policies is to identify those that move **states** in what *seems* to be a positive direction fiom the perspective of encouraging work Below we discuss a proposal and rationale for a subsidy policy that would move in such a direction. We also present a slight variation on this approach **as** well **as** several alternative interventions that might be tested.

a. Design and Rationale for Subsidy Policies That Could Promote Employment

Child care subsidies promote employment by reducing the cost of chdd care. Therefore, we recommend testing **policy** options that would reduce sliding fee scales and increase income eligibility limits so that low-income **parents** who enter the child care subsidy program can have relatively low child care costs throughout the period when earnings are low and chdd care costs are most likely to discourage work.

To promote employment, sliding fee scales must be affordable for low-income parents but should also gradually shift child care expenses from the state to the parent as income rises. Then, as parents approach the point at which they are income-ineligible for subsidies, they will be paying nearly all of their child care costs. Notches, or sharp increases in child care expenses with small increases in income, should be avoided because they cause a substantial decline in net income when *gross* income increases by a small amount; this is a deterrent to work Designing

an ideal sliding fee scale therefore **also** involves choosing a **sufficiently high** income eligibility limit to avoid a notch. However, if we were to **maintain** sliding fees at 10 percent of income, and the **cost** of **child care** is \$5,000 per year, then we could only avoid a notch if families were eligible for child care subsidies **util** their **annual** income **'reached** \$50,000 per year, which might be prohibitively expensive for **states**. An alternative strategy that would focus child care subsidies on the population most likely to show labor supply effects in response to the policies is to allow families to be eligible up to about \$30,000 **per** year.' The fundamental idea behind this strategy is that a notch at a relatively high income of \$30,000 per year would be acceptable because we expect that families in that income range have a strong attachment to the labor force, so their employment decisions would not be greatly influenced by variations in chdd care **costs**. If an income level other than \$30,000 seems to meet this criterion, we could choose that income level instead **as** the eligibility cutoff. An income level of \$30,000 per year corresponds to about 220 percent of the poverty line for a family of three. Sliding fees could be set at 10 percent of income (or lower for families with income below the poverty he).

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An additional consideration when designing the sliding fee scale is to **recognize** that, from the family's perspective, child care expenses are part of a package of earnings, tax, and transfer programs. It may therefore be best to consider the effect of chdd care sliding fees on family budgets in combination with the other tax and transfer policies (see Figure 11.1). Social security taxes on earnings **are quite high**, at 7 percent, while *earnings* **are** low, but they **are** offset to some degree by the **Earned** Income Credit (EIC), which is phased out fairly quickly, at a **rate** of 21.06 **percent**, **as** earnings rise from \$12,000 to \$29,000 per year for a family with two children (U.S. House of Representatives 1998). Welfare benefits and food stamps **are** available for families with very low incomes but phase out quickly **as** earnings rise to the poverty line and'just beyond The Food Stamp phase out rate is 33 percent. Figure II.1 shows the composition of income **as** earnings rise and **as transfer** programs are introduced and then phased out, for a mother of three in Pennsylvania. The effect of phasing out a package of transfer benefits by the point at which income reaches about \$30,000 per year is high marginal tax rates at many points along the income scale. Marginal tax rates are at least 40 percent over many income 'ranges and are at least 60 percent as income rises from \$12,000 to \$20,000 per year (see Figure 11.2). Thus, over some income ranges, the marginal **tax** rate is very high. If the child care sliding fee scale is also designed to be very steep over this income range (which is true in many states), the work disincentives may be substantial.

Therefore, we would recommend experimenting with a relatively low sliding fee over the full range of eligible incomes to avoid work disincentives until the family becomes ineligible for child care subsidies at about \$30,000. If the child care benefit of about \$5,000 per year is phased out smoothly over the annual income range between \$5,000 to \$30,000, it would require a benefit reduction rate of 20 percent. If we instead try to keep the child care benefit reduction rate very low, for example, at 5 percent, then we would create a notch at \$30,000 "that would tend to discourage work effort, unless we believe that child care costs have ittle effect on work effort at this income level. If we decide to test the policy that maintains a very low child care benefit reduction rate and a notch at \$30,000, it would be interesting to contrast that policy against one that avoids the notch but instead allows the sliding fee to rise quickly, after being relatively constant at lower incomes, as families approach the income eligibility cutoff.

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FIGURE 11.1

DISPOSABLE INCOME AT VARIOUS WAGE LEVELS BEFORE CHILD CARE EXPENSES, MOTHER OF THREE, PENNSYLVANIA, JANUARY 1997



Source: Based on calculations by the Congressional Research Service U.S. House of Representatives 1998), pp. 408-409.

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Two other features of subsidy policies vary considerably across states and may have important impacts on employment stability. First, the amount of information that welfare recipients and low-income worlung families have about the availability and value of child care subsidies ranges from very extensive to none at all (Meyers 1996). Second, the administrative ease with which families **are** enrolled in subsidy programs, and with which their eligibility and payments are maintained over time also varies substantially across states. In some **states**, eligibility and payment procedures work smoothly and efficiently, while in others, families may have difficulty applying for subsidies, providers may be paid late, and eligibility may be *cut* off without warning for failure to follow a procedure that the family only p r l y **understood**. It is possible that better information and more efficient **and** "customer-friendly" **administrative** procedures might smooth receipt of subsidies for families who need them, and this, in turn, may do more to stabilize employment than any change in the financial parameters of the program.

b. A Cash Alternative to Child Care Subsidies

Another possible approach to testing alternative chdd care policies is **to use** a design similar to the Negative Income Tax experiments, in which families were given cash on a monthly basis that was related to their earnings levels and reflected different policy decisions regarding the size of the income guarantee and the **rate** of benefit reduction with respect to earnings. Providing families with a monthly cash amount would simplify the policy analysis to focus on the effect of a **child** care subsidy amount that varies with income, **rather** than the effect of different levels of **maximum** payment rates and sliding fees. Because the child care subsidy in the current system is the **difference** between the maximum payment **rate** and the sliding fee, different levels of

maximum payment rates and sliding fees may imply the same subsidy level even when payment rates and fee scales are different.

However, most states do not provide the child care subsidy **as** a simple cash payment to parents, in part, because political support for a child care subsidy depends on assurances that the money will be **used** for child care expenses. And cash payments cannot be so earmarked. Moreover, providers would be less willing to serve low-income parents receiving cash subsidies because **the** providers would be concerned that families with limited income would not use the cash subsidy to pay them on a regular basis. Therefore, we do not recommend using cash subsidies **as** the experimental child care policy.

c. Recommended Interventions

We recommend testing two or three policy variations in each site. One policy variation would provide low sliding fees throughout the range of eligible incomes and increase income eligibility to about \$30,000, or about 220 percent of poverty. A second policy variation would be to provide clear information about eligibility for child care benefits and **simplify** eligibility and provider payment procedures to make the program more accessible and efficient. Thus, one experimental group would operate under the current set of sliding fees and income eligibility limits, but with better information and administrative practices, allowing us to test the effects of these administrative factors on employment. A second experimental group would be offered low sliding fees and higher income eligibility limits, along with better information and administrative practices, allowing us to test the additional impact on employment of more affordable child care subsidy policies. An additional group of families not experiencing either change would be used as a comparison with the other two groups. This design would allow us to test both the

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administrative/informational issues as well as a change in the sliding fee scale and income eligibility limit that may offer more incentive to work

Two variations in this design would be possible while continuing to test the impact of informational and administrative reforms and the effect of more affordable subsidy policies. First, an intermediate sliding fee schedule could be tested to measure the impacts of policies that would be less expensive for states. (This intermediate sliding fee schedule would fall somewhere between the average sliding fee schedule in the states and the more affordable sliding fee schedule that was proposed.) Second, the interventions could be designed to separately test the effect on employment of increasing the income eligibility limit (extending the state's old sliding fee schedule through the new income range) and the effect of decreasing the sliding fee scale along with increasing the income eligibility limit.

Another possible design variation is to randomize one group to receive no chdd care subsidies, and two other groups to receive subsidies under the old and new policies, respectively. Many low-income families who are eligible for chdd care assistance do not receive help **paying** for child care, so it would be important to contrast the experiences of this group with the othm. As long as the state involved in the demonstration cannot serve all of the eligible families, it would be ethical to identify a "no subsidies" group for research purposes. It would be possible to define this group as "no subsidies for a specified **pericd** of time (for example, two or three years)" in order to increase the acceptability of such a research group and to allow the intervention to last sufficiently long to test its effects. Including a group of families who were randomly assigned to receive no subsidies would enable us to study labor supply effects of no subsidies, which is important because a large proportion of low-income working families and welfare families do not receive subsidies.

However, each new experimental group **increases** the sample size necessary for the demonstration by a large amount (see Section A.3). Therefore, it would be a more efficient use of research funds to choose only those experimental options that are likely to teach us a lot about the relationship between alternative policies and outcomes. Small variations in subsidy policy parameters may not individually have a very substantial effect on employment, so it may be more cost-effective to choose a single set of subsidy policies that is expected to have strong effects on employment, contrasting that option with improvements in administration, which are also expected to have strong effects.

2. Target Population and Sampling Strategies

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The target population for this demonstration is low-income parents who are making the transition from welfare to work Because of the strong economy and the current welfare policy **emphasis** on self-sufficiency, many of the parents who are "making the transition" to work are currently employed. These **are** the people who were previously receiving welfare and who might return to welfare in the event of job loss or other crisis. Therefore, the chdd **care** subsidy policy to be examined in this demonstration would be offered to two groups of f d e s : those receiving welfare (the welfare sample) and those who are not on welfare but who have low income (the low-inme sample). The latter group will consist primarily of **parents** who **are** employed, but ideally, parents targeted by the sampling strategies discussed below **voill** have a tenuous attachment to the labor force. Many of these parents will have been former welfare recipients and/or would be expected to receive welfare at some time in the future in the absence of the experimental chdd care policies.

In this section, we describe various strategies for recruiting both types of families. We will also discuss how the **choice** of recruiting strategy may influence the ease and costs of implementation, the **efficiency** of the sample for addressing the research questions, and the types of questions that can best be addressed by a demonstration using each type of sample.

The welfare sample will consist primarily of single parents, and most of them will be single mothers. For the low-income sample, however, a decision must be made about whether to recruit all types of families or only single parents. Each of these strategies has advantages and disadvantages. Recruiting a broader set of families would increase the generalizability of the results and allow researchers to address additional questions, such **as** whether subsidy policies influence single-parent and two-parent families differently. For example, the presence of two parents may influence child care choice and stability in employment. On the other hand, studying a **sample** consisting entirely of single parents would focus the research on the group that has been at the center of the welfare reform debate. In addition, single parents may have greater child care needs and be more likely to participate in the child care subsidy program, since they are likely to have fewer informal child care options. These considerations would need to be weighed in the design phase of the demonstration.

A related issue is how to restrict the sample with respect to the age of children. Restricting the sample to families with young children (under 4 years) would focus the research on those families with the most difficult child care challenges and most in need of child care help over the immediate follow-up period for a child care demonstration. Including families with older, school-age children as well would broaden the scope of research that could be carried out with demonstration **data**. We recommend that the families selected for the demonstration have a child under **4** years old to focus the research on families with the highest potential child care costs and

to allow at least a year to follow families who would need to arrange child care to cover all of the parents' work hours. Many of these families would also have school-age children so that, if there is sufficient interest, the child care issues for older children could be examined. We-would not recommend narrowing the rule for the age of youngest child much more than this because this may make it difficult to recruit a large enough sample, but the degree to which restricting the age of youngest child would complicate sample recruitment would ultimately depend on the size of the community in which the demonstration is operating.

a. Welfare Sample

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The key issue in selecting a welfare sample for the demonstration is to select the point in time at which welfare recipients should be chosen, randomly assigned into treatment and control groups, and offered a child care subsidy. There are three options: (1) the point at which families enter the welfare system, (2) the point at which families reach a job-ready stage, and (3) the point at which families enter employment and apply for child care subsidies. We discuss these points fiom the perspectives of which research questions would be best addressed by the random assignment design and which points offer the most operationally feasible basis for random assignment.

If random assignment occurs at welfare entry, with families receiving a clear explanation of their child care benefits at the outset, the demonstration will be designed to answer research questions about the effect of the child care interventions on entry into employment. However, random assignment at welfare entry is a weaker design if our primary interest is in employment retention, because the child care interventions may affect employment entry. Since the composition of the group of employed parents would thus be affected by the intervention, it would not be possible to use the random assignment design to look at effects of child care on the stability of employment, earnings over time, and other employment outcomes that depend on employment entry. On the other hand, an advantage of welfare entry **as** the random assignment point is that it is a well-defined point in the flow through the welfare system, so random assignment could be implemented easily and with a high degree of integrity.

Another option for the random assignment point is to assign families to child care benefits when they reach the job-ready stage and visit the welfare office to discuss employment plans with a case manager. The exact point of random assignment would depend on how families move through the welfare system, which would vary across states and possibly, across communities. In general, however, states may vary according to the emphasis they place on quick entry into jobs or an employment-related activity. States that place a strong emphasis on quick entry into jobs or related activities may be able to identify a random assignment point that would be close to job entry.

If random assignment were to occur sometime during job readiness activities, the demonstration may still be best designed to address research questions' about entry into employment. However, the later the point in the process that random assignment occurs, the more likely that families in the demonstration will be so close to entering employment that the child care intervention will have little or no impact on job entry. If random assignment occurs close enough to employment entry, then questions about job retention and other employment outcomes can be addressed.

A drawback to selecting a point in the job readiness process for random assignment is that this point may be less well-defined than welfare entry. If the random assignment point is not well-defined but determined at the discretion of the case manager, the integrity of random

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assignment can be threatened by gaming behavior on the part of case managers who are aware that random assignment will occur at a particular point in the process. Another problem with selecting a point in the job readiness process for random assignment is that this point may differ across communities, so the characteristics of the sample of families entering the demonstration would be very different. Moreover, finding a point for random assignment during the job readiness process may not be operationally feasible in some communities.

A third option for the random assignment point is to enroll families who have found a job and are applying for a child care subsidy. This option would provide the strongest basis for using the random assignment design to examine questions of employment retention and related issues that depend on being employed. The point of application for child care subsidies is also a well-defined point for random assignment that will ensure the integrity of the random assignment system. However, to ensure that the families entering the child care demonstration are broadly representative of the families leaving welfare for employment, all families receiving welfare would need to be well-informed about the availability of child care subsidies and how to apply for them. Otherwise, the group of welfare recipients enrolling in the demonstration would likely be those who are more skilled than other welfare recipients in finding employment, more savvy about' benefits available to them (like child care subsidies), and more in need of child care assistance.

Since all welfare recipients would need to be well-informed about the availability of child care assistance and how to apply for it, random assignment at the point of application for subsidies would also preclude studying the effect of subsidy policies on entry into child care programs. However, it would still be possible to examine how differences in information and program administration following child care program entry **affect** parents' ability to maintain

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their child care arrangements and employment over time. Another possible way to test the effect of information and administrative simplicity on child care program participation and employment over time would be to choose a different community in the state that has similar characteristics, but where idormation and program administrative practices will not be changed. This community could provide a control group for the demonstration. The disadvantage of this strategy is the difficulty of finding a valid comparison community. Another possibility is to use different welfare and child care program offices within the same city to provide the contrast in administrative and idormation practices. In this case, the sample of families in the experimental groups would be more similar, and labor market and other community characteristics would be more similar than if different communities were used..

b. General Low-Income Sample

Examining a more general sample of low-income parents who do not receive welfare is useful for at least two reasons. First, although the members of this sample will not currently be receiving welfare, they may have received welfare in the past or may do so in the future. Thus, although they may not currently face the problem of finding adequate employment and child care, they are at risk of leaving their current job, entering welfare, and facing these employment/child care problems in the future. Second, even low-income parents who will never receive welfare face many of the same problems with finding and maintaining high quality, flexible, and affordable child care arrangements as do welfare recipients. Child care subsidy programs are, in fact, intended for both those leaving welfare and the working poor.

The sample of interest among low-income parents includes those who are currently employed but who have a tenuous attachment to employment and/or those who are not currently employed but who are looking for work. As was the case with welfare recipients, the random assignment point **influences** the questions that can be addressed. We discuss two approaches to identifying low-income, non-welfare families that involve tradeoffs in terms of the point of random assignment that are similar to those discussed for the welfare sample.

One way to draw a low-income sample would be to use random-digit-dialing (RDD) methods in telephone exchanges from low-income neighborhoods. Interviewers would sample phone numbers from these exchanges and conduct screening interviews to identify whether the number reaches a household or a business, and then, if it is a household, whether the family **has** low income, a child under 4 years old, and is not receiving welfare. If the household is eligible for the demonstration, the interviewer would assign the family randomly to one of the experimental groups, offer the appropriate child care benefit, conduct a short baseline interview, and collect some contact information to aid in future follow-up survey tracking. The offer of child care benefits would include encouraging the family to apply for those benefits if they are employed (and not currently receiving them) or to apply when they became employed.

A drawback of this approach is that random assignment would occur at 'a range of points in the process of moving into jobs. Therefore, many families who were identified **as** eligible for the child care demonstration may not obtain jobs or use the experimental child care benefits. In addition, it is expensive to use RDD methods to obtain a sample of this type. Finally, the **low**income sample obtained through RDD methods would not be comparable to the welfare sample, so it would not be possible to combine the two samples for analysis. Therefore, samples of both the welfare and the low-income groups would need to be large enough to detect meaningful impacts of the demonstration, which could add to the cost of the demonstration. An alternative strategy would be to sample nonwelfare low-income parents when they apply for child care subsidies. -Since this was also described as an option for welfare recipients, the same sampling strategy could conceivably be used to select both samples of interest, and if so, it would be possible to combine the welfare and low-income samples in the analysis. However, to ensure that a sufficiently broad sample of low-income parents enters the demonstration, it would be important to consider extensively promoting the availability of subsidies throughout target low-income neighborhoods. The idea would be to draw in many low-income parents as they were first getting jobs and also attract other low-income parents who were already employed but perhaps struggling with child care arrangements. Unfortunately, using an information campaign to bring families into the child care **office** would decrease the ability to test the effect of better information about subsidy policies on employment outcomes. However, we could still develop strategies for varying the amount of information and administrative efficiency once the family has entered the child care assistance program, and examine how well **families** maintain child care assistance and employment over time.

With this sample, analysts could study the effects of the child care subsidy policy of interest on job retention. Care would have to be taken to gain state and local community cooperation, since the promotion of child care subsidies would have an unknown effect on participation in the program and could increase program costs substantially.

3. Key Outcomes and Sample *Size* Considerations

The key relationships of interest in this demonstration are between the child care subsidy policies, and the employment outcomes and child care choices of low-income parents. In this section, we describe employment and child care outcomes that could be tracked as part of the demonstration, and we discuss sample size considerations, including how large samples would need to be to discern meaningful impacts of changes in subsidy policy.

Outcome measures could be obtained fiom a combination of administrative data fiom welfare and child care programs, Unemployment Insurance earnings data, and periodic surveys of parents in the sample. The administrative data could provide very basic measures of employment, welfare program participation, and child care program participation, but survey data would be needed in order to obtain detail about characteristics of jobs and child care arrangements. Because we would expect families to obtain jobs and make child care choices within a relatively short period after they receive information about the child care policies available to them, we would recommend conducting a survey within 12 to 18 months of enrollment in the demonstration. The earlier survey point would be preferable if random assignment occurs very close to or at the point of obtaining employment, while the later survey point would be preferable if random assignment occurs earlier in the flow fiom welfare to work.

To provide dormation that is useful in identifying subgroups of families in the analysis, we also recommend a short baseline survey, which could be completed as part of intake and random assignment. The baseline survey would also include contact information that would reduce the cost of locating families for future follow-up surveys.

a. Main Employment and Child Care Outcomes

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The child care subsidy available to low-income parents can influence employment outcomes in a variety of ways. The key employment outcomes include initial time to employment among welfare recipients and various measures of employment retention and stability among **low**income working parents. **As** we discussed in the previous section, if the random assignment point is early in the flow from welfare to employment, the random assignment design can be used to examine the effects of the experimental child care policies on employment entry and initial characteristics of jobs. If the random assignment point is closer to the time low-income parents obtain jobs, then the random assignment design can be used to measure the effects of the experimental child care policies on job retention.

A child care intervention that occurs early in the job search process may affect several initial employment outcomes. For -instance, the availability of generous subsidies may encourage and/or allow low-income parents on welfare to find employment more quickly and work for more hours than they otherwise would. The subsidies may influence the initial characteristics of the jobs that welfare recipients take, such **as** wages, occupation, or fringe benefits, but the directions of such effects are not clear.

Table 11.1 provides a list of potential outcomes that could be examined **as** part of an evaluation of the effects of experimental child care policies. We discuss the employment outcomes in this section, but the table lists illustrative outcomes in the areas of child care choice, parent and family well-being, and child well-being, which relate to the research questions listed earlier in this section.

Time-to-employment measures reflect how quickly welfare recipients find jobs (following either their initial orientation or job-readiness determination). Other key outcomes reflecting initial job characteristics include ' hours worked and weekly earnings. In addition, information on wages, fringe benefits, occupation, and the percentage of people whose jobs involve irregular shift work would add detail about the characteristics of jobs obtained by welfare recipients with and without access to more generous child care subsidies.

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TABLE II. 1

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ILLUSTRATIVE OUTCOME MEASURES FOR A CHILD CARE POLICY DEMONSTRATION

Emplo	yment ·				
Time to Employment Percentage employed within 6 months Percentage employed within 12 months Percentage employed within 24 months	Employment Stability Percentage employed each month after job start Average percentage of weeks employed during first two years after job start Average percentage of weeks employed during first five years after job start				
Characteristics of Initial Job	Distribution of weeks employed during first				
Wage (\$11001)	two years (percentages				
Weekly Farmings	Distribution of weeks employed during first				
Shift work (nercentages)	two years (percentages)				
Regular	Less than 25%				
Evening/night	25% to 50%				
Variable	50% to 75%				
	More than 75%				
Fringe benefits					
Health insurance	Employment Patterns				
Life insurance	Length of initial employment spell (%)				
Paid vacation					
	Less than 4 months				
Occupation	Less than 12 months				
Earnings Growth Conditions, in first year after job start Wage (\$/hour) Hours worked per week Weeks worked Annual earnings	 Time until reentry into employment after initial spell ends Number of employment spells during first two years following initial job start Reasons for ending employment spells 				
Conditions five years after job start Wage (\$/hour) Hours worked per week Weeks worked					
Change in earnings (percentages) First year to second year First year to fifth year					
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TABLE II. 1 (continued)

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Thild Care					
Percent Ever Used Child Care	Parent's Rating of Child Care Quality				
Center Care	Warmth				
Nonrelative home-based care	IRich environment				
Relative Care	Skilled caregiver				
	'Talk and Share				
Hours Per Week in Child Care	Accepting and supportive				
	High risk care				
Stability	Child safe and secure				
Number of providers concurrently	Child getting along socially				
Number of providers in past $\boldsymbol{6}$ months					
	(Other Parent Ratings of Child Care				
Child Care Cost	Satisfaction				
Price of child care	Continuity of care				
Cost of child care to family	Child's special needs				
Subsidy amount	Difficult work schedule				
Transportation time to child care	Affordable Care				
Share of earnings spent on child care					
Share of family income spent on child care	Flexibility				
	'Work				
Employment Problems Attributable to	Caregiver				
Child Care]Family				
Lost hours of work					
Lost days of work	:Professional Quality Ratings				
	(Quality of caregiver				
Reasons for work interruptions	Caregiver-child interactions				
Provider illness					
Child care setting closed	Safety and health				
Need to find new provider					
Sick child	Caregiver education				
Couldn't pay provider	Training and experience				
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Lost job or employment opportunities	Child – staff ratios, group size				
	Clobal Quality Datings				
	Giobal Quality Kallings				
	Cultural and language environment				
	Caregiver's detachment, sensitivity, narshness				
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 TABLE II. 1 (continued)

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Parent's Welfare Program Participation					
Months received welfare	Food Stamp amount				
Monthly welfare mount	Subsidized housing				
Medicaid eligibility	Number of times returned to welfare				
Parent's Well-Being					
Literacy and Education	Social and Psychological Well-Being				
Literacy skills	Social support				
Educational attainment	Marital status				
	Major life events				
	Depression				
	Self-efficacy				
Health Status and Health Care	Parenting Skills and Practices				
Health status	Knowledge of child development				
Health insurance coverage	Parenting practices				
Health care utilization	Parent-child relationship				
Medical home	Child abuse or neglect				
Substance use					
Father Involvement	Home Environment				
Contact with father	Quality of home environment				
Activities with father	Neighborhood characteristics				
Child support	Household composition and stability				
	Family conflict				
	Family routines				
Child's V	ClaBeng				
Cognitive Development	Social Well-Being				
Receptive vocabulary	Prosocial behavior				
Expressive vocabulary	Self-concept				
School readiness	Compliance with parent				
Attention during assessment					
	Health Well-Being				
Emotional Well-Being	Health status				
Self-regulation	Well-child visits				
Behavioral problems	Use of emergency room for care				
	Hospitalization for accidents				

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However, a more important effect of child care subsidy policy may be on the job retention or employment stability of low-income parents. Employment stability outcomes include measures of individuals' levels and patterns of employment over a given follow-up period. For example, the level of employment could be measured by monthly employment rates after the individual began their first job. An alternative way of loolung at employment stability is to examine the employment patterns of low-income parents. How long is their initial employment spell? How quickly do they return to a job after their initial employment spell ends? How many spells do they have in total over a given period? Rangarajan, et al. (1998) found that nearly half (45 percent) the employment spells are very short, ending within 4 months, though most people whose employment spells end are back in other jobs within a year (53 percent). (Rangarajan, et al. (1998) examined employment outcomes for welfare recipients who found jobs during the period from 1979 to i994.) Earnings growth is another plausible outcome, since a generous child care policy that positively influences the hours low-income parents work and their employment stability may also lead to larger earnings growth over time. Thus, another set of outcomes that could usefully be examined would measure the degree to which earnings increase over time for low-income parents who get jobs. Among welfare recipients who obtained jobs during the period 1979 to 1994, Rangarajan et al. (1998) found that there was a sizable increase (33 percent) in earnings during the first five years following the start of the first job.

Child care choices are another important set of outcomes that would be-examined **as** part of the impact analyses. We would expect more generous child care subsidies and more efficient child care program administration to increase the proportion of eligible families who participate in child care subsidy programs. Families participating in chdd care subsidy programs would be more likely to choose center-based care because the subsidy makes it more affordable. These

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families would also be more kely to continue in their child care arrangements for longer, use child care for more hours-per week, and use child care for a greater number of months.

Table **II.2** shows key chdd care outcomes that were measured **as** part of the Teenage Parent Demonstration (TPD) evaluation. The TPD evaluation looked at the effects of mandatory school and work requirements on a sample of fitst-time welfare recipients who entered welfare **as** teenagers. The table shows impacts measured on selected child care variables, including whether chdd care was ever used and the percentage of mothers using center-based care, nonrelative home-based care, or relative home-based care. TPD was not a child care demonstration, but case **managers** did try to provide mothen with the assistance they needed, including financial assistance, in order to find child care so that they could attend school, work, or training. Case **managers** did not offer a more generous package of financial assistance them was already available in the state. In addition, the mothen enrolled in TPD had younger children and were younger, on avemge, than we would expect the children and mothm eligible for the proposed chdd care subsidy demonstration to be. Therefore, we would expect the chdd care subsidy demonstration to have greater impacts on choice of care then TPD did.

b. Sample Size Considerations

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Given this design, an important question involves how large a sample is necessary to detect substantively important effects of the treatment across the demonstration sites. In other words, what *are* the *minimum detectable impacts* of demonstrations using various sample sizes? If the

TABLE 11.2

KEY CHILD CARE OUTCOMES FROM THE TEENAGE PARENT DEMONSTRATION

	Control	Group	Estimated	Estimated Impact	
Child Care Outcome	Lowest	Highest	Lowest	Highest	
Two-Year I	oliow-Up Esti	mates area a			
Percent ever used child care	54.8	70.2	6.9	14.3	
Percent of families using child care who used center care	10.2	16.2	3.5	8.0	
Percent of families using child care who used nonrelative home-based care	20.1	16.2	-2.3	1.0	
Percent of families using child care who used relative care	76.1	76.9	-1.6	-5.9	
Eour-Month	Follow-Up Su	bstudy			
Percent in activities (job, school, or training)	······································	31.3	18	3.5	
Percent of all mothers who are using child care	-	31.0	19	9.0	
Percent of all mothers who are using center care	2.2		2.	2.0	
Percent of all mothers who are using					
nonrelative home-based care		4.6	5.	1	
Percent of all mothers who are using relative care	24.5		10.0		

SOURCE: For four-month follow-up substudy: Kisker et al. 1990. For two-year follow-up estimates: Maynard et al. 1993.

"The Teenage Parent demonstration operated in three sites. Maynard et al. (1993) present estimates separately for each site. Therefore, we have reproduced on this table the lowest and highest of the three site estimates for the control group mean and the estimated impacts.

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sample that is analyzed is too small, then the estimated impact on employment outcomes will $\frac{3}{3}$ likely be statistically insignificant even if the true effect is substantial. As the sample size grows, the likelihood that the estimate of this substantial impact will be statistically significant also grows. However, costs will also increase **as** the sample size grows, so we would like to select a sample that is small enough to keep costs to a reasonable level but large enough to yield an estimate of any substantively important impact that is likely to be statistically significant.

To find this "preferred" sample size, we assess the statistical properties of various sample sizes that could be used in a child care subsidy demonstration. We assume that **we** will pool the sample across sites for analysis, although it would also be useful to estimate impacts for individual sites to understand the aggregate results better. We also assume an equal number of treatment and control group members because this sample **mix** generates the most precise impact estimates, although this assumption could easily be relaxed.

The sizes of minimum detectable impacts depend on three factors: (1) the sample sizes used in the estimation, (2) the standard deviation of the employment outcome being studied, and (3) the parameters chosen for the statistical tests that will be used? Minimum detectable impacts will be larger if sample sizes are smaller, outcomes are highly variable, or statistical tests with great power and high levels of confidence are used. In addition, since low response rates would lead to smaller samples, this would also lead to larger minimum detectable **impacts**?

Table II.3 shows potential sample sizes for the demonstration along with minimum detectable impacts for a binary employment outcome with mean values of 0.50, 0.60 (or 0.40), and 0.70 (or 0.30). These values would be reasonable monthly employment rates during the

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TABLE 11.3

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Sample Size Treatment Minimum Detectable Impact of Control Group Group Mean of Employment Rate Outcome Subsidy Increase (percentage points) 250 250 0.50 11.1 0.60 10.40 10.9 250 250 250 0.70 10.30 250 10.2 500 500 0.50 7.9 500 500 0.60 10.40 7.7 500 500 0.70 10.30 7.2 750 750 0.50 6.4 750 750 0.60 *i* 0.40 6.3 750 0.70 / 0.30 750 5.9 1000 1000 0.50 5.6 1000 1000 0.60 10.40 5.4 ! 000 0.70 10.30 1000 5.1 1500 1500 0.50 4.5 1500 1500 0.60 10.40 4.4 0.70 / 0.30 1500 1500 ... 4.2 2000 2000 0.50 3.9 2000 2000 0.60 IO.40 3.9 2000 2000 0.70 10.30 3.6

SAMPLE SIZES AND MINIMUM DETECTABLE IMPACTS

NOTES: Minimum detectable impacts assume a simple difference of means estimator and are calculated assuming a one-tailed t-test with 80 percent power and a 95 percent confidence level.

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several-year period following the start of an initial job for a low-income parent. To calculate minimum detectable imparts, we assume that a one-tailed t-test of differences between treatment and control group mean outcomes would be performed at a 95 percent confidence level with a power of 80 percent. We also assume that the treatment impact would be estimated with a simple difference of means estimator.⁴

The minimum detectable impacts are expressed in terms of percentage points. **Thus,** for a total sample of 1,000 split evenly between treatment and control group members, the minimum detectable impact of the treatment on a binary employment outcome with a mean of 0.50 would be 7.9 percentage points. In other words, we would expect to be able to detect the impact of a treatment that led to an increase in the employment rate from 0.50 to 0.579 (or an approximately 16 percent increase). If the true impact was only 5 percentage points, or 10 percent, we would not expect **this** design to be able to detect it (that is, the estimated impact would be relatively likely to be statistically insignificant).

Actual sample sizes for the demonstration would need to be larger in order to ensure that the completed sample size reaches the numbers shown in this table. The table- shows that **as** the sample increases fi-om 500 (including 250 treatment and 250 control group members) to 4,000, the minimum detectable impact for a binary outcome with a mean value of 0.60 falls from 10.9 percentage points (about 18 percent) to 3.9 percentage points (6.5 percent). The minimum detectable impacts for an outcome with a mean value of 0.50 are similar to these impacts, but the minimum detectable impacts **are** slightly lower for binary outcomes with a mean value of 0.70.

Given these minimum detectable impacts, what is a reasonable sample size for a demonstration involving **an** increase in the child care subsidy given to low-income parents? The answer to **this** question depends in part on exactly what policy change is being studied in the .

demonstration. If the policy change involves a large increase in child care subsidies going to low-income parents (an&a resulting decrease in their child care costs), we would expect the resulting impact of the policy change on the employment outcome being studied to be relatively large. **Thus**, the sample needed to study this type of policy change would not be as large as the sample needed to study a smaller expected change in child care subsidy policy.

Currently, child care subsidy policies lead to child care fees for low-income parents that range from nothing (or almost nothing) to several hundred dollars a month. In Alabama, for example, fees range fiom about \$20 a month to about \$290 a month (National Child Care Information Center 1998). Similar ranges in other states include \$8 to \$220 in Illinois and \$22 to \$491 in **Minnesota.'** If we assume that a reasonable policy to test in the demonstration would require low-income parents to pay no more than 10 percent of their monthly income for child care, this would lead to a decrease in the fees chmged to parents at the upper end of the fee range. In particular, the upper limit on monthly fees would fall to about \$144 in Alabama, \$182 in Illinois, and \$286 in Minnesota. The corresponding percentage decreases are 50 percent in Alabama, 17 percent in Illinois, and 42 percent in Minnesota. Selecting a fee decrease between the lower bound of Illinois and the upper bound of Alabama, and taking into account the fact that such a policy change might lead to smaller fee decreases for parents whose incomes did not put them at the top of the eligible income range, we believe that it is reasonable to think about testing a policy that would involve a decrease in low-income parents' child care fees of about 25 percent.

Research on the relationship between child care costs and employment outcomes can give us some idea what the true impact of this proposed 25 percent decrease in child care fees to **low-**income parents might be. Two studies have examined the relationship between a family's child '

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care expenditures and mothers' employment rates. The General Accounting **Office** (1995) found an elasticity of -0.50 for poor mothers and -0.34 for near-poor mothers. **Kimmel (1995)** found an elasticity of -0.35 for poor single mothers. **Kimmel's** estimate implies that a 25 percent decrease in child care expenditures would lead to an 8.75 percent increase in poor single mothers' employment rate. If the base employment rate of this group is 60 percent, **an** 8.75 percent increase amounts to an increase of 5.25 percentage points.

Thus, research **suggests** that the policy described above might have a true impact of 5.25 percentage points. Table II.3 shows that a sample of 1,000 treatment and 1,000 control group members would not be able to detect this impact with sufficient power (since its minimum detectable impact is 5.4 percentage **points**). To generate a minimum detectable impact of 5.25 percentage points with 80 percent power, a sample of 1,076 per group would be sufficient. If we have three groups (one control group **and** two treatment groups) we would need a **total** sample of 3,228.

We may also want to measure minimum detectable impacts of the demonstration on outcomes that are continuous rather than binary, such **as** mean wages or hours worked **per** week in a low-income parent's initial job. According to Rangarajan et al. (1998), welfare recipients finding **jobs** end up worlung **an** average of 32 hours a week and earn about \$6.50 an hour on average. With a sample size of 1,076 per group, the minimum detectable impacts of the demonstration would be 1.61 for hours worked and \$0.32 for wages (both effects of about 5 **percent)!** These sample sizes generate impact estimates that are reasonably precise.

Another issue worth considering before selecting a final sample size is whether the sample **vvill** be spread across multiple sites **and**, if so, whether these samples will be pooled before making impact estimates. For example, if a total sample of 3,228 is pooled across four sites, then

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the sample within a site will be only 807, and the minimum detectable impact for a binary outcome with a mean of 0.60 will be about 10.9 percentage points in each site. If estimating site-specific impacts will be an important part of the analysis, then working *with* a sample *within each site* large enough to detect **an** impact of 5.25 percentage points should be considered. However, site samples of this size are likely to be beyond the cost constraints of this *study*. Alternatively, it may be both prudent and cost-effective to hedge *against* the possibility that one of the four sites performs poorly by expanding the sample so that impacts *can* be detected using three out of the four sites. This would require a sample of 4,304 overall, or 1,076 in each site (359 per group in each site).

4. Number of Sites and Criteria for Site Selection

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To permit some contrast and improve the generalizability of results, we recommend that each policy change be tested in a minimum of four sites, each located in a different state. The ideal number of sites depends on a tradeoff between important objectives. On the one hand, having more sites would increase the generalizability of results. It would also provide some insurance against performance **risk**, since in any study, some sites may perform poorly, leaving researchers with an insufficient sample in the remaining sites to detect reasonable levels of program impacts. Having more sites would also reduce the sample size requirements for each site, which is important because limitations on the available child *care* funds limit the number of families each site can be expected to serve. On the other hand, having fewer sites would reduce the cost of the demonstration and the difficulties of implementing it in multiple sites.

Regardless of the number of sites selected for the demonstration, each must be large enough to generate a flow of enough families into the demonstration to meet sample size targets within a reasonable time frame. For example, if each site needed to enroll 1,076 families within a year, it would need to provide assurances that about 90 eligible families with a child under 4 years would apply for child care subsidies each month. Sites must also be able to provide subsidies to the number of families that are required for the demonstration each month. Two-thirds of the eligible families enrolling in the demonstration would need to receive child care assistance, so sites would need to have the capacity and funding to serve about 60 new families each month.

Sites included in the demonstration will need to be partners with the researchers in implementing the experimental policies, ensuring the integrity of the random assignment process, and supporting data collection efforts. The experimental design will **require** that different policies apply to different families, and that these policy differences continue for at least three years. Researchers will have to work with the sites to find ways to recruit a **sufficiently** large and broad sample of low-income and welfare families into the demonstration, and to determine how to implement a valid test of improved information and administrative practices for different experimental groups. Sites will need to cooperate with the data collection process by ensuring that parents who enroll in the demonstration complete a brief baseline questionnaire, by supporting efforts to locate and contact families for follow-up interviews, and by providing administrative data on families enrolled in the demonstration.

Sites should be chosen to provide a contrast, for example, to represent different regions of the country, to test the interventions against different baseline child care policies, and to test the child care interventions in different welfare reform environments. Choosing sites in this way will enable different state program administrators to identify a site that is somewhat comparable to their state; as a result, more of them will believe that the research results apply in their state.

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Sites would also need to be chosen so that the experimental policy change would make their child care rules more generous -- states would not be -asked to reduce benefits for any participating family **as** part of the demonstration. In addition, the states participating in **this** evaluation should have flexible, automated child care systems **that** could be used to randomly assign families to different child care policies. This would allow the system to be used to track the participating families and calculate the appropriate child care benefits over time.

Politically, it may not be simple to gain the interest of desirable states. The more generous policies need to be offered in states with relatively restrictive child care policies, and these states may be concerned about the cost or adverse incentives of making child care policy too generous. So-me of these states have carefully designed their policies so that they can provide child care to all eligible families who apply for it, and they may be unwilling to upset their careful balance of policy parameters to test the impact of a more generous policy. Nevertheless, given the level of states' interest in information about better child care policy design, it may be possible to find enough of them that are willing to participate in the demonstration. In addition, it may be possible to implement this demonstration in a state that is about to make **its child** care policies more restrictive. Here, we would use a design that compares families eligible and receiving benefits under the old, more generous rules with families receiving benefits under the new, more restrictive rules. This design may avoid some of the entry effects discussed above.

5. Schedule and Plan for Implementation

This demonstration and evaluation could be implemented **and** completed within a five-year time frame. The first year would be devoted to selecting sites and planning demonstration operations in consultation with state and local officials. Plans would include procedures for identifying and selecting families for the demonstration, informing them about their benefits, and collecting administrative and survey data over time. In the second year, the procedures would be implemented in the sites. Families would be enrolled in the demonstration and short baseline interviews would be completed. In the third and fourth year, data would be collected on parents' employment, child care choices, family well-being, and child well-being. In the **fifth** year, data analysis and reporting would be completed.

B. A DEMONSTRATION TO TEST THE LABOR SUPPLY EFFECTS OF FLEXIBLE, STABLE CHILD CARE WITH QUALITY VARIATIONS

Inflexible jobs pose **a** problem for some low-income parents who do not have another adult in the home who can help with child care and who have difficulty finding flexible child care. There are actually several distinct problems that are given the label, "job inflexibility," and each calls for a different type of flexible child care solution. One problem is that the nonstandard work schedules of low-income parents often require child care that is available outside the hours when most child care providers operate (roughly, 7 a.m. until 6 p.m.). Another problem is that parents may have jobs with schedules that change from week to week, or they may hold a series of short-term jobs with different schedules, so that over a year, their work schedule has changed several times, making it difficult to maintain a stable child care arrangement with a single provider. Finally, at least for an initial period of 6 to 12 months, and sometimes for longer, **low**wage jobs do not often provide benefits, such as paid vacation and sick time that could be used when children are sick or the provider is unavailable. While many low-wage working parents have relatives or friends who are willing to help out by providing child care whenever it is needed, many others do not have the flexibility at home to accommodate rigid or odd hours, or changing work schedules. For these parents, a flexible, stable, and reliable chdd care arrangement may provide&e support necessary for employment.

While flexible, reliable child care arrangements alone may make a substantial contribution to supporting the employment of low-income parents, a fundamental issue that has not been studied sufficiently is the effect of highquality child care on employment. Very little of the welfare literature has linked quality of care with employment outcomes. In nonwelfare studies, samples of low-income mothers are unlikely to be using high-quality child care unless they are part of an evaluation of a carefully developed early intervention program. Yet, work by **Brooks**-Gunn et al. (1994) and Meyers (1993) indicates that quality chdd care may lead to sustained employment activities and earlier entry into the labor force. Brooks-Gunn et al. found that mothers with lower levels of education and with more medically fragile toddlers were more likely to become employed and remain employed when they had access to high-guality, centerbased care for their infants. The Meyers study included mothers with children in **a** broader age range and found that the perceived safety of the arrangement and the mother's ability to trust the provider were most important in sustaining employment and training activities. These studies indicate that a basic threshold for q d t y must be met in order for a parent to sustain employment activities, but for parents of infants and todelers, and particularly for those with special-needs children, high-quality child care may improve employment outcomes.

Information on the quality of child care and on the chdd care arrangements of low-inme working parents indicates that the supply of child care in the U.S. can be very roughly characterized as offering a choice between lowquality, flexible arrangements and high-quality, inflexible arrangements. The demonstration proposed here would attempt to bring flexiiility and quality together in the same child care arrangements by increasing the quality of flexible child

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care arrangements to a basic level and increasing the flexibility of highquality child care arrangements, and then sffering these options to a randomly selected group of low-income families. Some have argued that flexible, reliable child care of at least basic quality may be **a** sufficient investment in the labor force participation of low-income parents. We recommend adding quality variation to this intervention — basic quality and higher quality — in order to test the additional contribution of high-quality care to improvements in the employment outcomes for parents leaving welfare.

The two interventions (basic-quality care and higher-quality care, both of which are flexible and reliable) could be implemented either in different communities or in the same communities. One intervention (flexible, basicquality child care) would assign families randomly to be linked with flexible, reliable child care providers who meet some basic standards for quality and have been recruited by the local child care agency to serve families in the demonstration. The other intervention (flexible, high-quality child care) would randomly assign families to be offered a space in a high-quality child care arrangement in the community. Since high-quality child care is often not flexible, but low-income parents will need child care flexibility, the local agency would work with these providers to ensure that they offer reliable care that is flexible enough to meet the work schedules of families in the demonstration.

An experiment providing access to flexible, basic quality child care arrangements would address the following research questions:

• How would the offer of flexible, basic-quality child care affect the employment rates, job stability, earnings, job flexibility, and self-sufficiency of low-income mothers?

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- How would the offer of flexible, basic-quality child care *affect* the type of child care, hours of care, quality of care chosen, parents' perceptions of the quality and flexibility of care, the cost of care, the continuity of care, and other features?
- How would the offer of flexible, basic-quality child care affect family well-being, including income levels, parents' psychological well-being, adult relationships and conflict, and parenting stress?
- How would the offer of flexible, basic-quality child care affect child well-being, including school readiness and performance, behavior, health, and involvement with the **noncustodial** parent?

Providing access to flexible, high-quality child care arrangements would address a similar set of research questions. Moreover, if the interventions were implemented in the same sites, we could also examine the question of how much high-quality child care contributes to improvements in employment outcomes and in family and child well-being, over and above the effects of flexible, basic-quality child care on these outcomes.

We considered implementing a test of the effect of high-quality child care on employment and other outcomes using a nonexperimental comparison-group methodology in different communities with different levels of quality of care. However, we expect that even in communities like Minneapolis, with good support for child care and potentially, for high-quality child care, there will not be enough high-quality child care to enable us to measure its impact if we were to compare children's outcomes in Minneapolis with those of children in other communities. It would be possible to obtain a somewhat better measure of the effect of quality if we knew the percentage of child care providers in each community that could be considered high-quality, but it would be very costly to measure the percentage of providers in the community who offer high-quality child care. Moreover, differences in welfare policies and other features of the child care environments across comparison communities would make it

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difficult to attribute, with a high degree of confidence, community-wide differences to the effect of different levels of child-care quality in the communities.

1. The Intervention: Policies to Be Tested

Consistent with the current child care policy emphasis on parent choice, this demonstration would test the *offer* of flexible, basic-quality and flexible, highquality chdd *care* on employment outcomes, chdd *care* choices, and other aspects of family and child well-being. To implement this demonstration, the community would need to have a supply of flexible, **reliable** chdd care of basic or **high** quality. Moreover, since the likelihood that we will be able to detect impacts of this offer depends, in part, on the rate at which f d e s exercise the chdd *care* option they are offered, child *care* agency staff who are implementing the experiment would need to make every effort to encourage families to use the option. The likelihood of detecting impacts also **depends** on minimizing the number of f d e s in the control group who receive the experimental child care options.

a. Defining and Making Available Flexible, Reliable Child Care Options of Varying Quality

Flexible, reliable child care of basic quality is not expected to be of substantially greater quality than the child care already available in the community. However, it is expected to be more reliable and more flexible, and thus able to respond better to varying work schedules. Providers also need to meet basic safety and health standards so that parents will feel safe leaving their children, but the level of quality will not be a distinguishing feature of the chdd care option.

This supply of child care could be developed in several ways. Home-based child care providers could be approached and offered adequate compensation to provide reliable child care

to match any work schedule. A network of home-based providers could be formed within neighborhoods so that parents can form relationships with two or three who would provide a reliable **source** of child care at any time it is needed The advantage to using home-based providers is that they more readily respond to the needs of families than do chdd care centers, which **are** larger institutions. However, a drawback to using home-based providers is that surveys of low-income parents indicate that these parents do not trust strangers who care for chddren in their own homes, compared with home-based relatives or institutional, center-based providers. To address the trust issue and still develop flexible, reliable child care, it may be possible to work with one or two centers in target neighborhoods to provide the necessary financial compensation and any necessary technical assistance to encourage them to provide **flexible**, reliable child care providers to increase parents' familiarity with the providers and to increase the providers' awareness of what the parents want in a child care setting.

Although the level of quality will not be a distinguishing feature of the demonstration chdd care option, there must be some demonstration criteria for basic safety and health requirements. It may be possible simply to use licensing requirements to *ensure* adequate quality, although in many' **states** and localities, some licensing requirements appear to be much more costly to implement than the benefits to children would warrant, while in other **states**, regulations **are** too lenient to ensure even basic quality. These problems, and the fact that quality would be defined very differently across **states**, lead us to recommend against using licensing regulations **as** the basic standard for quality.

An alternative **approach** to ensuring adequate health and safety would draw on existing measures of quality. For centers, we could draw on the Cost, Quality, and Child, outcomes in .

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Child Care Centers study, which found that a large number of centers scored between 3.0 and 5.0 on average on the Early **Childhood** Environmental Rating Scale (ECERS) (Helburn et al. 1995). This scale measured quality in centers across a number of different dimensions, rating them fiom 1 (inadequate) to 7 (excellent). Similarly, the Study of Farnily Child Care and Relative Care found that many home-based providers scored between 3.0 and 5.0 on the Farnily Day Care Rating Scale (FDCRS), although this scale has been criticized as inappropriate for informal and small-scale home-based child care arrangements (Galinsky et al. 1994). For both these scales, scores of 1 or 2 on individual items indicate that the center or **home** lacks an important component of good-quality child care, and in some instances, the missing component may pose a risk to children. Thus, it may be appropriate to require centers and homes to score a 3.0 or above on each item in the ECERS or FDCRS, or to require a 3.0 or better only on the subset of items pertaining to health and safety. Still another approach would be to require an average score of 3.0 or above on the ECERS or FDCRS, which would permit the center or home to score below a 3.0 on individual items.

Ensuring a supply of child care that is both flexible and high in quality requires more effort because, in most instances, they are not found together. The best approach would be to find high-quality child care programs that serve low-income families because these programs may already have had to respond to the scheduling issues faced by these families. Based on information from the Cost and Quality study and the Family Child Care and Relative Care study, centers and homes scoring an average of 5.0 or above on the ECERS or FDCRS would clearly distinguish themselves fiom most available community-based child care options in terms of quality, so this would suffice **as an** initial definition of high quality. If high-quality providers in low-income neighborhoods are not flexible, then some combination of technical assistance and financial incentives should be offered to them so they can offer **flexible** care. An alternative is to offer backup care optionasimilar to those discussed earlier to improve the chances that parents would accept the offer of high-quality child *care*.

The problem of ensuring **an adequate** supply of flexible, reliable child *care* of appropriate quality is complicated by the fact *that* the availability of the experimental child *care* options must be sufficiently limited to prevent members of the control group from **using them**, but not so limited **as** to fail to meet the needs of f d e s who are being provided access to this *care* and want to use it. Ensuring just the right level of supply means that the flow of families into the demonstration must be carefully controlled to occur when the providers have openings, and that children in the community who **are** not part of the demonstration **are** avdable to fill slots that **are** not needed by f d e s in the expennental group. It also means that we need to have reasonably accurate **predictions** regarding the proportion of families offered these chdd care options who will want to use them over time, which we discuss further in the next subsection.

b. Encouraging Families to Use the Offered Child Care

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Many low-income families prefer to use relatives or trusted friends to provide chdd care, and **as** a result, we expect that a proportion of the f d e s who **are** offered the flexible, reliable chdd care options will decide not to use them. Since the size of the measured impacts of the experimental child care options **depends** in part on the proportion of familes who decide to use these options, we need to encourage families to use the child care that is offered **At** the same time, the **policy**-relevant effect of these experimental options also depends on not displacing **families** from using a child care option that is attractive to them in favor of the experimental option. In other words, we should only be trying to serve families who have a child care problem that could be solved by

the experimental child care option, and measuring the overall improvement in employment that results from serving families who need help with child care.

Thus, we recommend that families entering the demonstration be linked with child care agency staff who can discuss with them their work schedules, chld care needs, and the importance of having a flexible and reliable source of child care. The staff member will need to explain how the providers associated with the agency are recruited and given technical assistance, and how these providers are in the best position to offer the kind of child care that the parent needs. To this end, the staff member will need to explain why the providers are trustworthy and the best choice for the family, and should offer any assistance or encouragement necessary to help the parent assess the potential match between her needs and the care offered by any of the providers on the list. If child care flexibility is being extended by maintaining networks of home-based providers, the staff member should work with the parent to identify **two** or three of these providers.

While many parents may still choose family members or friends to provide child care because these relatives and friends may offer the same flexibility but better quality than the providers in the agency's network, past research suggests that many low-income families experience breakdowns in their informal child care arrangements or they become dissatisfied with their arrangements over time. The family's own experience may demonstrate over time that these arrangements are not **as** reliable or flexible as expected, and may not be **as** good in quality **as** the parent had hoped. Therefore, we expect that over a relatively short period (about one year), some proportion of families in the experimental group who initially did not use the offered child care would be open to trying these arrangements. In some cases, this assistance finding flexible, reliable child care may need to be provided during a child care crisis, when it might help keep the parent employed. Thus, we recommend that agency **staff** develop approaches to contacting f d e s in the-experimental group periodically and repeating the offer of-assistance in locating flexible, reliable **child** care so that these f d e s continue to be encouraged to use the experimental types of child care. Over a period of about a year, if the agency has a responsive supply of child care providers who offer safe, healthy child care, and if agency *staff* provide reassuring information and help match f d e s with suitable providers, we would expect that the proportion of f d e s using the experimental child care would be high, since it could include all of the families who would ordinarily use nonrelative care, plus about half of the families who would ordinarily use relative care.

Families assigned to the high-quality child care experimental group should be given extensive information on the benefits of high-quality child care and perhaps a videotape showing what the high-quality arrangement looks like from the child's point of view. The offer should be repeated, and the family should have access to this child care for **as** long **as** it has a child not yet in **first grade** in-order to test the effect of having such care generally available and affordable in the community.

c. Minimizing the Number of Families in the Control Group Who Receive the Experimental Child Care Policies

This demonstration will have its **best** chance of detecting **impacts** of the experimental child care **policies** on employment outcomes if families in the control group do not receive the experimental child care policies and families in the experimental groups do receive the types of care offered to them. To minimize the number of families in the control group who receive the experimental child care policies, we would ideally require child care providers offering the experimental child care services to fill their openings with children in the appropriate

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experimental groups or with children in the community who are not enrolled in the demonstration, but not **with** children in the control group. Providers would need to call the child care agency before enrolling a child in their program so that agency staff could check to see if the child in question is in the control group. However, the question of whether to completely exclude control group children from the experimental child care settings presents a very **difficult** design decision.

A policy of excluding children in the control group fiom the experimental forms of chld care might be justified if the demonstration has invested large amounts of technical assistance and funding to create the experimental child care options. However, if very little has been invested in these providers, but instead, some providers in the community who meet most of the criteria for the experimental forms of care have been selected to work with the demonstration and are given a small amount of assistance to meet all of the criteria, it may be more acceptable to the providers and the community to give children in the experimental groups the highest priority for open slots, with children in the community who are not enrolled in the demonstration receiving the next highest priority, and children in the control group receiving the lowest priority for service. This practice may not completely exclude control group children from the experimental child care options, but it may minimize the number who are placed in these child care settings.

2. Target Population and Sampling Strategies

As was true of the child care subsidy policy demonstration described above, the target population for this demonstration includes parents receiving welfare and those who are not on welfare but who have only a tenuous attachment to employment. However, in contrast to the subsidy demonstration described earlier, this demonstration will try to link families with
particular child care providers. To increase the probability that families will use these providers, we must define our target population by neighborhood, **as** well as by income, welfare, and employment status. Census tracts could be identified to define the appropriate catchment area for eligible families. **Thus**, identifying the target population will require that we first identify neighborhoods with high proportions of families who are likely to be eligible for the demonstration by income, welfare, and employment status, and then recruit child care providers in those neighborhoods. If any neighborhoods yield **an** insufficient supply of child care providers to serve families who would be brought into the demonstration, then that neighborhood would have to be omitted from the target area.

We considered randomizing families who apply to the child care providers who offer the flexible, reliable, and quality child care services but rejected this design because it would limit the study to families who are knowledgeable about and value either flexible or highquality child care services. This research study should examine the impact on child care choices and employment of having a supply of flexible, reliable child care of different quality levels generally available in the community, which would be more consistent with giving the offer and providing, a lot of information about the benefits of the care arrangements to a more general population of families making decisions about child care and employment.

An important drawback of a target-neighborhoods approach to defining the sample is that low-income families tend to move often. Targeting neighborhoods is much more risky than targeting an entire city in terms of attrition from the experimental program because it is much more likely that a family will move out of a particular neighborhood than out of a city. Nevertheless, because we will need to work with a supply of child care providers, we must define

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the population in terms of neighborhood areas and accept the risk of that families will move out of the target area.

3. Key Outcomes and Sample Size Considerations

The outcomes in this demonstration should be similar to the outcomes used in the child care subsidy policy demonstration and described in Section A.3.a. In addition, however, a key outcome in this demonstration would be the extent to which sample members selected the **high**-quality child care option. This would show us how having a substantial supply of highquality child care available in a neighborhood and providing financial support to families who choose that option would affect the child care choices of low-income parents.

In addition, the sample size considerations for this demonstration would be similar to those of the child care subsidy policy demonstration. One issue that would gain increasing importance in this demonstration, however, would be the role of "leakage" in sample size requirements for examining the effects of chld care quality on job retention and employment stability. Leakage in the context of this demonstration refers to sample members offered the option of affordable high-quality child care who do not use this care. The rate at which sample members "take up" this offer would be a key outcome of the demonstration. However, our ability to detect impacts of the child care offer would be reduced by the proportion of sample members who chose not to use the flexible, high-quality child care services, because sample members who did not use the highquality child care could not be influenced by it.

Thus, it is important to remember that the minimum detectable impacts discussed in Section A.3.b would refer to the effects of *offering* high-quality chdd care on employment stability rather than the effects of actually *using* high quality child care on employment stability. The latter

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impact would actually have to be larger than the specified minimum detectable impact (for a given sample size) to be detected by the analysis.

Finally, in the discussion of sample size considerations for the child care subsidy demonstration, we assessed how large **an** impact we expected a given policy change to have on employment rates in order to determine what we felt the **minimum** detectable impact should be. 'We have much less information on which to base what we expect to be the true impact of an offer of high-quality chdd care on employment outcomes. One reasonable suggestion would be to make the sample size **as** large **as** the sample size for the child care subsidy demonstration. However, other possibilities may be equally valid

One consideration that leads us toward reducing the sample size requirements is the difficulty of implementing this demonstration in a large number of sites and for a large number of families. The flexible, basic-quality chdd care option requires that we have a supply of slots available with a set of chdd *care* providers who meet our criteria for providing flexible child *care* and meeting basic quality **standards** so that families assigned to that group can find chdd care whenever they **are** looking for it. Local staff at the site must *ensure* that a sufficient supply of providers **are** available, that f d e s in the expenmental group can find child *care*, and that providm worlung with the agency do not serve families in the control group. In addition to these considerations, sites offering flexible, high-quality chdd *care* must have a sufficient number of slots to serve families in the relevant experimental p u p. This may lead to a recommendation that fewer families per p u p be enrolled in this demonstration – for example, 750 per group, or even 500 per group – although the impacts of these policy interventions would have to be relatively large in order to be detected with this smaller sample.

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4. Number of Sites and Criteria for Site Selection

Criteria for site selection for the subsidy demonstration were discussed in Section A.4 above, and many of those criteria would be relevant to this demonstration as well. Sites need to have enough people in the population of interest to yield the required sample of families eligible for the demonstration (in terms of income levels, ages of children, and other characteristics). Local agency staff would need to be partners in the research, providing support for developing and implementing random assignment and service options, and for supporting data collection efforts. The sites selected should provide a *mix* of regions and child care policy environments. In addition, several other criteria, discussed here, may need to be met by sites participating in this demonstration.

The need for flexible, reliable chld care would be highest in !ow-income communities that are dominated by employers who offer a relatively nigh proportion of jobs with nonstandard schedules. Therefore, one way to identify candidate sites for the demonstration would be to analyze CPS data on work schedules to identify which employers (by industry and occupation) disproportionately offer odd-hours work schedules and which also employ large proportions of single women. It would then be possible to target labor market areas that contain a preponderance of employers of this type. Once the labor market areas have been identified, several interested in working on a research project could be chosen. In neighborhoods with a high proportion of women who would likely work for the targeted type of employer, a child care agency would intervene to increase the flexibility and reliability of child care in the neighborhood and ensure that it meets basic quality standards.

The *study* involving flexible, reliable high-quality child care should be implemented in several communities that already have a supply of high-quality child care for' low-income

families, but not enough to saturate the community. Ideally, the high-quality child care would exist in both **center-based-and** home-based arrangements, although it may not be possible to find this in all *study* communities. Child care providers involved in the demonstration must be able to offer flexible child care that is attractive to low-income parents, and they must be willing to cooperate with the requirements of random assignment and with the **data** collection needs of the demonstration. If possible, the study involving flexible, high-quality child care should be implemented in several different communities that have different levels of basic child care quality so that the effect of high-quality child care can be contrasted with different prevailing levels of quality in the communities.

As was true of the subsidy policy demonstration, there will be a tradeoff in determining the appropriate number of sites. On the one hand, including more sites would reduce the number of families per site who must be served by the child care providers recruited specifically for the demonstration and increase the ability of local staff to monitor children's placements. On the other hand, increasing the number of sites would increase the cost of monitoring demonstration and **data** collection operations, and it may be difficult to find a large number of strong sites willing to participate in the demonstration.

We considered the idea of implementing this demonstration in a community in which **high**quality child care would need to be developed and then offered to families, but we believe that the question of how to develop high-quality child care should be studied separately because of its scarcity in communities at large, and particularly in low-income communities, and because of the time required to improve the quality of existing low-income child care arrangements. Therefore, the study of flexible, high-quality child care should be based in communities that already have a sufficient supply of high-quality child care so that the research can focus on the effects of

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offering such care to low-income families. One drawback of this approach is that people who have developed and who direct high-quality child care services are often unwilling to participate in an outside evaluation. Their continued successful fundraising is based on a good reputation, which may not survive an independent evaluation. It would be necessary to address this issue in order to gain the support and cooperation of such providers.

In order to minimize the risk of families moving away from the demonstration area, the demonstration should be implemented in communities whose population is relatively stable. To increase the probability of finding a sufficient supply of flexible, reliable child care providers and a sufficient number of families interested in using those providers, the demonstration should be implemented in communities with relatively high concentrations of low-income families.

5. Schedule and Plan for Implementation

A five-year time frame would be relatively tight for this demonstration and evaluation because of the additional work required to ensure that the supply side of the demonstration will function as planned, but five years could still be feasible. In the first year, sites would be selected and demonstration operations would be planned in consultation with state and local officials. Plans would include procedures for identifying and selecting families for the demonstration, informing them about the special child care settings, and collecting administrative and survey data over time. Planning would also need to cover identification of providers who can offer flexible, reliable child care with the appropriate quality variations and who are willing to cooperate with the demonstration. In the second year, the procedures would be implemented in the sites. Families would be enrolled in the demonstration, and short baseline interviews would be completed. In the third and fourth year, data would be collected on parents'

employment, chdd *care* choices, family well-being, and chdd well-being. In the fifth year, data analysis and reporting would be completed.

¹ This strategy is being followed in the New Hope demonstration in Milwaukee, Wisconsin (R. Hollister, personal communication, October 16, 1998).

²The two parameters that must be chosen **are** the confidence level (the probability that the test accepts the null hypothesis' when it is true), and the power of the **test** (the probability that the test rejects the null hypothesis when it is false). In addition, we must also choose whether to use a one-sided or two-sided statistical test. When these parameters and the variance of the outcome being **studied are** specified, the minimum detectable impact can be computed from standard statistical formulas.

³For studying the impacts of a policy change on job retention or employment stability, sample members who never found jobs within the sample period (that is, the extent to which there is sample "leakage") would not respond to questions regarding job retention or employment stability. Thus, minimum detectable impacts on these outcomes would be higher in cases in which sample leakage was higher.

⁴If a regression-based **estimator** is used to estimate the treatment *impact*, the minimum detectable impacts will be smaller for each sample size. The extent to which this effect is smaller will depend on the-explanatory power of the regression (that is, its R-squared).

⁵The income eligibility limits in these *states* differ as well, so that an individual paying the upper limit of this range in one state may not be eligible for any chdd care subsidy in another **state**.

⁶These calculations assume standard deviations of 15 for hours worked and \$3 .OO for wages.

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III. EXPANDING THE CHILD CARE DATABASE

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Some of the research that would improve the knowledge base for child care policymaking is descriptive. It seeks to answer such questions **as:** What types of child care are families using? How much are families paying for child care? What are the characteristics of families receiving child care assistance compared to the characteristics of all eligible families? Up-to-date information on these questions is needed to guide policy decisions. Therefore, data should be collected annually fi-om a nationally representative sample of households to provide a regular and current description of child care utilization and the characteristics of families served by child care subsidy programs. We recommend collecting information annually on the type of child care used by families (including self-care), hours of child care used, the number of arrangements, the cost of child care to families, and participation in subsidy programs and benefits received. Some of this information is already being collected, and the rest could be obtained by expanding and improving existing data collection efforts, including household surveys and state administrative data.

More in-depth information about families' use of child care and how it interacts with their employment decisions, with the quality and cost of care, and with providers' decisions about the quantity of child care would require a more ambitious survey effort. Nevertheless, this information is important to obtain periodically in order to provide a factual basis for understanding the current supply and demand for child care. Therefore, we recommend that an in-depth study of child care supply and demand be conducted once every five years. We discuss our recommendations for this data collection effort in the second half of this chapter.

A. EXPANDING ONGOING DATA COLLECTION

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Several nationally representative, household-based population surveys that include information on labor force participation, income, and participation in public programs also include child care information, and some additional surveys have been identified **as** potential candidates for child care data collection. States also collect information from families participating in child care subsidy programs that they need in order to administer these programs. Child care administrative data, along with welfare administrative data, earnings data from the Unemployment Insurance system, and other program administrative data can provide a detailed portrait of employment, child care use and costs, and welfare program participation for families in a given state. In this section, we describe these surveys and discuss our recommendations about whether they should be expanded or modified to better support child care policy research.

1. National Household-Level Data

Several important national-level household surveys currently collect child care **data** or have been considered candidates for also collecting child care information to reinforce their utility **as** a basis for child care policy research. Good examples of such surveys are the Current Population Survey (CPS), the Survey of Income and Program Participation (SIPP), the Survey of Program Dynamics (SPD), the Panel Study of Income Dynamics (PSID), the National Longitudinal Survey of Youth (**NLSY**), and the American Community Survey (ACS). We recommend adding child care information only to the SIPP, and we recommend monitoring the development of the ACS because it will provide opportunities in the future to learn about child care markets. In general, our recommendations have been guided by several principles:

- The survey **should** already be collecting data annually in order to provide information **as** often **as** it is needed.
- The survey should be collecting data into the foreseeable future so that it can provide an ongoing source of child care data.
- The data should be longitudinal to permit analysis of the interactions between child care and employment.
- The sample should be large enough to permit analysis of important subgroups.

Ow recommendations regarding these national data sets are explained in more detail in the discussion that follows.

a. Current Population Survey (CPS)

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The CPS is a large survey of the labor force participation and economic well-being of households in the U.S. About 50,000 households are included in each round of data collection. Households in the CPS sample remain in the sample for a total of 18 months, but part of the sample is dropped and replaced each month. The main purpose of the CPS is to collect labor force statistics each month to produce monthly estimates of employment, unemployment, earnings, hours of work, and other labor force indicators by demographic characteristics, occupation, industry, and class of worker. The sample is dram fiom a large number of "primary sampling urits," which include counties and county groups, and which roughly correspond to labor markets. The CPS sample is not large enough to produce state-level estimates within a reasonable margin of error, but if several years of CPS data are combined, it is possible to produce more precise state-level estimates. However, because the CPS sampling frame is from

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parts of each state (selected counties and county groups) and state sample sizes are relatively small even when three years of data **are** combined, the estimates are still weak for many **states**.

Topical data in addition to employment-related data are collected on a rotating basis each month. For example, data on household composition and income fiom all sources are collected in March and form the **basis** for the annual poverty **rate** estimates for the U.S. Topical data have also been collected on school enrollment, previous work experience, child support, health, employee benefits, and work schedules.

Although some have suggested adding child care questions to the CPS, we do not recommend doing so. The CPS currently includes no information about chdd care, and since chdd care arrangements and costs are relatively complex to ask about, obtaining a little information about even these limited aspects of child care on a reliable basis would require a substantial amount of time fiom respondents, which could not be made available unless another topic were dropped fiom the survey. The advantages of adding child care data to the CPS is its large size, which could support some state-level estimates, and the fact that the public use data files are released relatively quickly once the data are collected. Nevertheless, the difficulty of finding time to administer a section on child care leads us to recommend other vehicles for obtaining child care information.

## b. Survey of Income and Program Participation (SIPP)

.The SIPP is a longitudinal household survey on the economic well-being of households. From 1984 through 1993, a new longitudinal panel of between 14,000 and 20,000 households was begun in February of each year so that panels would overlap. The overlapping design is important because it yields greater precision in cross-sectional estimates. For the 1984 through 199 1 panels, data were collected on each household once every four months for two to **two-and**one-half years.

The SIPP has been redesigned to include a new, four-year panel of 36,700 households introduced in April 1996. To help provide a transition between the old and new sets of panels, the 1992 panel was extended to 10 waves (about 3 <sup>1</sup>/<sub>2</sub> years) and the 1993 panel was extended to nine waves (3 years). No new panels were introduced in 1994 or 1995.

The SIPP includes a set of core questions about household composition, income, labor force participation, and participation in public assistance programs that are asked at each interview, and a series of topical modules containing questions that are asked only once or twice during the life of a panel. Information about child care arrangements is collected once per year, so child care data fiom these modules can be obtained from two combined panels in each calendar year. The fact that the SIPP already commits considerable resources to obtaining child care information makes this a good candidate for improving our dormation base for child care policy.

The SIPP asks about participation in a wide variety of public programs, but not about participation in child care subsidy programs. This may have occurred because child care subsidy programs, until 1992, were very small, so they would have affected only a small proportion of the sample. Moreover, they are administered by states, which use different eligibility and benefit rules, and the chld care subsidy is often paid directly to the provider or **as** a reimbursement in the family's welfare check, making it more difficult for respondents to answer the participation question accurately. Therefore, we recommend that some pilot testing be done to learn how to ask questions about child care program participation that will yield

accurate participation data. Once questions have been developed, they should be included in the SIPP child care modules.3

#### c. Survey of Program Dynamics (SPD)

The SPD was designed to collect data on households that can be used to learn about the effects of welfare reform on families and chldren. The SPD, first fielded in 1996, will follow households annually through 2001 that were previously interviewed from 1992-1 994 or from 1993-1995 by the SIPP (described above). The sample includes about 30,000 households for a shorter "bridge" survey in 1997. The 1998 survey interviewed a subsample of 17,500 households in May and June, and it oversampled low-income households (based on income levels reported in the 1997 survey). The 1998 survey included dormation on demographic characteristics, employment and income, children's well-being (including child care arrangements), and family well-being.

While the SPD already **asks** questions about type of child care used, hours spent in each child care arrangement, child care costs to the family and whether the family receives help paying for care, it is not now likely to be a good candidate for use, with modifications, as a standard means of obtaining chld care data because the survey is already well underway and the budget is tight. The next round of interviewing will occur in May and June of 1999, and the last set of interviews is scheduled for one year later. Other survey efforts that will last longer would be better candidates for modification.

#### **d** Panel Study of Income Dynamics (PSID)

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The PSID is a longitudinal study of demographic characteristics and the economic wellbeing of a representative sample of individuals in the U.S. The sample size in 1995 was 8,700 and includes the original sample of individuals from 5,000 households begun in 1968 and an additional sample of individuals in 2,000 Latino households begun in 1990.

Individuals **are** interviewed annually about income, employment, family composition changes, and demographic events such **as** marriage or childbearing. In recent years, questions have been added to the annual interview to cover housing, food expenditures, time spent on housework, and health status. Supplemental modules have incorporated additional information on a number of topics, including child care in 1977 and chdd care and development in 1997.

Given the availability of the SIPP for chdd care information, we do not recommend making a substantial investment to include child care data in the PSID. The PSID sample may not be **as** representative **as** the SIPP sample, which is refieshed every two to four years. Moreover, the PSID sample size of 7,500 is very small relative to the SIPP sample, which ranges **from** 14,000 to 36,000 households.

# e. National Longitudinal Survey of Youth (NLSY)

The NLSY currently includes two panels that were each begun with a youth cohort. The NLSY79 is a nationally representative sample of about 12,700 young men and women age 14 to 22 in 1979. These individuals were interviewed annually fiom 1979 through 1992 about education, employment, demographic changes, child care, and other topics. In 1986, the NLSY began to collect data on children born to women in the sample. The NLSY Mothers and Children surveys were conducted every two years through 1992 and include information on child health and well-being, parenting and the home environment, and chdd care.

The NLSY97 is a new cohort of 10,000 men and women 12 to 16 years old **as** of December **3** 1, 1996. Information will be collected about the parents of these adolescents, and about the

education, employment, income, behavior, and a number of other topics for the youths themselves.

While the NLSY79 has been a very useful source of child care data, its utility in the near future is declining as the sample ages (sample members currently range in age from 34 to 42 years). The new NLSY97 sample is currently too young to provide chdd care information. Therefore, we do not recommend using the NLSY samples as a vehicle for child care information over the near future.

#### f. American Community Survey (ACS)

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The ACS is a data collection initiative that is in its pilot stages. Collecting mformation' on housing, social, and economic data, the ACS seeks to continually interview households selected from community address lists to provide accurate and up-to-date profiles of America's communities that are comparable in quality to decennial census mformation. In collecting data at the community level, the ACS provides the basis for communities or agencies to obtain data on particular issues if they are willing to help fund the marginal cost of obtaining this mformation.

If Congress approves funding for the ACS, the Census Bureau plans to add a national sample of 700,000 housing units per year to the ACS sample between 2000 and 2002. Starting in 2001, estimates can be provided for all states and for geographic areas or population groups of 250,000 persons or more. In 2003, the ACS would be implemented in every county in the U.S., with an arrual sample of 3 million housing units. Once the swvey is in full operation, ACS data will be available each year for areas and population groups of 65,000 or more beginning in 2004. To provide statistics for small areas and population groups of 15,000 or less, ACS data will need to be combined over a five-year period to provide estimates with the precision of decennial

census data. Therefore, annual estimates of these smaller areas can be constructed beginning in 2008. **3** 

Unfortunately, funding uncertainties make the implementation schedule for the ACS also very uncertain. Nevertheless, the ability to represent small areas makes the ACS a potentially promising vehicle for child care data collection because child care markets tend to be geographically small. Areas and samples could be selected from the ACS sampling frame, and questions about child care supply and demand in these selected areas could be added to the survey. The ACS should therefore be considered as a possible basis for collecting child care supply and demand information in future rounds of a child care market survey, an effort we describe more fully in Section B.

# 2. State Child Care and Welfare Administrative Data

All states collect data from families who participate in public assistance programs in order to help administer the programs. The data provide information on the number and characteristics of families and children served, and on the amount of subsidy provided to each family. In some states, administrative data provide accurate monthly information on program participants and benefits, while in other states, the data and how they can be used is severely limited by archaic data systems. Administrative data thus have the potential to inform us about families in every state who receive child care assistance.

It is critical for all of the states to make whatever modifications are necessary in their administrative data systems so they can provide information on the number and characteristics of families and children receiving child care assistance. The data systems should be able to indicate by month, the number of families and children receiving child care assistance, children's ages, the amount of the child care subsidy received by each, and the amount the family pays for child care. The state data system should also be able to provide accurate information over several months, including the number of months each family and child received child care assistance, the total amount received, and an unduplicated count of the number of families and children receiving child care assistance in a year. State data systems should be able to provide idormation on participation in child care programs by subgroups defined by income, welfare program status, employment status, race and ethnicity, and family size and number. and ages of children. States should also be moving toward systems that allow them to combine family child care data with data on the same families fiom different administrative systems, including welfare, food stamps, unemployment insurance wage data, Medicaid, and other related data. This information will help states to better understand who is being served by various programs and what benefits are being received. While the political obstacles to progress in this area are substantial, we recommend using every opportunity to press for improvements in state administrative data that can help improve the knowledge base for child care policy.

# B. NEW DATA COLLECTION ON THE SUPPLY OF AND DEMAND FOR CHILD CAFE IN THE UNITED STATES

Although existing national databases can act **as** the vehicles for regularly obtaining idormation about critical aspects of child care (for example, the type of child care children are using, hours in care, and the cost of care), the questions on child care are somewhat limited **as** a result of time considerations.

These databases therefore cannot provide more extensive information that could help policymakers understand how families choose child care and how child care policies affect child care choices and employment activities. Moreover, because the national databases, are based on .

surveys of households, they provide almost no information about the supply of child care, or child care providers. Information about child care providers is valuable for understanding consumer choices and the effects of policies that seek to **influence** the supply of care. A survey of providers would address questions about the number of child care slots available nationwide for different ages of children, types of care offered, openings, fees charged, staff characteristics, major cost items in producing child care, staff and chld turnover, and related information.

A survey of the child care market was conducted nearly 10 years ago. The Profile of Child Care Settings (PCS; Kisker et al. 1991) and the National Child Care Survey (NCCS; Hofferth et al. 1991) provided information about the supply and demand sides, respectively, in the same communities, representing the nation's child care markets. The information fiom those surveys has been extremely useful and widely cited, but is becoming quite dated, particularly because the extent of federal and state subsidization of the child care market has grown, women's labor force participation has continued to rise, and welfare reform has increased employment among low-income mothers. Therefore, we recommend repeating the supply and demand studies as soon as possible, and because the information obtained **fiom** those studies will be dated within about five to six years, we recommend repeating these studies every five years so that policymakers will always have timely child care market data available.

An advantage of collecting another round of demand and supply data in the same communities is that this approach would allow analyses that combine the information about both sides of the child care market. The bulk of the research that was based on the original PCS and NCCS focused on either child care providers or parents, but not both. However, a few studies have used both data sets to analyze the child care market in greater detail. For example, Blau and Hagy (1998) and Hagy (1998) have looked at the effects of child care costs and quality on the .

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demand for child care and on employment. Hofferth and Collins (1997) examined the effects of child care market characteristics on employment stability.

If the PCS and NCCS data collection efforts were repeated, future research could combine these supply and demand side data sets in a number of interesting ways, including repeating the studies mentioned above with more recent data. Possible research applications include:

- Estimating the effect of prices on child care choices and employment outcomes. Data from child care. providers will yield information on child care prices charged by individual providers and by "the market as a whole." Data fi-om parents will show individuals' chdd care choices and employment status. For studies of this sort, information on the market price of informal care, which was not included in the 1990 PCS, would be particularly valuable.
- Estimating the effects of other market characteristics on child care choices and employment outcomes. Since the provider survey will offer information on a wide range of provider characteristics (and would provide an even greater wealth of detail if informal care providers were included) and the parent survey will provide chdd care and employment information, the combined data would allow the study of the effects of these provider characteristics on child care choices and employment outcomes.
- Providing a fuller picture of child care subsidy use in child care markets. The provider survey will offer information on whether providers accept subsidized clients, on the proportion of their clients that are subsidized, and on whether they charge subsidized parents a co-payment. The parent survey will provide information on whether parents know about subsidies, whether they receive **them**, whether their current provider **accepts** subsidies, and how much they are currently paying for care.
- Estimating the relationship between information available to parents and characteristics of the child care market (such as the level and dispersion of prices) Economic theory implies that as information about a particular good or service is more fully disseminated, the market price of that good or service should fall, and the dispersion of prices should also decrease. Chipty and Witte (1998) find empirical support for this hypothesis using information on chdd care resource and referral (R&R) agencies. If the new round of the provider survey includes information on R&R agencies, additional research would be able to address this issue with current data. It would be particularly interesting to see whether this relationship is the same in low-income markets as in markets serving higher-income parents.

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• Assessing parents' information about the child care market. In addition to examining the effects of information dissemination on the child care market, combining the parent and provider data would also allow researchers to assess the quality of parents' information about the market. Previous research has shown that, on average, parents and providers in a community report similar characteristics of providers in the market. However, additional research could evaluate how much individual low-income parents know about the characteristics of the full set of child care providers in their community.

#### 1. Target Population, Sampling Strategies, and Sample Size Considerations

The 1990 PCS and NCCS samples were based on two-stage sample designs. In the first stage, a random sample of 100 counties or county groups that was representative of counties in the U.S. was selected. Counties were stratified by region, metropolitan status, and poverty level, and they were selected for each stratum with a probability proportional to the size of the population younger than age 5. This formed the set of communities fiom which **both** the PCS and NCCS samples would be drawn.

In the second stage of the PCS sample design, a stratified random sample of providers within the sample of counties was drawn. Providers were sorted into strata according to type — Head Start programs, public-school-based programs, other center-based programs, and regulated home-based programs — to ensure that each category of provider would be represented. The PCS relied on lists of regulated providem in each county to provide a sampling frame.

The second stage of the NCCS sample design was based on random-digit-dialing (RDD) methods to sample parents for the survey in the selected communities. Thus, the sampling ftame for the NCCS was households with telephones in each of the 100 selected counties and county groups. Families were eligible for the NCCS if they had a child under age 13. The **cost** of obtaining a sample via RDD was acceptable for the NCCS because the proportion of households

eligible for the survey in any community was relatively high. The major drawback to an RDD survey is that it excludes households without telephones.

We recommend repeating the parent and provider surveys in the same communities **as** were originally sampled for the PCS and NCCS. This would enable direct comparisons of changes within these communities in the amount of care supplied, staff characteristics, staffing patterns, types of care used, costs to parents and fees received by providers, and a number of other topics. Although a newly selected sample of communities would also **allow** us to infer changes in these outcomes in the U.S., it would add a source of variability to the estimates.

While the sample of communities used in the PCS and NCCS were representative of the U.S. in 1990, these communities would not necessarily be representative of the U.S. in 1999 or 2000, when the new studies would be conducted. Thus, a new set 'of weights would need to be developed to make these communities representative of the underlying population of families with children under 13. If the characteristics of this population changed dramatically between 1990 and 2000, "refreshing" the sample by adding a few new communities should be considered, These new communities would be drawn from sample strata that have grown relative to other strata over this period, which should reduce the variance of the resulting estimates.

The most cost-effective data collection method for both the parent and provider surveys is computer-assisted telephone interviewing. Telephone interviews were used for the PCS and NCCS surveys in 1990. While child care providers should virtually all be reachable by telephone, many low-income households do not have telephones, so this population will be under-represented in the survey (the next subsection further discusses sampling strategies).

The final 1990 PCS sample included 2,089 center-based early education and care programs (including 217 Head Start programs, 437 public-school-based programs, and 1,702, centers) and

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583 regulated home-based programs. The survey response rate was 89 percent among centers and 87 percent among regulated home-based programs (Kisker et al. 1991).

The final NCCS sample included 4,392 parents, though the overall response rate was only 57 percent. In addition, the proportion of households with a child under 13 identified by the study's initial screening interview was much lower than expected (16 percent versus 30 percent). This smaller-thm-expected percentage of families with children "suggests the possibility of hidden refusals by families with children who denied that they had children" (Hofferth et al. 1991).

The sample sizes used in the original PCS and NCCS studies are useful starting points in considering how large the samples should be in the new provider and parent studies. The PCS sample of 2,089 center-based programs was large enough so that an estimate of the mean of a binary outcome of 0.50 would have a 95 percent confidence interval of 0.468 to 0.532, even after taking into account the complex sampling design (Kisker et al. 1991). This confidence interval is sufficiently narrow so that inferences about the mean characteristics of center-based programs and comparisons of the characteristics of different types of center-based programs was also large enough to support precise estimates of the mean of continuous outcomes. Assuming a mean wage of \$8 per hour and a standard deviation of \$3 among center teachers, the 95 percent confidence interval based on this sample would be approximately \$7.8 1 to \$8.19.

Two considerations suggest that a larger sample of center-based providers might be appropriate in a new provider survey, however. First, if the swvey is repeated in the same communities, it is likely that the sample weights would need to be more variable than in the original survey. In particular, providers fiom communities in sample strata **that**, grew rapidly. during the 1990s would likely be under-represented in the new survey, and their associated sample weights would betincreased. Conversely, those fiom communities in sample **strata** that became smaller over the past decade would be over-represented in the new survey, and their sample weights would become **smaller**. This increase in the variance of the sample weights would reduce the precision of *estimates* from the provider survey. An increase in the sample size from its previous level of 2,089 might be necessary to maintain the level of precision of the PCS. The sample size would be increased most efficiently (with respect to raising the precision of the sample rather than by selecting additional providers from each of the existing communities. Furthermore, these communities should be drawn fiom strata most likely to be under-represented in the new survey.

Second, the overall sample size should be increased if particularly important subgroups of the tctal sample of center-based programs will be the focus of much of the analysis. For example, if nonprofit center-based programs will be separated from other center-based programs and *studied* extensively, then the key measure of precision is the 95 percent confidence interval for the 1,436 nonprofit centers. For a binary outcome with a mean of 0.50, the 95 percent confidence interval for the 1,436 nonprofit centers. For a binary outcome with a mean of 0.50, the 95 percent confidence interval for this sample is 0.464 to 0.536. If this confidence interval is not considered sufficiently narrow, then an increase of 25 percent in the sample size might be considered. If this increase is accomplished by selecting 25 percent more communities, then the 95 percent confidence interval for the new sample of 1,795 non-profit centers would be 0.468 to 0.532.

Although raising the total sample *size* by bringing in additional communities will raise subgroup sample sizes **and** increase the precision of estimates based on subgroups, some subgroups **are** so *small* that raising the overall Sample size would not be **an efficient** means of

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increasing the precision of estimates for these subgroups. For example, there were 213 Head Start programs among the 2,089 center-based programs in the PCS. The 95 percent confidence interval for this subgroup would be approximately 0.422 to 0.578. Increasing the sample by 25 percent to 266 would narrow this confidence interval, but, only to 0.430 to 0.570. This confidence interval might still be considered too wide if Head Start programs are a key subgroup with the larger sample of center-based programs. Furthermore, if this approach were used to **mise** the sample of Head Start programs to a size that would narrow the confidence interval to 0.46 to 0.54, the number of Head Start programs in the sample would have to be 804, the total sample size would have to be 7,885, and the number of communities selected would have to be 377. This increase in the overall sample by a factor of nearly four would clearly not be a feasible way of ensuring a sufficient number of Head Start programs to generate precise estimates. An alternative approach would be to oversample Head Start programs and develop sample weights to ensure that the total sample would be representative of the overall population of center-based providers.

The PCS sample of 583 regulated home-based programs led to a 95 percent confidence interval of 0.444 to 0.556 for a binary outcome with of mean of 0.50. If this confidence interval is considered too wide and this group of regulated home-based providers is an important one for further study on its own, then increasing this sample size should be considered. To narrow its confidence interval to 0.460 to 0.540, we would need to add additional home-based providers to the sample **utril** it reached 1,140.

The sample size considemtions for the parent survey are similar to those for the provider survey. The NCCS sample of 4,392 generated a 95 percent confidence interval of 0.481 to 0.519 for a binary outcome with a mean of 0.50 (Hofferth et al. 1991). The overall level, of precision

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associated with this sample seems good, though the same considerations that would lead to an increase in the provider sample size might also justify **an** increase in the parent sample **size**. For example, the overall sample includes 1,272 cases in which the youngest child is under 5 and the mother is employed. The 95 percent confidence interval for this sample is 0.466 to 0.534. However, if the true group of interest is *low-income* households with children under 5 and in which the mother is employed, the sample would be smaller and the 95 percent confidence interval would be larger. <sup>1</sup> Again, if this is a subgroup of particular importance, then oversampling this group should be considered.

To summarize, the PCS and NCCS sample sizes led to reasonably precise estimates of key outcomes for the full samples and **are** a useful guide for selecting sample sizes for new supply and demand surveys. However, a likely increase in the variance of sample weights in these new surveys **suggests that** a moderate increase in the sample size will be needed to maintain these levels of precision. Furthermore, if key subgroups of the full supply and demand sample **are** likely to be frequently studied in isolation, then strategies for increasing the sizes of subgroup samples should be explored. As mentioned, one such strategy would be to increase the size of the overall sample, which should lead to increases in the sizes of each of the subgroups within the overall sample. For small subgroups, however, a more efficient strategy for increasing the size of samples would be to oversample fiom the most important subgroups and develop sample weights to make the total sample representative of the overall population. For the sample of chdd care provides, subgroups of particular interest might be regulated home-based providen, for-profit? versus nonprofit center-based providers, or different types of nonprofit center-based providers. For the parent sample, key subgroups might be defined by the income of the parents,

whether the household includes one adult or more than one adult, whether the mother (if in the household) is employed, the age of the youngest child, and the **race/ethnicity** of the parent(s).

Two additional aspects of the parent survey are worth consideration. First, the NCCS had a relatively low response rate of 57 percent, and it would be useful to consider ways of improving the RDD screening introduction to encourage households to participate in the survey. We recommend devoting some resources during the planning period of the study to draft and test several different versions of the introduction to find one that is most likely to encourage participation in the survey. Since the interviewer will have only about 10 seconds to gain the interest of the potential respondent on the telephone, it is also worth sending out advance letters describing the study and encouraging participation before the interviewer calls. Second, it is worth thinking about sampling strategies that might be used to include respondents without telephones. A limited amount of in-person interviewing might be considered in combination with optional studies (described below) that would also require in-person interviewing in selected communities from the full study. Because of the high cost of managing in-person **data** collection in multiple sites, it would probably be necessary to limit these efforts to a subsample of sites, **as** we discuss further below.

### 2. Data Collection Methods and Content

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The provider survey should collect information to address the following questions:

- What is the supply of formal child care in the U.S. by type and age of child? What unused capacity exists? What is the extent of child turnover in formal care?
- What is the structure of formal care organizations? What are the major expenditures child care providers face? What are the major income sources received by providers?

- What are **staffing** patterns in formal care in terms of **staff** per child, staff education and training, and salaries and benefits paid?
- What fees do providers charge for different types of care and for children of different ages?
- How have child care enrollments, staff characteristics, **staffing** patterns, fees, and expenditures changed over the past quarter-century?

The parent survey should collect information to address the following questions:

- What types of child care arrangements do families use for their preschool and school-age chldren while parents work? What arrangements are used for children with a parent at home? How many hours do chldren spend in nonparental care?
- What proportion of families pay for child care? How much do they pay, on average? What proportion of their family income goes to child care? What proportion of families receive help paying for child care? How much help do they receive, and fiom what sources do they receive it?
- How did families learn about their current child care provider? What factors were important in choosing their child care provider? What types and features of child care do they prefer?
- What is the quality of child care arrangements fiom the parents' perspective?
- How much time is lost fi-om work because of child care problems? What kinds of leave do parents have and how often is it used for ch1d care problems?
- How much flexibility do parents have in their jobs, child care arrangements, and family support?

# 3. Optional Study of the Quality of Child Care

The national child care provider study would be greatly enhanced by a study of the quality of child care. Quality is an important dimension of child care that policy seeks to affect, and having no information on the quality of care in the U.S. has been a serious problem for child care policy. The studies completed to date, including the four-site study of center-based care (Helbum et al. 1995) and the three-site study of home-based child care (Galinsky et al. **1994**),

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have measured quality in selected sites, but not in nationally representative sites. Although ratios and group size are not highly correlated with quality, researchers fall back on these measures when more direct quality measures are missing, but the conclusions drawn are questionable if proxies for quality are not highly correlated with quality. For instance, we find that many child care settings have acceptable child care ratios, but poor or mediocre quality.

If a quality **substudy** were added to the provider study, it would entail observations of child care settings and interviews with center directors and family child care providers. The interviews would be essentially the same **as** the telephone interviews already recommended, although it **might** be necessary to ask more questions in order to obtain all of the information needed for the quality measures. It would be possible to include parent ratings of quality among the measures, but to do so, one would need to select one or more parents at random and either conduct a short telephone interview or ask the parent to complete a self-administered questionnaire. The observational study would require the observer to spend a minimum of two hours in the child care setting in order to see enough of the environment and the provider interacting with children so that the quality measures would be reliably coded.

To reduce the potential costs of the quality study, it would be possible to include fewer child care providers than would be needed for the main study. To reduce the number of providers in the most cost-effective way, it would probably be best to choose a subsample of communities, rather than a subsample of providers within all of the communities. Communities should be chosen randomly fiom the strata used for the main study, but fewer would be chosen so that data collection resources could be more efficiently deployed to fewer communities.

Assuming that 20 center-based providers are selected for each community in the subsample, a subsample of 20 communities would lead to a sample of 400 center-based providers for the quality study. If the design effect for this sample is the same **as** the average design effect in the full PCS sample (2.16, according to Kisker et al. **1991)**, then for a binary outcome with a mean value of 0.50, the 95 percent confidence interval for this sample would be 0.43 to 0.57. Selecting a smaller sample of communities would lead to a wider confidence interval, while selecting a larger sample would lead to a narrower confidence interval. For example, the confidence interval would be 0.40 to 0.60 for a sample with 10 communities and 200 providers, 0.44 to OS6 for a sample with 30 communities and 600 providers, and 0.45 to 0.55 for a sample with 40 communities and 800 providers.

#### 4. Optional Study of Nonregulated, Home-Based Providers

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An important drawback to this research design is that it limits the study to regulated child care, when unregulated forms of child care can be such a substantial proportion of providers of care for low-income families. In addition, regulations may have spillover effects on nonregulated forms of care. Spillover effects can occur because providers compete not only within the same type of care (for example, competition among centers) but also with providers of other types of care. Parents view center-based and home-based care as substitutes to some extent. As a result, if the cost of providing one type of care increases significantly so that its price must increase, parents may choose the other type of care, leading to changes in the quantity supplied and price of that type of care. In addition, because parents' search costs for child care are **high**, providers can compete on non-price characteristics of care by differentiating their product, thereby avoiding competing on price. One of the ways in which providers differentiate their services is by offering different levels of quality care. Therefore, we would also look for

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spillover effects on the quality of care provided when regulations change in a different child care market. 3

Any studies of the child care market will be weaker if information about the nonregulated sector is unavailable, because nonregulated providers make up a large proportion of the supply of home-based child care. For example, researchers used the PCS and NCCS to analyze the effects of child care costs on employment decisions using information on actual market costs by type of care estimated from the PCS, but the PCS could only provide an estimate of the cost of regulated home-based and center-based care. Similarly, researchers examined the effect of particular quality regulations in different states on the quantity, price, and quality of the child care that was the target of the regulation, **as** well as the responses of its competitors. These studies were also incomplete because they could not inform us about the response of the nonregulated sector.

An alternative design that would include all forms of child care for low-income families is a community-based study that would sample all child care providers in a given area. Providers would be sampled using RDD methods or through more direct, in-person methods, including neighborhood canvassing, contacting knowledgeable individuals in the target communities, or asking parents fi-om the demand study to name their child's provider. The National Study. of Child Care for Low-Income Families, sponsored by ACF, a study focusing on family child care, of which non-regulated is a part, is pursuing more intensive, community-based strategies, but the community design does not provide a nationally representative picture of the supply of child care.

The main obstacle to extending the study to nonregulated child care is that response rates are typically low for any of the methods described above. Many people do not want to participate in surveys, and this is a more serious problem when one of the targets of the survey is a group of

providers who may be operating illegally. Moreover, if one has to contact providers by first talking to parents, the interviewer must convince two people to cooperate with the survey in order to obtain a single data point, further reducing response rates.

A methodological study might tell us something about how to improve both response rates in child care studies and the validity of the information obtained **from** these studies. For this kind of study, focus groups would be assembled with child care providers of all types in **low**-income areas, helping researchers understand how to approach providers, secure their cooperation, and explain their thinking on cost and quality issues that surveys **ask** about. Since response rates were also low for the parent study, it may be equally useful to assemble focus groups of parents to discuss how to obtain their cooperation with a survey effort in general and with a request to help contact their child's provider for a linked provider study.

To reduce the cost of broadening this study to include informal child care, it may be possible to use a sub-sampling approach, in which a subset of the communities chosen for the main study would be selected for the broader study that would include nonregulated child care. As long as the selections were made within the original strata used for the main study, the resulting sample would be useful for learning about the nonregulated child care sector. This was suggested for the quality study, and the same subset of communities could be used for the nonregulated and the quality sub-studies, if these options were exercised. The same sample size considerations important for the quality sub-study (as described in Section B.3) would also apply to the sub-study of nonregulated care.

### 5. Schedule and Plan for Implementation

The basic versions o&the supply and demand studies described here could be conducted in a three-year period. In the first year, the sample fi-ames would be developed and questionnaires would be designed with input from a technical work **group** to ensure that the surveys address the most important policy areas and use the most reliable forms of questions. The survey would be conducted during the second year of the study. The third year of the study would be devoted to data analysis and reporting.

If the optional quality or informal care studies were conducted, the time line for the study would need to be extended by about one year. The planning phase would extend to about 18 months to accommodate the time needed to plan for the in-person data collection and to conduct the focus groups necessary to develop procedures for improving response rates. ?he data collection phase would be extended to about 15 months to accommodate the in-person interviewing, and the data analysis phase would be extended to 15 months to accommodate the additional data.

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<sup>&#</sup>x27;About 20 percent of the total NCCS sample had household incomes below \$15,000. If this percentage is applied to the sample of households with an employed mother and child under 5, then the number of cases in this group that are low income would be approximately 250 and the 95 percent confidence interval would be 0.436 to 0.564.

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#### **IV. EXPLORATORY STUDIES**

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In this chapter, we propose designs to address areas of chdd care that have received only scanty attention to date. The lack of research investment in these areas probably reflects the fact that a relatively *small* fraction of families or providm can be studied. As a result, efforts to establish a knowledge base have been limited – in terms of data collected and conceptual progress made -- which, in turn, has made it difficult to design policies to improve the affordability, quality, and flexibility of chdd care for low-income f d e s.

To begin to establish a body of research in these three areas, we propose a sequence of studies that begin on a *small* scale and build as information is established util we have a firm basis for a large-scale study in each area that will provide reliable, broadly representative information. The specific areas in which we propose such a multi-stage research program include:

- *Participation in child care subsidy programs* Who is served by subsidy programs and what factors affect families' participation decisions?;
- **Out-of-school care** What do parents want from out-of-school care, how is quality defined and measured for out-of-school care, and what are the characteristics of out-of-school care for low-income children of employed parents?
- Development of quality child care How can quality child care be developed in low-income neighborhoods? What are the essential combinations of features of child care that produce positive outcomes for children?
- Promotion of employer policies to encourage job and child care flexibility What policies would encourage employers to increase the flexibility of jobs they offer or help families secure flexible child care? What are the costs and benefits to employers and families of policies that seek to add flexibility to jobs and child care?

### A. PARTICIPATION IN CHILD CARE SUBSIDY PROGRAMS

The design of child **eare** subsidy policies has been made more **difficult** because we lack information on two very fundamental questions:

- What proportion of families eligible for child care subsidy program are being served, and which eligible families are most lkely to be served?
- What factors influence families' decisions about whether or not to participate in child care subsidy programs?

**A** lack of information about the first question has made it difficult to predict when eligibility and benefit policies are targeting families most in need, and whether the resources invested in child care subsidy programs are **sufficient** to meet the greatest need. **A** lack of information on the second question has made it difficult to predict the cost of alternative reforms to child care subsidy policies. We discuss research designs that would address each of these questions.

# 1. Estimating Who is Served by Child Care Subsidy Programs

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Since the mid-1970s, welfare policymakers have had information about which families are served by the Food Stamp Program and cash welfare programs. The information about eligible families came fiom microsimulation models, which consist of a nationally representative database of households and a computer program that evaluates each household according to the established set of rules for program eligibility and benefits, and then aggregates information about which families were participating also came fiom the nationally representative database of households, but was verified with the program's administrative data on the number and characteristics of participating families. Policy analysts can use a microsimulation model to identify which

eligible groups of families are most likely to be served by the program and the level of benefits received. The models **can-also** be used to estimate the likely effects of a change in current policy on family-level outcomes of interest and on program costs and caseloads.

We do not yet have a similar **analytic** capability for child care subsidy programs primarily because of a lack of household-level data that indicates who is participating in these programs and a lack of reliable data fiom each state on the number and characteristics of participants in child care subsidy programs. Here, we outline a strategy for obtaining the information we need to analyze who is being served by chld care subsidy programs, the level of benefits received, and how changes in child care subsidy policies would change the *mix* of families served and the level of benefits received.

The most promising way to build the capability for estimating the number and characteristics of eligible and participating families is to use a microsimulation model. Because of the large variation in state welfare and child care policies, it would be useful to have a microsimulation model that weights a national database to represent each of the individual states and then allows the user to simulate TANF and chld care program rules in each of the states on a longitudinal basis. State weights could be based on state-specific demographic information fiom the CPS and Food Stamp Program administrative data. The SIPP, with its information on household composition, employment, program participation, and child care choices and costs over time, could provide a longitudinal database of families for simulation.. The microsimulation model would be most useful if it could simulate different welfare and child care program rules for each state as well as the interactions between welfare program rules and child care program outcomes.

Currently, microsimulation models are used for a wide range of policy simulations in the welfare and Food Stamp policy areas. Some additional work is needed to improve our ability to
use microsimulation for child care policy analysis. The SIPP data need to include information on which families **are** participating in child care subsidy programs, how much they are paying for child care through the sliding fee, and any extra amount they are paying for child care above the sliding fee. This idea was discussed in the previous chapter as an enhancement to the SIPP. Data are not yet available from the states on the characteristics of families and children participating in child care subsidy programs, and in past years, this information could not be obtained uniformly and completely for all of the states (ACF 1993). Thus, more work needs to be done to improve the quality and timeliness of reporting by states about child care program participation.

The microsimulation model would need to contain welfare and child care policy parameters that reflect current state law (information that was not available when the model was developed). Information compiled fiom state CCDBG plans covers the rules for child care programs and some information on administrative practices across the states (NCCIC 1998). The microsimulation model should also have the ability to either run individual state policy simulations or a series of state-specific simulations. This would enable the analyst to estimate the characteristics of the population eligible for child care subsidies in each state, using TANF and child care program rules that apply in each of the states.

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### 2. Understanding Child Care Program Participation Decisions

More information is **also** needed on how child care subsidy policies affect the participation decisions of families because states need to know how eligible families would be likely to respond to proposed policy changes. Participation decisions could be examined as part of the child care subsidy demonstration described in Chapter II, since that design involved changes 'in child care policy parameters that may lead to changes in a family's willingness to participate. The demonstration design also involved simplifying several types of administrative rules and practices that may affect child care program participation, including how welfare recipients and other low-income families are informed about child care assistance, and how simple the application process is. States involved in the demonstrations may differ in their policies governing the use of informal child care, which may also affect participation decisions.

As part of the child care subsidy demonstration, families in the welfare sample could be interviewed six months after entering the demonstration about participation issues, since most states try to provide child care assistance to welfare recipients who need it in order to work. Focus groups of parents might tell us more about participation decisions, child care choices, and the extent of parents' knowledge about their eligibility for assistance. Researchers would need to identify the administrative rules and practices that seem most important and obtain more data on these state policies and practices for the research sites. Alternatively, if a state is about to change one of these administrative rules or practices in a significant way, it may be possible to compare participation rates and characteristics of participants before and after the policy change to learn something about its effects.

### B. OUT-OF-SCHOOL CHILD CARE

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The design of child **care** policies to help low-income parents with school-age children has been more difficult because very little is known about some of the most fundamental questions surrounding school-age child care:

- What kind and features of child care do parents want for their school-age children, and how much would that cost? How does this differ by the age of the child and neighborhood characteristics?
- How important is assistance with different types of out-of-school care to parents' employment, including before- and after-school care, care during school breaks and holidays, and care during the summer?

A lack of information about what kinds of assistance with out-of-school care would promote employment among low-income parents has made it difficult to develop child care policies for school-age children. As a result, the near-term agenda for research on school-age child care is to develop measures and collect descriptive data that would help us understand what child care policies toward school-age child care would help promote the employment of low-income mothers. Once some of the basic questions have been answered, it would be possible to develop and test interventions intended to improve quality, affordability, or access to child care for school-age children. In this section, we describe some of the basic questions and proposals for research.

An initial stage of research on school-age child care easily could be added onto the research demonstrations proposed in Chapter II, since these demonstrations would provide access to a sample of welfare mothers and low-income mothers not receiving welfare. Research on **school**-age child care should proceed first with focus groups of mothers of school-age children, who could be recruited during the implementation phase of either demonstration. The purpose of the

focus groups would be to sharpen our understanding of the child care issues faced by low-income mothers of school-age children.

The focus group study should explore what low-income parents want for school-age child care. What types and features of child care are available, and what would be ideal for their children? What would be necessary to keep them employed when the child is out of school? For **this** question, we would want to ask focus group members what they want from a child care arrangement, what price they are willing to pay, how difficult it is to find such care, and what difference school-age child care would make for their employment decisions. The focus groups should especially include subgroups of mothers who have various "combinations" of children needing care, such **as** mothers with younger school-age children, those with older school-age children. The focus groups should explore the need for and problems arranging all types of school-age care, including care during school holidays and other days off, care during week-long and summer-long school vacations, and care before and after school.

Work is also needed to conceptualize quality in school-age child care for children of different ages and across settings. Most of the effort to date to develop measures of quality for school-age child care has focused on formal settings, but a large proportion of school-age children are cared for in informal settings, including self-care. What dimensions or features of child care are important for school-age children of different ages and in different child care settings? What measures of quality and other features should be used? This work could be conducted in parallel with the focus group study and informed in part by what is learned fiom that study. Deborah **Vandell** and others have begun some conceptual work to identify aspects of quality in school-age child care settings and ages, and their work would be **important** to

this part of the study. Following this phase, a larger descriptive study of mothers and their school-age child care arrangements conducted in selected demonstration study sites would help to obtain a more representative picture of the types of child care used, the problems faced in arranging child care and pursuing employment, and the quality of child care. Measures of the 'quality of school-age child care arrangements should be developed for this study.

The study would include interviews with mothers to learn about the types, features, and perceived quality of child care available to their school-age children while they work. This study should ask about child care used during all times that children are not in school, including care during school holidays and other days off, care during week-long and summer-long school vacations, and care before and after school. The recent study of low-income school-age child care included a relatively small sample of working parents; the study we propose should focus on low-income worlung parents to learn about how they arrange child care while they work. One or two of the types of school-age care should be selected for a quality study — for example, **after**-school care and/or summer care. Measures of the quality of school-age child care settings should include the perspectives of parents, children, and a trained observer.

With information from the focus groups about the aspects of school-age child care that would make a difference for employment, and dormation on the quality and supply of school-age child care, a demonstration could be designed to look at interventions that would improve the quality or accessibility of school-age child care in ways that would promote employment. Other ideas for **further** research could also be developed.

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## C. DEVELOPMENT OF QUALITY CHILD CARE

High-quality child **case** is relatively rare in low-income neighborhoods, and policymakers interested in improving quality need to know what approaches work best to improve the quality of child care in a community. What ongoing training approaches should be used for staff already providing care? What prior education and training should be required of new staff members **to** ensure quality? What background should center directors have to support quality? What will quality enhancement and maintenance cost?

To address these questions, research should proceed along two parallel tracks: (1) identify and measure the characteristics of high-quality center-based and home-based arrangements that seem to distinguish them from lesser-quality arrangements of the same type and (2) evaluate some of the more promising approaches to improving quality that are being initiated across the country.

#### 1. Identify and Measure Characteristics of High-Quality Child Care

Blau (1997) and Mocan (1997) have used existing data to measure the correlation between characteristics of child care centers and levels of quality. Their research indicates that the features we have measured and that are viewed as strong correlates of quality only explain up to about half of the variation in quality observed in a sample of centers. Therefore, this research project should begin with a process study examining high-, medium-, and low-quality child care centers and child care homes to consider what measurable features, or "inputs" seem to be associated with higherquality child care. Attention should focus on ways in which inputs may be successfully traded off in producing high quality — for example, more highly educated staff may be combined with higher child-staff ratios than are commonly associated with quality. Parent

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perceptions of the quality of these arrangements could be obtained through focus group studies or short questionnaires, **and this** may contribute useful insights into the factors associated with quality.

Once more of the important features of quality arrangements and combinations of inputs have been identified, researchers should collect information on these features in a large-scale study of child care quality (for example, in the study of quality that could be added onto the child care supply study described in Chapter III). Researchers could then use regression techniques to analyze the strength of the relationships between these inputs and measured quality. Regressions measuring the relationship between inputs and quality should be carefully specified (based on the process analysis of child care arrangements of different quality) to capture interactions and tradeoffs between inputs that may be intrinsic to quality child care services. For example, if staff education and child-staff ratios can be traded off to some degree, the simple relationship between ratios and quality will not be very strong or explain much of the variation in quality. However, the combined effect of education and ratios, taking into account the tradeoffs between inputs, will pick up more of the variation in quality. Research should proceed separately on **center**based and .home-based arrangements.

This study could be conducted **as** an extension of the national survey of child care providers, discussed in Chapter III, if the option to conduct **an** observational **substudy** of child care quality **as** part of that survey were also exercised. The process study of quality programs compared with other program could be conducted during the first year, when planning for the provider survey would occur. And the additional measures of quality could be developed at the same time. The observational **substudy** of quality would therefore include the additional measures developed during the process study, including parent ratings, and the data analysis would include **an**.

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examination of the extent to which the measures of quality explain variation in the observed quality of centers and homes. Because of the need for OMB clearance for **data** collection instruments used in the provider study, the planning period for the provider study may need to be extended for up to six months.

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### 2. Evaluate Current Initiatives to Improve Quality of Care for Low-Income Families

Several initiatives across the country are attempting to improve the quality of care for lowincome families. North Carolina's Smart Start and T.E.A.C.H. education initiatives are designed to improve the quality of child care across the state. Child care agencies in Jacksonville and Seattle administer quality enhancement systems that require providers to meet relatively high standards while receiving technical assistance, training, and referrals of families from the agency enforcing quality standards. Wellesley College's Center for Career and Development in Early Care and Education is supporting several community-based approaches to quality development, including Taking the **Lead**, an experiment in director credentialing in four sites, and Emerging Leaders, experiments in six or more sites that take a variety of approaches to improving child care quality within communities.

We recommend that researchers look more closely at these models and others to determine how fully they have been implemented and to gain a sense of how successful they may have been at enhancing the quality of child care in low-income neighborhoods. A few of the most promising models should be selected for a more in-depth study of the level of quality achieved and critical steps in the process of improving quality. This information could be used by communities that want to replicate any of the approaches to improving quality. It would be helpful to identify any opportunities to evaluate the original quality enhancement initiatives through, for example, pre-post studies, comparison-community studies, or other comparison designs. Alternatively, **if** the information obtained from the in-depth study is used by other communities to replicate the original models, their efforts could be evaluated.

# D. PROMOTING EMPLOYER POLICIES TO IMPROVE JOB AND CHILD CARE FLEXIBILITY

Existing information suggests that job, chld care, and family flexibility **are** potentially serious issues for some low-income parents leaving welfare for work. Few employers and formal child care providers offer flexible job benefits or flexible child care services to low-income families. Yet, **Emlen** (1997) has argued that mothers can only continue working if they find sufficient flexibility in their jobs, chld care, and family support. With sufficient flexibility in one or two of these areas, mothers can manage even with a high degree of inflexibility in the third area.

Researchers in this area face several difficulties. One problem is sample selection, and both the magnitude and the direction of the bias is not clear. Mothers who have flexible jobs or flexible child care arrangements may have chosen them out of great necessity, and thus, research on mothers with flexible jobs and child care compared to those with inflexible jobs and child care would overstate the impact of providing flexibility more generally to parents who do not need it **as** much. Alternatively, if parents with flexible jobs and child care arrangements, research comparing the group with flexible arrangements to the group with inflexible arrangements may understate the impact of more readily available flexible jobs and child care arrangements, since many parents who could not find flexible jobs or child care may show a greater employment response to such arrangements.

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A second problem for researchers is the difficulty of identifying a sound design for a demonstration or intervention because the appropriate roles for government are not obvious. Interventions in this area would be important but are potentially laden with political and economic issues. The government could encourage employers to offer flexible job benefits or flexible child care through mandates or by paying employers a portion of the cost of the benefit. It would be useful to offer employers the choice of providing flexible benefits or flexible child care, since some employers will find the flexible leave to be less costly while others, with more inflexible staffing needs, will find the flexible chdd care to be less costly. The government could also subsidize child care providers so they could offer more flexible arrangements, but the problem here is that we do not know what amount of subsidy would produce the response needed fiom child care providers. Moreover, if financial incentives alone are offered without any technical support or assistance, the initiative may simply bring forth lowerquality providers who are having **difficulty** filling slots and see this as an opportunity to increase their incomes. Some research on the size of financial incentives and types of technical assistance needed to bring forth a supply of basicquality chdd care could be done as part of a process study in conjunction with the quality/flexibility demonstration described in Chapter II, Section B.

Another role for government would be to sponsor research on the effects of flexible jobs or child care options on employers and employees, disseminating the results to employers and the public more generally in order to build a case that such benefits should be offered. Many employer initiatives are being developed and implemented, and it may be possible to work with **an** employer to conduct more methodologically sound research on the effects of various flexible job and child care benefits if one were aware of changes that were being considered **A** pre-post study of different cohorts of low-income parents before and after a set of flexible benefits were **x** 

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introduced would be **an** improvement over current research, which compares people who work at flexible and inflexible **job**, who may have sorted themselves into these jobs out of necessity.

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APPENDIX A

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LIST OF PARTICIPANTS IN THE ACF FORUM

# LIST OF PARTICIPANTS IN THE ACF FORUM: 3 Child Care and Labor Force Attachment October 16, 1998

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