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THE PROJECT ON STATE-LEVEL CHILD OUTCOMES

Rationales for the Common Core of Constructs

Prepared for the Second National Level Meeting of the Planning Phase

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Project Overview: *The U.S. Department of Health and Human Services'* Office of Planning, Research, and Evaluation at the Administration for Children and Families (ACF), and Office of the Assistant Secretary for Planning and Evaluation (ASPE) are working together with states and other groups to improve the measurement of child outcomes in state welfare evaluations and in other state data systems. ACF is providing grants to states instituting welfare reform demonstrations to augment their demonstration evaluations with measures of child outcomes and also to expand their data capability to track state-level indicators of child well-being on an ongoing basis. Under funding from ASPE and the other federal contributors and private foundations, the states are receiving technical support on these activities from leading researchers who are members of the NICHD Family and Child Well-Being Research Network. The Network's technical support effort is led by *Child Trends, Inc.*

The project has two phases. The first phase is a one-year planning and design phase which began October 1, 1996. The second phase will be an implementation phase for data collection, analysis, and reporting activities that will begin in the fall of 1997. Twelve states participated in the first phase: California, Connecticut, Florida, Illinois, Indiana, Iowa, Michigan, Minnesota, Ohio, Oregon, Vermont, and Virginia.

This document provides rationales for constructs that were selected for the states' evaluations at the second national-level meeting of the planning phase of the Project on State-Level Child Outcomes.

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INCOME

Rationale

By altering labor-force behavior, the size and duration of cash grants, and family composition, numerous waiver provisions may produce important changes in the level of family income. There are many ways in which parental income level may affect the attainments, health and behavior of children (Children's Defense Fund, 1994; Duncan & Brooks-Gunn, in press; Huston, 1991; Korbin, 1992; Hill & Sandfort, 1995). Family income can affect children because money can be used to buy things that are essential for growth and development. Money can purchase food; lack of adequate food leads to poor nutrition. Money may provide such resources as books, toys, and musical instruments, that facilitate learning. Money can also enable participation in child care settings, activities and lessons that support positive development. Lack of resources to purchase toys or good quality child care may mean that low-income children do not have as many stimulating experiences (such as reading, playing learning games or playing musical instruments) as do children in more affluent families. Money may provide for greater safety and stability. A continual struggle for resources may lead children in low-income homes to experience less predictable daily routines and more residential moves than children in higher income homes. Money provides an opportunity to purchase shelter in less hazardous neighborhoods. Neighborhoods with large proportions of low-income residents are characterized by more violence and gang activity, lower quality neighborhood schools, and more exposure to environmental toxins such as lead.

Parents themselves may be influenced by low income such that their lives are more stressful, conflictual and unpredictable (Conger & Elder, 1994; McLoyd, 1990). In turn, their emotional health may be compromised, resulting in more depressive, irritable, or volatile moods. Stressful lives and less positive emotional health may themselves influence the day-to-day interactions between parents and children. So, for example, low-income parents may exhibit more inconsistent or harsh behavior with their children, or they may be less emotionally available to their children.

Possible Measures

Research studies show that: (1) household income is severely underreported in most welfare administrative records (Edin and Jencks, 1992); (2) household income fluctuates a great deal from one month to the next; and (3) calendar-year reports of income are generally more valid than monthly reports (Bound et al., 1994). The first point argues for a survey-based measure of family income, although administrative records on the past history of receipt of income from various assistance programs are exceeding helpful. The second and third points argue for an annual income measure unless extenuating circumstances (e.g., the previous calendar year covers too long a period for a useful evaluation of key waiver provisions) suggest otherwise.

Most crucial to collect is a reliable report of the total income (from all sources) of household members over a fixed time period (e.g., the previous calendar year). Since "income" from Food Stamps is virtually interchangeable with cash income, Food Stamp income should be included in the household total. Less crucial but still quite valuable information would be a person- and income-component specific accounting of total income. Also valuable would be monthly detail on key income sources, such as AFDC, Food Stamps and SSI.

An example of a single, global question on total family income is the following: "How much was the total income of you and all other members of your family last year? Please include income from work, welfare, Food Stamps, Social Security and all other sources." In the case of respondents who refuse or don't know the income total, it is useful to ask a series of "unfolding" questions of the form "Was it more than $10,000" (IF YES) "Was it more than $20,000?" (IF NO) "Was it more than $5,000?" Etc. Experience has shown that many apparent refusals can be converted into income brackets.

More details come from component by component (employment, welfare, dividends and interest) and person by person listings of income sources. In the case of income sources such as AFDC, it takes little additional interviewing time to ask, when the respondent reports a positive amount of AFDC, "During which months did you receive that income?" Responses to such questions provide an "event history" of the timing of the receipt.

EMPLOYMENT

Rationale

Extent and nature of employment. Maternal employment is a primary goal of welfare reform. How changes in the number and timing of work hours of adult women and other family members affect family life and children is a matter of considerable debate (Parcel & Menaghan, 1994). On the one hand, employment may reduce time for the care of children, for monitoring the activities and behavior of older children, and for carrying out household responsibilities. The possibility exists that employment will induce stress in employed mothers from overload, from difficult work hours (night, weekend, varying hours), from concern about child care adequacy, and concerns about the well-being of children caring for themselves. Yet on the other hand, employment and increased income may enhance parents' sense of financial security, self-worth, efficacy, and status. Similarly, employment can enhance rewarding social contacts and provide "social capital".

Children's activities and time use are very likely to be affected by changes in maternal employment. Younger children are likely to experience an increase in nonparental child care. Extent and quality of child care in turn have the potential to affect children's development. Older children may also experience changes in their activities, with possibilities including increased nonparental care (for example, in after-school programs), self-care, and also increased responsibilities for the care of younger siblings and for household tasks. Greater assumption of responsibility within the household and for the care of younger siblings, if not too extensive, could have positive implications for older children's development. If mothers' employment results in children spending more time in the home, parents' ability to monitor their children's whereabouts and activities may increase, and children may be protected from negative influences outside the home. Work schedules are expected to increase the structuring of family life -- e.g. schedules for meals, homework, bedtime. If parents experience an increase in sense of financial security, self-worth, and efficacy, this would be expected to have positive implications for the quality of parent-child interactions. Further, children observing their parents succeeding in employment may lead to increases in children's aspirations and optimism about the future. Yet if parents experience a substantial increase in stress in association with their employment, and/or experience job insecurity and instability, this could have implications both for the quality of parent-child relations and for the children's aspirations.

Job skills (hard and soft). As they attempt to move welfare recipients into permanent employment, many states are interested in what helps individuals maintain employment over time. Thus, there is interest both in hard job skills (e.g., typing, computer skills) and in soft job skills (e.g., expectations in the work place, and interactions with other employees or employers), and which of these skills helps recipients maintain employment. Many welfare reform efforts have moved from providing education and training, to emphasizing direct entry into the labor force. Thus, soft job skills are more likely to be addressed in job-readiness activities that the recipients engage in. Qualitative research provides support for the idea that recipients need soft

job skills. Quint, Musick and Ladner (1994), in their study of young mothers, found that it was not an inability to perform the necessary tasks that lead to job loss, but "relational" difficulties. That is, the women had difficulties dealing with supervisors and other employees as well as with the norms and customs of the workplace.

There is evidence that the behaviors parents are rewarded for on their jobs can affect the socialization practices they use with their children. For example, jobs that are repetitive, unstimulating, and that offer little opportunity for self-direction may be associated with child-rearing values that emphasize obedience to adults. By contrast, when jobs involve greater variety, stimulation, and self-direction, parents are more likely to use strategies of reasoning in disciplining their children, and to expect self-direction from their children in their behavior. More cognitive stimulation of the parent on the job may result in more varied and interesting parent-child interactions. Thus, skills and behaviors engendered by job-training activities or in the context of parental employment may have implications for parental socialization practices and for children's development.

Possible Measures

Most crucial here is information about the total number of hours of work for the mother and perhaps also the child's other main adult care givers in the family. Questions concerning hours of employment are widely used in surveys of the kind contemplated in the 12-State Project, as are questions about the occupation and industry of employment for the current or most recent jobs.

Hourly earnings on a job are an important indicator of the skill level of the worker and the value of that worker's time. It is best to ask about earnings in a flexible way so as to allow the respondent to use the units he or she is more comfortable with: "What is your salary or wage", with a response of $_____ per hour, week, 2 weeks, month or year. To obtain an hourly rate for everyone, one needs the added question: "How many hours per week on average do you work to get that pay?" Health insurance and other fringe benefits provided by jobs can be obtained from questions such as: "Does this job provide you with: (1) a health plan or medical insurance available through the employer?; (2) sick days with full pay?; (3) paid vacation?; (4) pension plan coverage?

Stability of employment, or whether the recipient is employed over time, is also an important measure of employment. The stability of the work indicates whether the recipient can count on the income as well as any health benefits.

Since the timing of the work hours has an important potential effect on family routines, it is useful to ask questions about that as well. A 24-hour retrospective time diary produces the highest-quality reports of this kind of information. Less time-consuming questions of this kind ask about whether working respondents have a regular work schedule; if so, whether it is a split-shift schedule; and what is the regular starting and ending time for the employment.

Job skills, especially soft skills, are difficult to ascertain directly in the context of a survey. There are no established measures of soft skills and the attempts that we are aware of were not particularly successful. There may be a number of different ways to try and measure soft skills. Questions could focus on attitudes toward work and a willingness to endure difficulties in the workplace. If an in-person interview is done it might be possible to use some interviewer ratings of a respondent's punctuality, demeanor, and self-presentation. Attempts to create such a measure could be very useful but would also be highly experimental.

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FAMILY FORMATION AND DISSOLUTION

Rationale

One of the stated goals of welfare reform on the national level is to reduce non-marital births and to end potential incentives that exist for family dissolution. While most waiver policies do not directly seek to influence what kind of families recipients live in, the policies may have consequences which affect family formation and dissolution. Stricter enforcement of child support may increase incentives for father involvement. Sanctions and time limits may encourage the formation of families for recipients who are at risk of losing part of their income; alternatively, families may "double up" with other families. Provisions requiring teen parents to live at home provide strong incentives to maintain family types that might otherwise have been altered.

Children who experience a marital separation or divorce typically show less positive development than those whose parents live together. Separation and divorce have been linked to emotional distress (Chase-Landsdale & Hetherington 1990; Furstenberg 1990), declines in school achievement, and increases in problem behaviors in school (McLanahan & Sandefur 1994). Differences between children living in single-parent households and other children with regard to educational disadvantage and the chances of later becoming a teen mother or single parent are only partly explained by differences in income. Even at equal levels of income, children living in single-parent households are likely to experience more negative outcomes in these areas (Hogan and Kitagawa 1985; Krien & Beller 1988; McLanahan 1985, 1988; McLanahan and Sandefur 1994).

There is evidence that the children of married parents in high conflict relationships have adjustment problems that are similar to those experienced by children of single parents (Hanson 1993; Peterson & Zill 1986). Incentives that lead adults to stay in high-conflict relationships may not result in benefits to children. Thus, it may be important to measure not only family formation and dissolution, but also marital conflict.

Possible Measures

We suggest covering issues of family formation and dissolution using a set of questions pertaining to changes in living situation similar to those used in the New Hope project. These questions would have to be modified for use on the telephone, but the general format could be preserved. A person could be asked if they have experienced a marriage, separation, or divorce since random assignment. If they replied "yes" then they could be asked when this occurred. Asking when the change occurred is useful information in itself and is likely to improve the accuracy of reporting.

CHANGES IN ATTITUDES TOWARDS WORK & WELFARE

Rationale

A measure of attitudes toward employment is needed to identify a key subgroup, namely, those mothers who feel negatively about employment or who feel it is inappropriate to work outside the home while their children are still relatively young. Studies in the child development literature have found that there are more likely to the negative effects on the children when the employed mother has negative attitudes about employment than when she has a neutral or positive attitude (Hoffman, 1989; Zaslow, Rabinovich & Suwalsky, 1990; Alvarez, 1985). Also, in one welfare-to-work study, negative attitudes toward work were found to predict to less favorable supervisor ratings when employment was secured (Johnson, Messe & Crano, 1984).

Similarly, mothers may have positive or negative attitudes about receiving welfare, which is likely to influence their participation in mandated employment activities. However, after participation, these attitudes may change; for example, mothers who believe it "doesn't pay" to choose work over welfare may change their minds after receiving financial incentives to encourage work. Positive change in attitudes about work and welfare may be on indicator of program success. Moreover, to the extent these mothers than remain successfully involved in work-related activities and ultimately become stably employed, their children's overall well-being and development may be enhanced (see "Employment" rationale).

Possible Measures

Appropriate for mixed-mode (phone when possible, in-home if no phone)

We recommend 7 items from the National Survey of American Families which tap mothers' opinions on the effects of welfare on other life decisions (e.g., finding work; having a child) and attitudes about maternal employment. This survey is still in the field, hence no reliability or predictive validity information in available.

We also recommend eight items from the Five-Year Home Interview of the JOBS Child Outcomes Study. These items are related to mothers' employment and welfare and the perceived barriers to their becoming employed. This survey is still in the field, hence no reliability or predictive validity information is available.

PSYCHOLOGICAL WELL-BEING

Rationale

Maternal depression. Depression is defined as a negative mood state so extreme that it interferes with daily functioning and productive activity. In general, the highest rates of depression are found among people with low incomes, among women, parents with young children, young adults, unmarried people, the poorly educated, and the unemployed (Eaton and Kessler, 1981; Hall et al, 1991; Hall, Williams, and Greenberg, 1985; Klerman and Weissman, 1989; Orr, James, Burns and Thompson, 1989). Consequently, single mothers on AFDC with young children have been found to be at especially high risk for developing depressive symptoms. In accordance with previous studies of low income mothers (Hall, Gurley, Sachs & Kryscio, 1991), 42 percent of AFDC mothers in the JOBS Descriptive Study reported high levels of depressive symptoms (Moore, Zaslow, Coiro, Miller, and Magenheim, 1995). Similarly, a longitudinal study of young women on AFDC who had given birth as teenagers found that about half of the program applicants were at risk of clinical depression at baseline (Quint, Polit, Bos and Cave, 1994).

In the Washington State Family Income Study (Weeks, Gecas, Lid, Seff, Stromsdorfer, & Tarnai, 1990) the public assistance sample was found to have a greater percentage of mothers who reported high levels of depression than control groups. Longer duration on welfare was associated with more depression. However, women in the study who were enrolled in school or a training program, and those with jobs, were less likely to be depressed. Other studies have also found that employed women tend to have better psychological health than nonemployed women (Kraus & Markides, 1985; Ross, Mirowsky & Goldstein, 1990).

It is not clear whether state welfare reform policies may increase or decrease levels of maternal depression, have no effect at all, or have differing effects at different points in time (e.g., in relation to whether or not the family has reached a time limit) . For mothers at risk of clinical depression, policies such as sanctions, hitting time limits, or working in low-paying, unstimulating jobs may serve to maintain or increase depressive symptomatology. On the other hand, if labor force participation or job training manage to lift mothers out of their depressed state and into a more constructive frame of mind, the more adaptive mind set may well decrease depressive symptoms.

High levels of depression and stress interfere with effective functioning in adult roles, particularly with regard to parenting (e.g., Lyons-Ruth, Connell, and Grunebaum, 1990; Richters and Pellegrini, 1989; Simons et al 1993; Cooley and Unger, 1991). Specifically, parents who are depressed or highly stressed are less likely to provide emotional support to their children and more likely to employ harsh disciplinary practices (Puckering, 1989; Richters and Pellegrini, 1989; Moore et al 1995b). In their interactions with preschool children, depressed mothers are more critical, less responsive, and less active (McLoyd & Wilson, 1991). Similarly, research by Cox et al (1987) found that maternal depressive symptoms predict parenting that is more hostile

and less responsive than parenting by nondepressed mothers. In general, maternal emotional distress is associated with a lower frequency of positive behavior toward the child and a higher frequency of negative behavior.

Such parenting styles are consistently associated with poorer child outcomes (see Maccoby & Martin, 1983 for a comprehensive review of this literature). That is, in addition to the negative ramifications of depression for mothers themselves, a variety of child development studies have found that children of depressed parents display higher levels of both externalizing (e.g., aggressive) and internalizing (e.g., anxious, depressed) behavior problems, often have deficits in social and academic competence, and are in poorer physical health than children of non-depressed parents (Downey and Coyne, 1990).

Possible Measures

The Center for Epidemiological Studies Depression (CES-D) scale is a widely used measure of depressive symptomatology in the general population (Devins & Orme, 1985; Weissman, Sholomskas, Pottenger, Prusoff & Lock, 1977) and has been found to discriminate between clinically depressed patients and others. Scores on this scale can theoretically range from 0 (not at all depressed) to 60 (severely depressed). Scores of 16 or higher are considered to be indicative of a level of depression that places the person at risk of clinical depression; only 20 percent of people in community samples score in this range (Comstock & Helsing, 1976). The full 20-item version of the CES-D was used in the JOBS Descriptive Study survey and the New Chance 18-month follow-up, and a shorter 12-item version (Ross, Mirowsky & Huber, 1983) was used in the JOBS Two-Year follow-up survey. Coefficient alphas were .86 and .91 for the JOBS Descriptive Survey and the Two-Year Survey, respectively, indicating a high degree of reliability. In addition, the 12-item version of the CES-D is being used in a telephone parent survey for the Early Childhood Longitudinal Survey (ECLS). Finally, an abbreviated scale based on four-items from the CES-D was used at baseline in the JOBS study and other welfare evaluations. Caution should be exercised when using the shorter versions of the CES-D because established cut-off scores for "risk of clinical depression" have not been established.

ABSENT PARENT INVOLVEMENT

Rationale

The following discussion is focused on fathers, since in most cases, state waiver provisions concerning nonresidential parents are targeted toward fathers. Many of the states' waiver provisions are aimed at increasing a nonresident parent's involvement in his or her child's life, mainly through paternity establishment, enforcement of child support collection, and allowing families to keep more or all of the child support awards by passing through the monies. A possible consequence of these provisions is that fathers may see their children more frequently and the relationships between fathers and their children may be enhanced. On the other hand, forcing fathers to acknowledge their paternity and pay child support might increase feelings of anger and resentment toward both the mother and the child. In addition, many fathers of children who receive welfare have supported their children "outside of the system." Several studies of women on AFDC find that many fathers choose to provide support either by providing money directly to the mothers, or through the provision of such things as gifts, clothing, or diapers (Achatz & MacAllum, 1994; Edin, 1994; Greene & Moore, 1995; Hardy, Duggan, Masnyk, & Pearson, 1989). Thus, it will be important to examine fathers' provision of informal support as well.

Several studies have examined the relationship between child support payments, visitation, and parental contact. For instance, McLanahan, Seltzer, Hanson, and Thomson (1994) found that voluntary payment of child support for children born outside of marriage was associated with lower parental conflict and increased contact between the child and the noncustodial parent. However, the beneficial effect of child support dollars might be due in part to the fact that fathers who paid support in this study might have been more committed to their children. Others (Baydar & Brooks-Gunn, 1994; Veum, 1993), have found that child support compliance was not related to father-child contact.

Father involvement in the form of child support is related to several areas of child well-being, particularly cognitive development and academic achievement (Graham, Beller, & Hernandez, 1994; King, 1994; Knox & Bane, 1994). King (1994) found that child support payments were related to higher levels of children's perceived scholastic competence, math and reading scores. In addition, Furstenberg, Morgan, and Allison (1987) found that the level of child support that was received was related to fewer behavior problems among adolescents.

Possible Measures

Appropriate measures of father involvement can be found in several surveys:

- Questions from the JOBS Descriptive Study (items on frequency of child's contact with birth father; set of items regarding the receipt of non-monetary support and contributions from the father; set of items on child support awards and payments)

- Questions from the Child Development Supplement of the PSID
- Questions from the National Survey of America's Families on contact and child support
- Questions from SIPP

STABILITY AND TURBULENCE

Rationale

Turbulence involves the experience of multiple changes in life circumstances. Turbulence during childhood in terms of family structure and living arrangements, family relocation, schools attended, child care, and income level, have been shown to be associated with a number of negative outcomes for children and young adults.

Welfare policies may bring about changes in a number of areas of family life to which children are exposed. For example, changes may occur in experiences of child care, who the child lives with, family income levels, and where the family lives (families may move in order to find work). It is unknown whether changes will occur with such frequency in any one area of family life, or across such a range of areas of family functioning, that they will amount to turbulence for children. Some programs include support services that may reduce turbulence, and steady parental employment may lead to a more stable environment for children. Yet other waiver provisions may lead to a greater degree of turbulence.

Existing research links turbulence experienced by children to behaviors that policy makers hope to reduce. Obtaining data on various types of turbulence in the lives of children may provide an early indicator of changes that either support or undermine children's development.

Living arrangements and family structure. Wu and Martinson (1993) found that the number of changes in family situation during childhood was associated with the probability of a woman having a premarital birth before she was 18 year old. These researchers found that controlling for the number of changes in family situation removed the link between spending time in a single parent household and the likelihood of having a premarital teen birth. Using a different data set, Wu (1996) again found a link between the number of changes in family situation and the likelihood of a premarital birth, though in these analyses exposure to a single parent household also increased the likelihood of a premarital birth for black, though not white, women. This research indicates that the number of changes in family situation is associated with increased risk for premarital birth independent of exposure to single-parent families.

The experience of multiple transitions in family situation during childhood is also linked to lower educational attainment (Aquilino 1996). Given that lower educational attainment decreases earning potential throughout a person's life, multiple transitions in living arrangements during childhood may have long-lasting implications.

Moves during childhood. The frequency of moves during childhood has been found to be related to a number of school-related outcomes. For example, a greater number of moves is associated with a decrease in the probability of completing high school and college (Haveman, Wolfe and Spaulding 1991; Hagan, MacMillan and Wheaton 1996), an increase in the

probability of repeating a grade and in behavioral problems (Wood, Halfon, Scarlata, Newacheck and Nessim 1993), and lower levels of academic achievement (Ingersoll, Scamman, and Eckerling 1989; Simmons, Burgeson, Carlton-Ford, and Blyth 1987). Ingersoll et al. (1989) found the most negative effects of mobility when moves occurred during the early grades, but these researchers did find that mobility was linked to lower levels of achievement at all grade levels.

Stack (1994) found that the number of moves during childhood helped predict whether or not a 15-19 year old girl has had premarital sex. The number of moves increased the probability of premarital sex controlling for other variables such as whether the girl's family was intact, religiosity, race, and peer sexual behavior and attitudes.

Child care arrangements. Turbulence in child care may occur because a parent changes arrangements, or because of a high turnover of caretakers within a single child care setting. Children who experience a greater number of changes in child care arrangements have been shown to engage in less complex forms of play (Howes and Stewart 1987) and to have more problems in school as first graders (Howes 1988). Whitebook, Howes and Phillips (1990) found that children in centers with higher annual teacher turnover rates spent less time engaged in social activities and more time wandering aimlessly. A greater number of changes in the primary caregiver in a day care setting has been found to be associated with a greater occurrence of aggressive behavior (Howes and Hamilton 1993).

Income instability. Associations have been found between fluctuations in family income levels and outcomes for children. Such fluctuations create uncertainty about resources. Families may overspend when income is at higher levels, which may compound the difficulty of getting by on income that is low overall. Wu (1996) found support for the idea that fluctuations in income increased the likelihood of a woman experiencing a premarital birth regardless of level of income. He also found some indication that declining income had a detrimental effect that went beyond that of just having a low income. Moore, Morrison, Zaslow, and Glei (1994) found associations between fluctuating in and out of poverty and welfare, and lower scores on a measure of the home environment. These fluctuations were also found to be associated with lower reading scores, lower math scores, and a greater number of reported behavior problems among children 7 to 12 years old.

School changes. Moving often requires a child to change schools. Most of the studies that examine the link between moving and child outcomes do not include measures of whether or not the child changed schools. However, there is some research that looks at school change in relation to child outcomes. The existing evidence indicates that even the "normal" transition from elementary school to junior high school can have negative implications for a child's self-esteem and grades (Blyth, Simmons, and Carlton-Ford 1983; Simmons et al. 1987). The possibility exists that a transition that involves an improvement in school environment would be associated with improved child outcomes. Because of the close association between number of moves and changes of school, we are recommending here to document only the former.

Multiple changes. Changes in one sphere of a child's life are often linked with changes in another sphere. When parents divorce, the child's household is likely to experience a loss of income, which in turn may lead to moving and a change in schools or day care arrangements. Simmons et al. (1987) found that multiple changes occurring in a child's life (in terms of school attended, family living situation, and moving) predicted a reduction in participation in extracurricular activities and a greater risk of decline in school grades. This finding suggests that more attention should be paid to instability occurring across multiple areas of a child's life. Turbulence may have more serious implications for children when it is generalized. Studying instability across multiple areas of a child's life also opens up the possibility of studying offsetting influences: the possibility that stability in one or more key areas may offset instability in other areas.

Possible Measures

There is no established measure of turbulence. However, it is likely that states will be collecting information on a number of the areas (e.g., family income, family living situation, child care) where turbulence has been shown to be associated with child outcomes. A composite measure of turbulence could be developed by drawing upon information from these different areas. In order to create such a composite, however, it will be essential in each of these areas to go beyond data about the current situation. For each area, questions will need to be included that get at changes over time. Such questions will need to be worded in such a way as to reduce the possibility that the respondent will make errors when recalling events from the past.

We suggest drawing upon measures of *family living situation*, *income*, and *child care* to develop a turbulence composite. In order to create such a composite, it will be necessary to agree upon a time frame for considering changes in each of these. For example, it could be agreed that we would seek to document changes in family living situation, income and child care since random assignment, or over the most recent year. While items can be drawn upon from existing surveys (as noted below) for such a composite, some of these items are worded for administration in-home, and would need to be simplified for telephone administration.

Regarding *family living situation* it is important first to ask if the child has been living with the respondent during the period of time being considered. Questions addressing this issue have been used in the JOBS Child Outcomes Study (for all children in a family) and the Study of Early Head Start (for a particular child), and are included in this notebook. A series of questions can then be asked about changes in living situations. Such a series is included in the New Hope Project. These are included as possible measures in this notebook.

Regarding *income,* the section providing rationale and suggested measures concerning income above notes the possible strategy of getting monthly detail on key income sources such as earnings, public assistance, Food Stamps and SSI. If the states decide to go forward with a measure of turbulence, it will be important to get such monthly detail regarding income for the agreed upon period of time that turbulence is being examined.

Regarding *stability of child care,* possibility measures are provided in the section (below) on child care. Again, the time frame for measurement will have to agree with that used for income and living.

CONSUMPTION

Rationale

Three measures of consumption are suggested for possible inclusion in the waiver studies. These are: the percent of income spent on child care; the percent of income spent on rent; and the percent of income spent on food.

The suggested measures regarding child care are discussed in the child care section (below). Housing is one of the largest single categories of expenditure a family makes. The greater the percentage of income a family spends on housing, the less that is available for other uses. Housing affordability is measured by the percent of income that a family spends on housing. Clearly changes in income associated with changes in welfare policies will have a implications for housing affordability. Families with affordability problems are at risk of having to move, homelessness, and doubling up. They are also more likely to be experiencing high levels of stress.

Food is another major expenditure category. Changes in income may change the percent of income spent on food. Families may reduce income spent on food in order to meet other expenditures. This may result in problems in terms of hunger or nutrition.

Possible Measures

Cost of housing includes the amount spent on rent or mortgage, plus property taxes, insurance and utilities (Myers and Wolloch 1995). Questions about housing cost can separate these out or ask about them jointly. Most surveys do not ask questions about utility costs. This is because this category is subject to inaccurate reporting. However, it is common to ask whether utilities are included in the rent. We are including as possible measures the housing questions asked in the SIPP survey and in the New Hope survey.

Expenditure on food is far more difficult to measure because it often involves money spent in various places such as grocery stores, restaurants, and schools. These expenditures may vary from week to week and are hard to recall on a monthly basis. In addition, expenditures at grocery stores may include non-food items. There are surveys that attempt to get an accurate account of money spent on food. Typically they ask about expenditures at all of the places where money may have been spent on food. Given the problems of recall and the length of time it takes to answer these questions, we are reluctant to recommend their inclusion in a survey. However, items are available for review upon request .

USE OF HEALTH AND HUMAN SERVICES

Rationale

Mothers who are mandated to participate in employment and educational activities through the welfare office might also be introduced to additional resources available to them. Indeed, some states' welfare policies and practices include extensive case management with the goal of identifying families' service needs and improving their access to needed services, particularly if, in doing so, mothers become more able to leave welfare for employment. Such services include *child care subsidies* and *Medicaid* (including "transitional" child care and "transitional" Medicaid for up to 12-24 months after mothers earn their way off welfare), and *Food Stamps*.

In addition to supporting the mothers' transition from welfare to work, these services are likely to benefit children directly. Additional Food Stamps may allow the family to purchase additional and/or more nutritious food, addressing children's hunger and boding well for their overall health. Subsidies to help purchase adequate child care will not only allow a mother to secure regular employment, but quality child care can benefit children's health, educational and socioemotional development. Likewise, Medicaid coverage not only will reduce the work disincentive due to lack of health insurance, it can also ensure proper medical care when needed, improving children's overall health.

Possible Measures

We include for consideration possible measures appropriate for mixed-mode survey (phone when possible; home interview when there is no phone in the household), and measures appropriate for in-home survey.

Appropriate for mixed-mode survey

- *Assessing the New Federalism Study.* The National Survey of American Families asked one item on whether the respondent, spouse/partner, or focal child postponed seeking needed medical care, and for what reason. This survey is currently in the field; thus, predictive validity information is not available. However, this item has face validity in that those who answer "yes" clearly have problems accessing health services.
  (See attached item).

- Items from the JOBS Child Outcome Study's two- and five-year home interviews (see below) could be easily administered over the phone to obtain information on Food Stamps receipt, health coverage, use of transitional Medicaid and transitional child care.

Appropriate for in-home survey

- The single item from the Assessing the New Federalism study can easily be administered in the home.

- *JOBS Child Outcomes Study.* The Five-Year In-Home Survey also included an item on whether respondent or anyone in household received Food Stamps in prior month.
  (See attached J3 item)

  The Two-year In-Home Survey included two items on whether the focal child was currently covered by his/her father's medical insurance/health plan and whether focal child was currently covered by private insurance, and HMO, or Medicaid. (Could edit language to include whether *any* children in the household were covered.)
  (See attached DD8, DD9 items).

  The Five-Year In-Home Survey included four items on whether respondent ever used transitional Medicaid and/or transitional child care benefits.
  (See attached G1-G4 items).

CHILD CARE

Rationale

Child care is typically defined as any non-maternal or non-parental care arrangement. Types of child care include child care centers, family day care homes, relative or neighbor care in or out of the parent's home, Head Start programs, and before or after school care. Once the child is of school-age, the notion of child care is expanded to include lessons, regular activities, and self-care.

The work requirements in place with many of the waivers and with TANF are likely to affect the use of child care. Child care use for participants in the JOBS Program increased substantially for those with mandatory work, job training or education requirements (Moore, Zaslow, Coiro, Miller & Magenheim, 1995). There is evidence that child care can affect the mother's ability to get and maintain a job. Meyers (1992) reported that those parents who miss more days of work due to child care are also more likely to drop out of JOBS-type programs. Hofferth and Collins (1996) reported that mothers earning low wages (defined as under $6 per hour) without a conveniently located center-based program (within 30 minutes) were more likely to leave their jobs. Among the groups of mothers studied, those earning moderate wages (defined as $6-8 per hour) were most likely to leave their jobs as the price and instability of care increased.

The use of child care by respondents is likely to affect the development of the children. The research literature suggests that high quality early childhood programs can play a significant, positive role in the lives of disadvantaged children (Burchinal, Lee, & Ramey, 1985; McCarthey, 1984; and Darlington, 1980). Quality of care and stability of care over time have been found to be related to children's cognitive and socioemotional development (Galinsky, Howes, Kontos & Shinn, 1994, Hayes, Palmer & Zaslow, 1990; Helburn, Culkin, Morris, Mocan, Howes, Phillipsen, Bryant, Clifford, Cryer, Peisner-Feinberg, Burchinal, Kagan, Rustici, 1995; Love, Schochet, & Meckstroth, 1996; NICHD Study of Early Child Care; Zaslow, 1991).

Possible Measures

Below we summarize aspects of care that could be addressed separately according to different options that states might take in collecting data: relying on mother as a respondent in a survey, obtaining permission to contact child care providers, and assessing child care quality through direct observation.

A. Mother as respondent in a survey. The measures provided as possibilities in the notebook are taken from The JOBS Child Outcomes Study, The National Child Care Study and The School Age Child Care Project. Except where noted, the suggested measures would be appropriate for mixed mode administration. Specific measures (as noted) would rely on administrative data, or would require an in-home interview.

1. States may want to know how child care affects the ability of recipients to get and maintain employment. Relevant aspects of child care include:

- the supply of care (through administrative data; number of center slots and licensed family day care slots available per 1,000 children in recipient's neighborhood)
- mother's perception of difficulty in finding care for focal child/all children
- reliance on care for non-traditional hours; difficulty in finding such care
- the number of different arrangements the parent is having to use simultaneously for focal child/all children
- the cost of care for focal child/all children
- use of subsidies for care for focal child's care/all children
- the convenience of care (location and transportation issues)--focal child/all children
- availability of care for child(ren) when ill
- frequency with which mother has had to miss work/school/training because of problems with child care (note nature of problem)

2. States may want to know how child care affects the development of the child. In addition, states may want to be able to describe the child care settings that children in the studies are experiencing. Here measures would pertain to a focal child, because we would be seeking to describe a particular child's experiences and relate these experiences to his/her development. Relevant aspects of care to measure for these purposes include:

- type of care (primary arrangement/all current regular arrangements--number of concurrent arrangements)
- hours per week in primary arrangement/all current regular arrangements
- number of children in child's group
- number of providers in child's group
- licensed care or not
- how many caregivers child has had in the last year/ over longer interval (detailed child

care history would require in-home survey, so that mother and interviewer can work in calendar format)

- whether self-care occurs on regular basis; whether care by an older sibling (specify age) occurs on a regular basis.

3. For older children (7-14), it would be very important to go beyond consideration of center care, family day care, reliance on relatives and neighbors as forms of care. Types of care for older children should include also after-school child care, after-school activities, regularly scheduled lessons. It would continue to be important to ask about self-care and care by siblings. It would also become important to ask about whether child is in charge of siblings or other children on a regular basis.

B. Permission obtained to contact child care provider. More detailed information on the quality of the child care setting can be obtained by getting permission to call the provider of care, or sending the provider a survey. In this case, states could address:

- number of children in child's group
- number of caregivers in child's group
- training and education of child's primary provider
- reasons caregiver is working as a child care provider (views this as a profession; primarily to earn money; as a means of caring for own children while earning money)
- licensed or not
- auspice of care
- attitudes about caregiving (e.g., authoritarian)
- hours and days care provided
- cost of care

C. Permission obtained to observe in care setting. The most detailed information about the quality of child care is obtained by direct observation in the child care setting. States might opt to request permission to carry out such direct observations. Recommendations regarding measures for direct observation of the child care setting would be made according to the specific hypotheses and research designs being used by states deciding to pursue this approach.

HOME ENVIRONMENT AND PARENTING PRACTICES

Rationale

Family violence. In state's efforts to maximize the employment of welfare recipients, it is important to understand what factors contribute to getting and maintaining employment. There is a growing concern among policy makers about the influence that family, friends, and partners can have on a woman's perceptions of the barriers to employment. There is, in fact, growing evidence of domestic violence suffered by participants in welfare reform programs (Quint et al., 1991) as well as a strong link between low income and family violence (Strauss, M.A. & Smith, C., 1990). Efforts by the recipient's friends or husband to influence the recipient mentally or physically may have an effect on a recipient's employability over time (Lloyd, 1995).

Although research findings are not entirely consistent, there are some indications that observing domestic violence has negative implications for children. Thus, Deibowitz and King (1995) report that witnessing domestic violence can traumatize the child as well as lead to future behavior problems and delinquency. In addition, children in homes where domestic violence is happening between adults are much more likely to be battered themselves. 75% of battered women report that their children are abused as well (Straus, Gelles, Steinmetz, 1980).

While the implications of children's *observing* domestic violence are not entirely clear at this point, findings clearly link being the *target* of abuse to negative child outcomes. For example, Hotaling, Strauss & Lincoln (1990) found that children assaulted by parents were more violent toward brothers, sisters, parents and persons outside the family. They were also more likely to have adjustment difficulties at school, to be involved in property crime and to be involved with the police.

Routines. Mothers who are mandated to participate in employment and educational activities might experience an increase or a decrease in the degree to which their lives are routinized, or follow a regular schedule. This in turn could have implications for child outcomes. For example, mandated employment may force mothers to *establish regular routines,* such as regular bedtimes and mealtimes. Children can benefit from such predictability. Alternatively, the home environment may become *more disorganized and less routinized* as a result of increased stress or because employment (and child care) occur sporadically or at varying hours.

Aggravation/stress in parenting. Mothers who are mandated to participate in employment and educational activities might experience an increase in their subjective sense of stress, which can lead to more impatient, more aggravated parenting practices. For example, questionable feelings of self-efficacy, time stress, or difficulties securing transportation or child care might increase mothers' feelings of aggravation in the parenting role. Alternatively, involvement in activities beyond the family may diminish negative feelings toward the parenting role. Greater parenting aggravation is associated with poorer child outcomes. For example, in

the JOBS Descriptive Study, greater aggravation and stress in parenting, measured when children were between 3 and 5 years of age, was strongly associated with the reported number of child behavior problems two years later.

Possible Measures

A. Routines

Appropriate for mixed-mode survey (phone when possible, home interview when no phone in household):

- *NLSY -- Routines and Solidarity.* With little or no adaptation, could administer the home interview questions over the phone. These items can be asked of the parent and/or the adolescent (12-17) (younger children, 6-11 and certainly younger than 5, may have trouble answering in number of days per week).

  "In a typical week, how many days from 0 to 7 do(es) . . . . . ."
  a. Your family watch TV during dinner?
  b. Housework get done when it's supposed to, for example, cleaning up after dinner, doing dishes, and taking out the trash?
  c. You do something fun as a family such as play a game, go to a sporting event, go swimming, and so forth?
  d. You do something religious as a family such as go to church, pray, or read the scriptures together?

- *ECLS -- Family Routines Questionnaire.* ECLS has used this 7-item measure with parents; presumably, it could also be asked of adolescents if desirable. On the ECLS sample, this scale demonstrates adequate reliability (alpha= .60) and sufficient distribution across response categories to support predictive analyses.

  (See attached for items)

Appropriate for in-home survey

- *Family Routines Inventory (Boyce, Jensen, James, & Peacock, 1983).* The Head Start/Public School Transition Survey used a modified version of this scale, which contains 22 items related to the frequency with which family members engage in individual and mutual activities (e.g,. after-school activities, eating dinner together) and the regularity of daily schedules (e.g., time parent returns from work, bedtimes, mealtimes). It takes about 8 minutes to complete.

- *JOBS Child Outcomes Study (Moore, et al., 1995).* The JOBS Two-Year Survey contained one interviewer rating of the noise level and chaos in the home.

"Was the atmosphere in the area where the interview took place:"
0 = extremely chaotic . . . 10 = very quiet and calm

B. Domestic Violence, Abuse/Neglect

Appropriate for mixed-mode survey (phone when possible, home interview when no phone in household)

1. Domestic Violence

- *National Survey of Families and Households Wave 1.* There are a series of questions about physical violence between partners that can be used to assess domestic violence in the household.

2. Abuse/neglect

- We have no suggestion for a survey measure at this time due to sensitivity issues and under reporting. Links to administrative records may be the best way to get at information on child abuse/neglect although issues of confidentiality may have to be dealt with. While administrative records will not include individuals who have not come into contact with the child welfare system, such data are likely to be more complete than self-report. In addition, administrative records are likely to capture the most serious cases.

C. Aggravation/Stress in Parenting

Appropriate for mixed-mode survey

- *Aggravation in Parenting Scale (Moore et al, 1995).* The 5-item *"Aggravation in Parenting Scale"* can be part of a phone survey using three response categories (never, sometimes, often). Reliability and validity data are available for the scale as used during in-home surveys (see below), but not as adapted for telephone administration.

Appropriate for in-home survey

- *Aggravation in Parenting Scale (Moore et al, 1995).* The 5-item *"Aggravation in Parenting Scale"* can be part of a self-administered questionnaire (SAQ) using an 11-point Likert scale ("not at all true" to "completely true"). This scale was created for the JOBS Child Outcomes Study and has moderately high reliability (alpha = .69). Analyses

of data from the JOBS Descriptive Study and the JOBS Two-Year Survey indicate that current maternal employment was significantly related to higher levels of self-reported aggravation in parenting, and maternal aggravation when the children were 3-5 years of age predicted significantly more child behavior problems among the children at 5-7 years (even after controlling for possible maternal report biases).

"Being a parent is harder than I thought it would be."
0= not at all true . . .10 = completely true
"There are some things that my child does that really bother me a lot."
0= not at all true . . .10 = completely true
"I find myself giving up more of my life to meet my child's needs than I ever expected."
0= not at all true . . .10 = completely true
"I feel trapped by my responsibilities as a parent."
0= not at all true . . .10 = completely true
"I often feel angry with my child(ren)."
0= not at all true . . .10 = completely true

EDUCATION

Rationale

The states' welfare waiver provisions might have several implications for children's and adolescents' educational progress. There are several intervening mechanisms through which waiver provisions, in general, might affect children's educational progress. For young children, placement in high quality child care might have positive implications for school readiness. For school-age children, parents who participate in work or training activities might establish regular routines, including school attendance and nightly homework sessions, for their children. Many states have specific provisions to ensure that teenagers, particularly teen parents, remain in school and obtain a GED or high school diploma. In addition, some states sanction parents if children are not attending school. Increases in family income due to employment or income disregards may have implications for educational materials (books, stimulating toys) in the home, and for family outings that could serve as a source of cognitive stimulation. Given that children are more likely to have difficulties in school if they grow up poor (McLoyd & Wilson, 1991; Zill et al., 1991), improvements in family income bode well for children's education.

Alternatively, parents' ability to monitor their children's behaviors and assist with homework might be compromised because of increased demands on their time and/or working evening or after school hours. In addition, placing children in care of low quality may have implications for their cognitive development. Another factor that might have a negative influence on children's school progress is frequent moves. An increase in the number of times someone moves during childhood is associated with a decrease in the probability of completing high school and college (Haveman, Wolfe, & Spaulding, 1991; Hagan, MacMillan, & Wheaton, 1996), with an increase in the probability of repeating a grade and having behavioral problems (Wood, Halfon, Scarlata, Newacheck, & Nessim, 1993), and with lower levels of academic achievement (Ingersoll, Scamman, & Eckerling, 1989; Simmons, Burgeson, Carlton-Ford, & Blyth, 1987).

Cognitive development, formal schooling and well-developed thinking and problem-solving skills are eventually important to job opportunities and income. In fact, education is one of the most central predictors of economic well-being (Kuh & Wadsworth, 1991). On a societal level, a more skilled work force is more productive, and pays more taxes. Also, well-educated individuals are less likely to experience spells of unemployment or to be economically dependent. Preschool and elementary age measures of education are important, because difficulties during this period can constrain academic and occupational achievement in adolescence and adulthood (Entwisle, 1990).

School readiness (0-5). Children enter kindergarten with vast differences in their level of preparation for formal schooling. This is likely to have an impact on their experiences in school. The National Education Goals Panel has identified five dimensions that have been linked to early learning and development (Phillips and Love 1995). These are: physical well-being and

motor development; social and emotional development; approaches toward learning; language usage; and cognition and general knowledge. Clearly any tool that tries to measure the concept of school readiness is likely to be complex and time consuming. In addition, measures that focus solely on children's level of readiness neglect to ask to what degree are schools prepared to educate the children who are currently enrolling in them (Love, Aber, and Brooks-Gunn 1994). A child who is ready for a well-functioning, resource-rich school may not be well-equipped for a school that suffers from a lack of resources or organization.

Engagement in school. Children's engagement in school is defined as "behaviors, emotions, and a psychological orientation when doing academic work that reflect commitment, interest, and enjoyment." James Connell at the Institute for Research and Reform in Education, and his colleagues have developed a measure of children's engagement that is both reliable and valid (Connell, Spencer, & Aber, 1994; Wellborn & Connell, 1987). This measure has been previously administered to more than 10,000 students, parents, and teachers as part of the Rochester Assessment Package for Schools (RAPS). School engagement has been found to predict better performance over time. For example, Connell and his colleagues (Connell, personal communication, July 1995) report that parent, child, and teacher reports of school engagement are predictive of school outcomes, such as attendance, grade point average, test scores, suspensions, and grade retention, measured two years later.

School attendance and grade repetition. Absenteeism in the primary grades is linked to later dropout status (Ensminger & Slusarcick, 1992). Children are more likely to repeat a grade (Child Trends, Inc., 1993) if they are poor (National Commission on Children, 1993). Grade retention, even at an early age, is associated with a greater likelihood of eventually dropping out of school, even after controlling for achievement (Ensminger & Slusarcick, 1992). In addition, grade repetition is related to adult outcomes. For example, repeating a grade significantly predicts young adulthood literacy scores (Baydar, Brooks-Gunn, & Furstenberg, 1993). It can also affect students' perceptions of the job market (Entwisle, 1990). Falling behind in school occurs most often in grades 1 through 3 (Entwisle, 1990). Evidence indicates that participation in early intervention programs during the preschool years is associated with a reduction in grade retention. To the extent that maternal participation in work or training activities is associated with increased attendance in high quality early childhood education during the preschool years, these programs may improve educational outcomes among children of welfare mothers by reducing retention in grade.

Achievement. A large body of research has demonstrated that school success, particularly in the elementary school years, predicts long-term academic attainment (Entwisle & Hayduk, 1988). Direct assessments of achievement with children and adolescents provide a unique source of reliable data. Another alternative is to use standardized tests that are administered in the school setting, though these records might not be available or might not be comparable across school districts.

Graduation from high school. The high school persistence rate (proportion of students enrolled in school for two consecutive years) for low income students is 10 percent lower than the rate for students from high income families (U.S. Department of Education, 1993). Several factors place adolescents at risk of dropping out of school, including low academic achievement, early pregnancy or marriage, low self-esteem, grade repetition (especially in elementary school), problem behaviors such as substance abuse, and demographic factors such as low socioeconomic status and minority status (Brooks-Gunn, Guo, & Furstenberg, 1993; Ekstrom, Goertz, Pollack, & Rock, 1986; Linares, Leadbeater, Kato, & Jaffe, 1991; Loughrey & Harris, 1990). High school completion is also important to adolescents' future career potential. The highest grade or year in school that a child has completed is the single best predictor of later occupational attainment (Entwisle, 1990).

Possible Measures

A. School Readiness

The National Household Education Survey (NHES) School Readiness Interview represents a feasible strategy for assessing school readiness over the telephone. This is a 12-item developmental profile for preschool-aged children. However, it will be important to assess whether a sufficient number of preschool-age children are in the sample to support statistical analyses of this outcome. If a sufficient number of preschool age are present and the possibility exists for direct in-home assessment, the Early Childhood Longitudinal Study (ECLS) includes an extensive assessment of school readiness that covers a wide range of areas. In addition, there are measures that have been proposed to assess how well schools are doing in offering an environment suitable for early learning (Love, Aber, & Brooks-Gunn 1994).

B. Engagement in School

A short four-item parent report engagement scale has recently been developed by James Connell and Lisa Bridges from the Institute for Research and Reform in Education for use in the Urban Institute/Child Trends' National Survey of America's Families. The alpha coefficient for these items is .65.

Parent Report of Children's Engagement:
1. My child cares about doing well in school.
2. My child does just enough to get by.
3. My child only works on schoolwork when forced to.
4. My child always does homework.

Response options are: 1) not at all true; 2) not very true; 3) sort of true; 4) very true.

C. School Attendance and Grade Repetition

For school absences a question similar to the one used in the Prospects survey can be asked: How many days of school did your child miss during the past four weeks? The question may need to be rephrased so that the parent counts the past 4 weeks when school is in session not weeks when school was closed for vacation.

These items from the National Household Education Survey 1996 could be used to address grade repetition:

1) Since starting kindergarten, has (child) repeated any grades?
   - -yes
   - -no

2) What grade or grades did (he/she) repeat?
(list grades)

D. Achievement

For the option that states decide to carry out direct assessments of children's cognitive achievement, we have attached a table compiled by Abt Associates which presents a review of measures of children's cognitive achievement and development. The Woodcock-Johnson Psychoeducational Battery is being used in the JOBS 5-year study as well as the Early Head Start Transition Study. The Peabody Individual Achievement Test (PIAT) is another widely used test of achievement. The usefulness of the alternative, relying on school records for tests administered in school settings, would depend on access to school records and on the use of the same test or tests across school districts.

E. Graduation from High School

A question from National Education Longitudinal Study 1988 Parent Questionnaire can be asked of parents. As with school readiness, this outcome only applies to a narrow age range. Therefore, it is necessary to examine the number of cases available for analysis on this outcome.

HEALTH AND SAFETY

Rationale

Hunger/Nutrition. There are a number of reasons that changes in welfare policies may affect issues of hunger and nutrition. If income falls, families may be forced to cut back in some areas and food may be one of these. On the other hand, if families experience an increase in income through working or a combination of work and benefits, they may be less likely than other recipients to experience food shortages. This may be especially true for the states that are experimenting with increased income disregards.

There is a great deal of controversy over the extent of hunger among children (National Commission on Children 1991). However, no one would argue over the importance of meeting basic food needs. Infants and young children who do not receive adequate nutrition experience numerous physical problems. Serious deficiencies can result in lasting effects on the child's physical and mental health (Dwyer and Argent 1990).

Families which are experiencing food shortages may be able to overcome this problem through the use of food banks or soup kitchens. Thus there may be a change in food sources that is not picked up with measures of consumption. This suggests that states might want to consider a question that examines the reliance on charitable organizations for the purposes of increasing the family's food supply.

Rating of Child's Health. The child's health status is an important measure of child well-being. Changes may occur if income declines, if the parent's access to health care changes, or if parents are able to obtain health quality care as a result of being employed. A parent's ability to work may be limited if a child is experiencing difficulties in the area of physical or mental health. Though we are probably unlikely to see major changes in this area, a child's health is a fundamental concern that should be monitored.

Immunization. Immunization is the target of welfare reform efforts in a number of states. Full immunization is an important measure of a child's general health and of health-care access. Though it might seem straightforward to obtain reports of child immunization, it is actually very difficult to get accurate reports of immunization. Parental reports of immunization have limited reliability. Reporting can be improved if the parent is asked to refer to the immunization record and if detailed questions are asked about each type of recommended shot and when the shot was administered. Parents may have difficulty producing the record, or may have multiple or incomplete records. While this procedure has been done over the phone, it is time consuming.

Accidents and injuries. Welfare programs are likely to lead to increased employment resulting in increased time away from home. Unless the parent has a reliable child care

arrangement for the child, the child may be at greater risk for accidents and injuries. Children care for themselves or for their younger siblings may be at risk, or put the children they are watching at risk, of injury. Stress due to employment or other mandated activities may lead to more harsh discipline which, if extreme, could in turn result in increased visits to the emergency room for accidents and injuries. Also, income loss may force welfare recipients into unsafe housing conditions, while income gains may enable recipients to move to safer housing.

Possible Measures

A. Hunger/nutrition

The items that are in the survey being used by Minnesota to evaluate MFIP provide one approach to measuring hunger/nutrition. These include an item from the food security questionnaire that the Department of Agriculture recommends as the single most useful item in its Food Security Questionnaire. There is an additional item from SIPP which asks the respondent to describe the food the family has eaten in the past month.

B. Rating of Child's Health

We have included as possibilities three questions regarding children's health status. The third one actually covers the extent to which a child's health is a barrier to a parent working and should be considered optional. A parent rating of the child's health has been shown to be a good predictor of later health status and medical expenditures in studies done by the National Center for Health Statistics and the Rand Corporation. This single question has been shown to be reliable in assessing current health status, and to be a predictor or mortality (Kaplan and Camacho 1983). Though parent identification of limiting conditions has been shown to be somewhat problematic, the measure is a significant predictor of future disability and medical expenditures. Therefore we suggest using a general health status question and a question asking about limiting conditions. Both of these are suitable for administration over the phone or in-person. They are also suitable for children of all ages.

C. Immunization

Given the difficulty of getting accurate reports of immunization, we are reluctant to recommend survey measures of immunization for these studies. If a state collects this information as part of administrative records we recommend that using this source. If an in-home survey is being utilized, it may be possible to request the parent to locate the record before the visit. However, even if this is done, filling out the information is still likely to be time consuming. If a state decides they wish to measure immunization, we can provide the survey items used by the National Health Interview Survey or the National Immunization Survey. States may want to consider other measures of access to health-care that are suitable for very young children, such as questions about well-baby care or the last visit to a doctor.

D. Accidents and Injury

We suggest using the question on accidents and injuries from the JOBS Child Outcomes Study. This question has been used in multiple waves of the JOBS Child Outcomes Study, and is thought to be an important indicator of chaotic households, inadequate supervision, or unsafe living situations. This measure is appropriate both for in-home surveys and mixed mode administration.

SOCIAL AND EMOTIONAL ADJUSTMENT

Rationale

Behavior problems. Behavior problems as a construct can encompass a variety of different behaviors. Internalizing behaviors (withdrawn, unhappy, depressed) and externalizing behaviors (breaks things, cheats, bullies) are common conceptions of behavior problems. Additionally, illegal activities, gang membership, school suspension and drug or alcohol abuse could all be considered problem behaviors.

There are a number of possible mechanisms by which welfare programs may affect behavior problems. It is possible that maternal stress or depression rates could increase due to reduced grants, because of sanctions or time limits, or due to the mandatory nature of the welfare programs with regard to participation. Maternal depression, in turn, is related to an increased incidence of behavior problems in children (Downey & Coyne, 1991, Moore, Zaslow, Coiro, Miller & Magenheim, 1995). If the welfare program affects the family's living arrangements or socioeconomic status, changes in behavior problems may also result. Mott and Menaghan (1993), for example, found that (for white girls) having a father present was related to fewer behavior problems, but that having a father-figure depart or arrive was related to increased behavior problems. Living in neighborhoods with more low-income neighbors is associated with a higher incidence of children's externalizing behaviors, such as destroying things and throwing temper tantrums (Duncan, Brooks-Gunn, & Klebanov, 1994). Yet if welfare programs bring about enhanced maternal psychological well-being (for example, because of satisfaction with new employment roles), improved family economic well-being, and/or residence in a better neighborhood, behavior problems could diminish.

Behavior problems, in turn, are related to negative outcomes later in development. McCord (1990) states that "childhood aggression and misbehavior operate as relatively efficient predictors of problems in adolescence." In early childhood, preschool children who are depressed, anxious, or withdrawn are at risk of a difficult adjustment to school (Brooks-Gunn & Peterson, 1991). In early adolescence, having been suspended from school is a significant predictor of later literacy scores (Bayder, Brooks-Gunn & Furstenberg, 1993).

Depression/mental health. Depressed mood, the presence of sadness or unhappiness for an unspecified length of time, can be caused by several factors during childhood, including psychosocial stressors. It generally does not occur in isolation, but is related to other behavior problems, problems with peers, and somatic complaints (Jacobsen, Lahey, & Strauss, 1983). Chronic stress, induced by poverty, among other factors, increases the risk of mental health difficulties in children (National Commission on Children, 1991c). Family structure is also associated with depressive symptoms in adolescents, with adolescents in single-parent and remarried parent families experiencing more depressive symptoms (e.g., Feldman, Rubenstein, & Rubin, 1988). Adolescent depression is also linked to other behavioral problems such as apathy

and boredom, poor school performance, and suicidal ideation (Inamdar, Siomopoulos, Osborn, & Bianchi, 1979; Garrison, Schluchter, Schoenback, & Kaplan, 1989).

States' welfare waivers provisions might have implications for children's depression through several conduits. First, improvements in parental psychological well-being might have positive implications for their children's well-being (Downey & Coyne, 1990). Further, increases in family income might decrease the level of stress that children experience. Changes in family structure may have positive or negative implications for children's mental health. In addition, an increase or decrease in access to mental health services might also have implications for children's adjustment.

Teen Childbearing. Teen childbearing is of great interest to the states evaluating welfare. Welfare policies have the potential to affect teen childbearing through increased employment of recipients may lead to decreased parental monitoring (simply from the parent not being present). This may lead to opportunities for teen sexual behavior. On the other hand, increased employment of recipients may provide a positive picture of work for the teen, leading to increased expectations for achievement and decreased teen childbearing.

Risk factors for teen pregnancy include growing up in a single-parent family, living in poverty, early behavior problems, having low performance in school, and having parents with low educational attainment (Moore, Miller, Glei & Morrison, 1995). Poor outcomes for the adolescent parents and their children are only partly due to the early childbearing itself, but also reflect other background and contextual factors, such as single parenthood, school completion, social and economic circumstances and the roles of the fathers (Maynard, 1996). Thus, all of these factors can lead to various degrees of positive or negative outcomes for the teen and especially the child. Moore, Morrison and Greene (1996) found that children born to mothers under the age of 18 are disadvantaged in terms of their home environments, their cognitive development and their academic achievement.

Measures

A. Behavior Problems

Appropriate for mixed-mode survey (phone when possible, home interview when no phone in household)

- *Behavior Problems Index*: The Behavior Problems Index (BPI) is a 28-item rating scale for parent report of child behavior (age 4-17) developed by Zill and Peterson, based on earlier work by Thomas Achenbach (Achenbach & Edelbrock, 1981). This index has a demonstrated ability to discriminate children who have received clinical treatment from those who have not, and taps some of the more common behavior syndromes in young people, namely, antisocial "acting out," distractible-hyperactive behavior, and depressed-withdrawn behavior. Psychometric analyses of data from the 1981 Child Health

Supplement (Zill, 1985) have shown that the overall alpha reliability for the scale was .89 for children ages 4-11. For shorter surveys we would suggest using two of the subscales (12-items) from the BPI; the antisocial behavior subscale and the Depressed/Withdrawn subscale used previously by Peterson and Zill (1986).

- *National Education Longitudinal Study of 1988: Questions on drug and alcohol use, and illegal behaviors.* We recommend the appended questions that are asked of the parents about their perceptions of problem drinking and drug use, as well as theft and violence, among their teenager and their teenager's friends.

- *National Survey of America's Families: Question on suspensions/expulsion from school.* This question (appended) could also be asked of parents of school-age children.

- If it is possible to ask questions directly of teenage children (either over the phone or during an in-home interview), we suggest asked questions from the *National Education Longitudinal Study of 1988* about alcohol use, drug use and problem behaviors.

B. Depression/Mental Health

Appropriate for mixed-mode (phone when possible, in-home if no phone)

Ages 2-17.

- We recommend a mental health measure developed by Thomas Achenbach for the National Health Interview Survey. Information about how this measure was designed is included with the measure. Although we feel that the age breaks are appropriate, we do not recommend the gender breaks without reservations. These items do have some overlap with the Behavior Problems Index, as both measures were developed using items from the Child Behavior Checklist.

Ages 12-18

- The Center for Epidemiologic Studies Depression Scale for Children (CES-DC) (Weissman, Orvaschel, & Padian, 1980) is a modified version of the Center for Epidemiologic Studies Depression Scale designed for use with adolescents ages 12-18. Researchers have demonstrated that the CES-DC is a valid and reliable measure of depressive symptoms for children, adolescents, and young adults. For instance, Fendrich, Weissman, and Warner (1990) reported concurrent validity between the CES-DC and current diagnoses of major depressive disorder as measured by psychiatric interviews for children, adolescents, and young adults aged six to 23. In addition, the CES-DC served as an effective screen of major depressive disorder diagnosed two years later.

C. Teen Childbearing

Appropriate for mixed-mode (phone when possible, in-home if no phone)

- A single question can be asked, taken from the JOBS Evaluation. This question is asked of the parent about whether her son or daughter under the age of 18 has had children.

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