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Development of a Monitoring Instrument: Examining the Effect of Welfare Reform on Children's Health and Nutrition

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DEVELOPMENT OF A MONITORING INSTRUMENT: EXAMINING THE EFFECT OF WELFARE REFORM ON CHILDREN'S HEALTH AND NUTRITION

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CHAPTER I: INTRODUCTION

The Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA), or welfare reform, was enacted by Congress in 1996. While the premise of this reformed welfare law was to assist low-income families to move from welfare to work and to reduce dependence on "the system", the new law was also enacted to shift the financial burden of the programs involved to the state and local governments. The PRWORA ended a 60-year entitlement program of cash assistance to needy families and involves stipulations, including lifetime limits and work requirements. The block grant funding to states was expected to decrease the overall amount of money spent on welfare. Welfare reform will reduce funding to the Food Stamp Program by $27 billion over a period of five years, and will also reduce funding for other federal food and nutrition programs.

Research demonstrates that children raised in a life of poverty are likely to experience negative physical or psychological outcomes. Hence, understanding how welfare reform affects children's health is fundamental, as nutrition and health influence children's ability to learn and quality of life. Thus far, limited studies have been conducted to understand the effects of welfare reform on children's health and nutritional status. While some studies have shown that new welfare law has and will continue to push people into poverty, it is important to look at how welfare reform has impacted low-income families with children. According to a report published by the Children's Defense Fund (Sherman, et al., 1998), "[w]elfare reform is not yet succeeding for large numbers of families. Early evidence suggests that hundreds of

thousands of former recipients and their families may be faring worse than they did on welfare, and need more help".

This thesis attempted to develop a monitoring system to explore and track health and nutrition variables influenced by welfare reform. Specifically, the goals of this thesis were to: 1) identify indicators that predict the influence of welfare reform on children's health and nutrition, and to 2) develop a simple monitoring tool that can be used to examine the effects of welfare reform on children's health and nutrition indicators across time. Moreover, interviews with key informants in the community were conducted to assess Hartford's capacity for implementing a monitoring system, to identify sentinel sites, and to determine the organizations that have the capacity to use the data and translate it into policy. Secondary data analyses were conducted on several sections of the Hartford Acculturation and Nutrition Needs Assessment (ANNA) where 201 Hispanic caretakers were interviewed on welfare reform as well as on different aspects of health and nutrition. The variables studied to determine the indicators were food security, children's dietary intake, emergency food assistance and children's health.

Significant findings demonstrate that food security has been negatively affected by the new welfare law, leaving more families unsure of how they will provide food for their families. Results also show that welfare reform and food stamp variables are significantly associated with poor dietary intake among children.

The findings from this thesis indicate that there is a need to further investigate both the short and long-term effects that welfare reform is having on children's nutrition, and to implement systems, both locally and nationally, to track these effects.

The monitoring system proposed in this thesis should involve data collection, data processing, and dissemination and policy. Recommendations, policy implications and future research recommendations are discussed in the last chapter of this thesis.

Background

In 1996, President Clinton enacted the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA), a welfare reform plan intended to get welfare recipients into the workplace, and to limit cash assistance so that recipients would not become dependent on "the system". It was a revolutionary step, as PRWORA would mark the end of guaranteed assistance. Up until this point, welfare, previously known as Aid to Families with Dependent Children (AFDC), was a safety net for poor families with children; recipients were guaranteed their welfare checks for as long as they met the eligibility guidelines (Bloom, 1999). With PRWORA in effect, recipients are faced with work requirements in exchange for time-limited assistance in order to promote responsibility and self-sufficiency and to strengthen families.

The new welfare reform act was enacted after general consensus that something had to be done, for the public, the policymakers, and the welfare recipients themselves were unhappy with the way things were. In an analysis of welfare reform, the following were reasons for dissatisfaction with the old system.

> Governors complain that federal law is overly prescriptive and are willing to take less federal money in return for more flexibility. The public believes that welfare is anti-work and anti-family although polls show that the public wants welfare reformed in ways that do not penalize children. Welfare recipients find dealing with the system degrading and demoralizing: most would prefer to work...welfare has done little to stem the growth of poverty among children (Sawhill, 1995).

With PRWORA, however, people stand divided on the effects this new act will bring. Those who view the PRWORA as an appropriate change believe that "one-way handouts" to the poor will eventually, and inevitably, be damaging, as "they place no moral or social demands on recipients" (Rector & Mclaughlin, no date). Teaching responsibility is a cornerstone of welfare reform, with work requirements and time limits enforced; this provides a good answer to the problem that some perceived as chronic dependency. Children's advocates, and advocates of the poor, however, see welfare reform in a different light, and claim that it will harm more children in the long run, pushing both them and their families deeper into poverty (Edelman, 1997; Children's Defense Fund, 1998). There is current debate as to what will really happen.

Since welfare reform was enacted, the welfare rolls have declined 44% nationwide, and about 51% since President Clinton took office (U.S. Department of Health and Human Services, Administration for Children and Families, 1999; U.S. Department of Health and Human Services, 1999). Proponents of welfare reform claim welfare reform a success, assuming that the declining caseloads mean that those leaving welfare are leaving a life of poverty. Opponents of the reform, and advocates for the poor, do not think the declining caseloads are a good indicator of the success of welfare reform; rather, the success of welfare reform should be measured by whether the well being of children and families has gotten better since welfare reform was enacted. So far, studies have shown that many of those leaving the welfare rolls have not escaped poverty (Children's Defense Fund, 1998; Sherman, 1999; Loprest, 1999). While some have fared better with welfare reform, studies have found that many tend to face difficulties finding stable jobs that will lift them above the poverty line, and may place

them in dire predicaments, such as being unable to afford food, housing, or medical care for their families. Many of the jobs current and former welfare recipients have tend to pay low wages (often below half the poverty line) and they do not offer health benefits, paid sick leave or vacation (Sherman, 1999; Heymann and Earle, 1999). These studies showed that the jobs available to welfare recipients do not pay enough (both in wages and benefits) to compensate for the loss of cash assistance, and for some, the loss of food stamps. This is disquieting news as welfare reform is intended to lift people above the poverty line and into a job that will provide them the self-sufficiency and economic independence they need to support their families. According to a study of Census data conducted by the Children's Defense Fund, the families with children in extreme poverty were most likely to be families leaving welfare for work.

The Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA)

The premise behind welfare reform is that recipients will leave the welfare rolls for a job, and that they will replace their relied-upon welfare check with a paycheck. It is intended to encourage responsibility, and it relies on work requirements and time limits to do so. Under PRWORA, AFDC was replaced with Temporary Assistance for Needy Families (TANF), a block grant to states which ends the old entitlement program. With TANF, states have the flexibility to run the program as they see fit for their state, as well as the capacity to change eligibility rules for the TANF programs they administer in their state (Schott, et al., 1999). States receive the block grant and then decide how to allocate the funds. However, while the states have flexibility, they do have to follow "important mandates designed to transform...AFDC...into a work-

oriented transitional assistance program" (Pavetti, et al., 1997). According to the Administration for Children and Families (1998):

> States may use TANF funding in any manner 'reasonably calculated to accomplish the purposes of TANF.' These purposes are: to provide assistance to needy families so that children can be cared for in their own homes; to reduce dependency by promoting job preparation, work and marriage; to prevent out-of-wedlock pregnancies; and to encourage the formation and maintenance of two-parent families.

States are also required to spend some of their own funds in order to receive the federal block grant. This is called the maintenance-of-effort (MOE) requirement, and requires that at least 80 percent of the amount they spent on AFDC programs in 1994 will be spent on TANF (Schott, et al., 1999).

Under the new act, recipients are required to be working within two years of receiving assistance, with few exceptions. However, single parents with children under six years of age cannot be penalized for not finding work; states may also opt to exempt single parents with a child under one year of age from the work requirements (U.S. Department of Health and Human Services, 1999). In order for unmarried teen parents to receive assistance, they must be living with an adult or in an "adult-supervised setting", as well as participating in school and/or training activities (Administration for Children and Families, 1998; U.S. Department of Health and Human Services, 1999).

States have financial incentives for moving clients from welfare to work, and are required to have set percentages of families in the workforce by established dates. In most states, recipients must be in the workforce after two years of receiving TANF assistance. In 1997, states were expected to have 25% of people on the welfare rolls engaged in work for at least 20 hours a week. The number is increasing 5% each year until it reaches 50% in 2002. For two-parent families, 90% of them were expected to be

in the workforce in 1999. In 1998, all the states met the overall work participation rate, and 28 of the 41 states who comply with the two-parent family guidelines met the goal (U.S. Department of Health and Human Services, 1999). On December 4, 1999, 200 million dollars in bonuses were distributed among 27 states who showed exceptional effort and performance in moving recipients into the workforce (U.S. Department of Health and Human Services, 1999).

The federal government has also put a life-time five-year time limit on cash assistance, but may exempt up to 20 percent from that federal time limit. In addition, states have the flexibility to shorten that time limit (U.S. Department of Health and Human Services, 1999). While the federal government has given the states many options as to how to run TANF, it can also impose penalties. For example, states may incur penalties if they state fail to: satisfy work requirements, follow the five-year time limit, turn in required reports (e.g., financial and data reports), or spend the required maintenance of effort (MOE) amount (Administration for Children and Families, 1998).

State agencies (usually the department of human or social services) or tribal grantees are required to collect and report both case and financial data for TANF and MOE-funded programs. The PRWORA sets MOE requirements for the states to spend a certain amount of their own money in order to receive the block grant funds. It requires states to:

> maintain their own spending on welfare at a level equal to at least 80 percent of FY 1994 levels....States must also maintain spending at 100 percent of FY 1994 levels to access a $2 billion contingency fund designed to assist states affected by high population growth or economic downturn (U.S. Department of Health and Human Services, 1999).

Three quarterly reports are required to be handed in to the U.S. Department of Health and Human Services (TANF Data Report, TANF Financial Report, and SSP-MOE Data Report) in addition to an annual report which includes more detailed information (Schott, et al., 1999). The TANF Data Report contains disaggregated case record data (including demographics, marital and employment status). The states can collect data on every case, or they can use a sample as long as the sampling method is approved by the Department of Health and Human Services. Aggregated data describing the caseloads is also gathered; it includes information on the number of applications submitted and approved, the number of recipients and the number of closed cases. The financial report includes information on how the states spend TANF and MOE funds. The SSP-MOE data is collected only for states who wish to be considered for performance bonuses and caseload reduction credits. The data reported here only includes information on clients receiving cash assistance. The annual reports contain detailed descriptions of state-specific guidelines, definitions, and procedures. The Department of Health and Human Services collects these reports from every state (Schott, et al., 1999).

Connecticut Guidelines

Using the flexibility the federal government allows, Connecticut has its own regulations. Unlike the federal five-year time limit, Connecticut has enforced a 21-month time limit on cash assistance, with people already having reached that limit. (Exemptions can be made if recipients make a "good-faith effort", meaning that the recipient is actively looking for work and is still unable to find a job.) Also, in January of 1996, Connecticut established the Jobs First Program, a program for recipients of

TANF. Jobs First is focused on "work first" with placing recipients in the workforce as quickly as possible in contrast to some other states that prioritize long-term education and job training. Those eligible to work must participate in the Jobs First Program, and there are penalties for not cooperating. These penalties involve cutting the recipients' benefits for a period of three months. Three penalties gets one disqualified from the program and his/her benefits are discontinued. In Connecticut, this rule also applies to the work requirements for the Food Stamp Program. The Food Stamp Program work requirements essentially mirror those of the TANF program. If a person violates the work requirements three times, then s/he is subject to lifetime disqualification from food stamps. This only applies to the head of household, the person violating the rules; his/her family may still continue to receive food stamps. There are some requirements, however, that only apply to TANF; if a TANF/ food stamp recipient violates that particular requirement, s/he will not be penalized on the Food Stamp Program. S/he will, however, not benefit from the increase in food stamps that automatically accompanies a drop in TANF cash benefits. Instead of facing lifetime disqualification, s/he may face a 20% reduction in food stamps (Connecticut Department of Social Services, verbal communication, 2000).

Connecticut also has an earnings incentive. In an effort to reward and promote work, families can keep all their earnings without a reduction in benefits, as long as they are below the poverty level, (Connecticut Department of Social Services, no date). If the family's earnings are at or above the poverty level, they lose the cash assistance.

A family cap has been added with the enactment of welfare reform. While in some states, the family cap precludes recipients from receiving additional assistance if a

child is born, Connecticut's family cap reduces the amount of assistance a family may receive. If a child is born to a recipient of TANF benefits, fifty dollars of cash assistance will be added for the newborn child. In Connecticut, the family cap excludes children born as a result of rape or incest, or teenagers under 18 who give birth to their first child.

Participation Rates and Characteristics of TANF Recipients

In keeping with the goal of welfare reform to move families from welfare to work, the welfare caseloads have declined dramatically, and continue to decline, because of the PRWORA. In fact, the caseloads are at their lowest since 1969. Since the enactment of the PRWORA, the rolls have declined by almost 5 million people, and by 6.8 million people since January 1993 (Council of Economic Advisors, 1999). During 1998, almost 3 million recipients had the TANF benefits cut off, and all states showed a decrease in cases. As stated earlier, as of December 1999, the TANF caseloads declined 44% nationwide, and 48% in Connecticut since the enactment of welfare reform (U.S. Department of Health and Human Services, Administration for Children and Families, Dec. 1999).

The Council of Economic Advisors (CEA, 1997) published a report explaining the decline in welfare receipt from 1993-1996. They studied state-level data from 1976 to 1996; the methodology controlled for confounders in order to isolate the effects of the economy and welfare waivers. They found that over 40% of the declining welfare caseloads could be attributed to strong economic growth (which began in 1992), and that about 33% could be attributed to the federal waivers which allowed states to begin

experimenting with different aspects of AFDC. The CEA conducted another study (1999) looking at the declining caseloads from 1996-1998 using the same methodology as their previous study (1997). In contrast to their 1993-1996 study, their subsequent study found that welfare reform was a *key* contributor to the declining caseloads accounting for about 35% of the decline. They attribute the rest to the strong economy (8-10%), increases in minimum wage (10-16%), reductions in cash benefits (1-5%), and other factors (35-45%).

As stated previously, TANF guidelines require states, the District of Columbia, Guam, Puerto Rico, and the Virgin Islands to collect and submit reports on the financial situations and demographic characteristics of the people receiving assistance. States have the option of reporting either universe data, meaning information on all the clients that come through the system, or sample data. It is important to note that the following results are a compilation of the sample and universe data for fiscal year (FY) 1998, and that the data may be subject to sampling and non-sampling errors. In order to increase the reliability of the data, questionable data was eliminated from these analyses (U.S. Department of Health and Human Services, Administration for Children and Families 1999).

The average TANF family in FY 1998 consisted of 2.8 members, with only 10% of families having more than three children. About 70% of families in the US had only one adult. Ninety-eight percent of TANF families received cash assistance averaging $358 per month. Eighty-four percent of those TANF families also received food stamps.

The average age of adult TANF recipients was 30 years. Six percent of the recipients were teenagers, and 19 % were 40 years old and older. "Only 16% of adult recipients were married and living together." The largest percentage of recipients, both in the US and the Connecticut samples, were between the ages of 20 and 29 (41.4% and 44.6%, respectively). The average age of children participating in the TANF program was 7.7 years. Thirty five percent of children were under 6 years old. Seven percent were 16 and older. In Connecticut, the largest percentage of children were between 6 and 11 years old (35.8%), and 26.6.% of the children were between 2 and 5 years old. The age breakdown for children in Connecticut was similar to that of the whole US sample, in which 35.4% were between the ages of 6 and 11, and 27.5% between 2 and 5 (U.S. Department of Health and Human Services, Administration for Children and Families, 1999).

The racial/ethnic breakdown of adults on TANF nationwide was as follows: 35.6% White, 37.1% Black, 20% Hispanic, 4.6% Asian, 1.6% Native American, and the remaining classified as either "other" or "unknown". This differed from the Connecticut numbers: 31.7% White, 29.7% Black, and 37.6% Hispanic. It is important to note the drastic difference in the percentage of Hispanics on TANF in Connecticut compared to the U.S. Similar trends were found in children. Nationwide, children were composed of 40.2% Black, 28.3% White, 23.4% Hispanic, 4.2% Asian, and 1.5% Native American. In contrast, the Connecticut statistics showed that 38.9 % were Hispanic, 31.8% were Black, 26.6% were White and a very small percentage were in the "other" categories (U.S. Department of Health and Human Services, Administration for Children and Families, 1999).

The majority of adults both in the US and Connecticut were single, 52.5% and 68% respectively, whereas only 16.4 % and 11.2% were married. This is an important factor, as studies have shown that families led by a single parent tend to have higher rates of food insecurity and poverty (U.S. Department of Health and Human Services, Administration for Children and Families, 1999; Rose, 1999; Sherman, 1999). In addition, between 1996 and 1997, the number of children living in families below one-half the poverty line increased by almost half a million; "[M]ost of this increase occurred in mother-only families, the group most affected by the welfare law" (Sherman, 1999).

Of clients receiving TANF assistance in FY 98 (from October 1997- September 1998), 22.8% of the US caseload was employed, while 49.3% of the Connecticut caseload was employed (U.S. Department of Health and Human Services, Administration for Children and Families, 1999). The Connecticut numbers could be due to the JOBS Program, and its emphasis on "work first", as opposed to the emphasis on education and job training. In addition, 45% of the US caseload was unemployed (but looking for work), and 28.3% was not in the labor force, or not looking for a job. In Connecticut, 39.7% were unemployed, and 11% were not in the labor force (U.S. Department of Health and Human Services, Administration for Children and Families, 1999).

Effects of welfare reform

Because welfare reform was only enacted a few years ago, there are limited studies that have been published explaining the effects of welfare reform on children's

health. Many studies are currently underway, and in several years we should have a much better understanding of how welfare reform is affecting the quality of life of its recipients, both adults and children, as well as its former recipients (those whose assistance has been terminated due to the imposed time limits).

Meanwhile, the results of several of the earliest studies conducted on welfare reform are discussed below.

Employment

Studies show that since the Personal Responsibility Act was enacted, more recipients, both current, and former, are working (Sherman, Amey, Duffield, Ebb, Weinstein, 1998). In addition, more recipients are benefiting from combining work with welfare, due to rewards that some states are offering for recipients who work (Sherman et al., 1998). In FY 1998, 35.4 % of recipients 41.4% of Connecticut recipients were employed (Collins, 1999). Furthermore, according to the Census Bureau Current Population Survey (CPS), "the employment rate of previous year TANF recipients increased by 70 percent" between 1992 and 1998 (Collins, 1999). The CPS is a representative national survey conducted on a monthly basis by the U.S. Bureau of Census on approximately 50,000 households. Its main focus is to monitor employment rates and workforce participation (Food and Nutrition Service, 1999).

However, while the declining caseload rates seem impressive, it is important to note that that labor market has been improving since 1992, and that could be having as much of an effect, if not more, on the declining caseloads. Some of the recent decline in caseload has indeed been attributed to the strong economy. The Council of Economic Advisors (1997) studied the declining caseloads from 1993 to 1996 and found that

approximately 45% of the decline was due to the strong economy and improvements in the job market, such as increased wages. They claim that working was more attractive to welfare recipients than it had been in the past, and that led people to leave welfare for employment. Furthermore, after the 1993-1996 decline, the PRWORA was enacted, and the economy continued to improve. So while the welfare caseloads have been declining, there was already a trend towards lower unemployment and declining caseloads even before the advent of welfare reform.

However, while welfare caseloads have been declining, many people leaving the welfare rolls for work are not making enough money to lift their families out of poverty. A study conducted in nine states by the National Governors' Association (NGA) found that those who were working were paid between $5.50 and $7.00 an hour-- not enough to lift a family above the poverty line (Sherman et al., 1998).

The Children's Defense Fund (1998) analyzed Census Bureau data and found that while 28.8% earned above the poverty line for a family of three, more than two thirds were earning incomes below poverty. According to the report published by the Children's Defense Fund many families are *losing* income when they leave welfare. Many people are taking any jobs they can get, and those jobs are only offering below-poverty wages (Sherman, 1998),. And while statistics show that recipients are finding work, a large percentage of them still do not have jobs. For example, the NGA's study found that 40 to 50 % of families leaving TANF are not working.

Another study used data from the National Survey of America's Families (NSAF), a nationally representative survey conducted in the form of interviews, of the noninstitutionalized population under 65 and their families. The survey covered

economic, health, and social characteristics. Because it oversampled low-income households, it provided a larger sample of welfare recipients (former or current) than most other nationally representative samples (Loprest, 1999). The findings from NSAF show that 61 % of single-parent families who were former welfare recipients are working, with a remaining one-third not working (16% of former recipients were actively looking for work). Ninety percent of two-parent families had one or more parent working (Loprest, 1999).

While a main premise of welfare reform is to get people into the workforce, a worrisome finding is that "increases in extreme child poverty were most severe among children whose families were most likely to be moving from welfare to work" (Sherman et al., 1998). Extreme poverty is defined as family income below half of the poverty line. Sherman attributes these increases to the fact that many former welfare recipients are no longer receiving food stamps even though they remain eligible for food stamp assistance. The claims demonstrate that the weakening role of public assistance is leading to the increase in child poverty.

Leavers

Studies looking at the NSAF provide information on how welfare "leavers", those who left welfare between 1995 and 1997, are faring now that they are off TANF cash assistance. According to Loprest's analyses (1999), most of the leavers are females under 35 with children. Loprest (1999) compares former recipients to low-income women with children who have not been on welfare recently. The findings on low-income women reflect both those with incomes below 150% of poverty and those below 200% of poverty; because the characteristics between these two groups were

similar, Loprest (1999) focuses on women with incomes below 200% of the poverty line. The results show that former recipients tend to be younger, have younger children, and are more likely to be single than the low-income mothers. They tend to have similar family sizes, education levels, and disability status (Loprest, 1999).

The NSAF findings demonstrate that some former recipients are facing economic struggles, such as lack of health insurance and difficulty affording food and housing. According to Loprest's (1999) study, one third of former recipients responded affirmatively when asked if they "[H]ad to cut size of ... or skip meals because there wasn't enough food". Fifty-seven percent claimed that it was "often true" or "sometimes true" when asked if they worried that food would run out before they could afford more. About half of those former recipients reported that it was "often true" or "sometimes true" that food did not last until the end of the month, and they did not have money to buy more. Of all former recipients 31%, were receiving food stamps at the time of the interview (Loprest, 1999).

Former recipients also had problems with housing expenses: 38.7 % reported that "there was a time in the last year when they were unable to pay rent, mortgage, or utility bills" (Loprest, 1999). In addition to housing and food issues, former welfare recipients faced being uninsured: 41 % of adults and 25 % of children lacked medical insurance (Loprest, 1999).

While both the food security and housing numbers appear high, it is important to look at whether the numbers were the same before these former recipients left welfare. Loprest's study (1999) did not compare the figures before and after leaving the welfare rolls. A study looking at food insecurity and hunger established that the prevalence of

food insecurity has remained almost the same over the three-year period from 1996 to 1998 (Nord, Jemison, Bickel, 1999). This is not to say that food security (insecurity) is not affected by welfare reform, but only to take note that the prevalence has remained relatively the same since welfare reform was enacted at a time when it should be declining given the strong economy. A more thorough examination on food security will follow in subsequent pages (see pages 20-23).

Reproductive and Infant Health

In addition to providing states with performance bonuses as a reward when they meet certain goals in moving recipients from welfare to work, the federal government has set aside additional funding ($100 million) to be used as bonuses for states who reduce out-of-wedlock births and abortions (Administration for Children and Families, 1998). Wise, Chavkin, and Romero (1999) reviewed the empirical evidence and the data sources available to study and predict the effects of welfare reform on reproductive and infant health; namely, they concentrated on how childbearing, pregnancy outcome, and infant health might be affected by the PRWORA. While they outline possible effects of welfare reform on different reproductive outcomes and infant health, it is important to note that true associations cannot be made since data is limited, for welfare reform has only been in effect for a few years.

As noted above, states have an incentive to reduce out-of wedlock births and abortion. The "illegitimacy bonus" is awarded to the top five states who reduce out-of-wedlock births. The family cap is the policy which excludes a family from getting additional assistance (or in some states, including Connecticut, only *limits* the assistance) if a child is born while the mother is receiving TANF assistance. According

to Wise, Chavkin, and Romero (1999), these "reflect explicit intentions to decrease childbearing among TANF recipients without increasing abortion rates". In New Jersey, however, an increase in abortions and visits to family planning centers, and a concomitant decline in births, were associated with the family cap (Wise, Chavkin, and Romero, 1999).

A close link between poverty and negative birth outcomes, including low birth weight, late fetal loss, and infant mortality, has been demonstrated in previous studies. Wise, Chavkin, and Romero (1999) are concerned that welfare reform "could have an impact on the risk of these adverse effects through changes in the risk status of women, primarily via altered social conditions and the imposition of work requirements and via diminished health care". They discuss how women seeking work because of TANF may be forced to work physically demanding jobs, which could require them to stand for hours at a time, or to lift heavy objects. These could have an affect on pregnancy, as they note that "...studies indicate that prolonged standing and long working hours are associated with preterm delivery". This could be a problem for the health of newborns, and that of the pregnant TANF recipient (in addition to the policy that excludes her from receiving additional cash assistance for the newborn baby).

Another substantial concern is that some women may not have Medicaid or health insurance. If women are taking the first position they find, and/or are working part time, chances are their jobs do not provide them with health benefits (Heymann & Earle, 1999). With regards to Medicaid, there has been some concern that the Medicaid numbers have fallen since its decoupling from TANF. Before PRWORA, Medicaid and AFDC were linked in that they were both entitlement programs; if an applicant was

eligible, she was guaranteed benefits. In essence, if one qualified for AFDC, then she also qualified for Medicaid, and vice versa. Again, TANF differs from AFDC in that it comes in the form of a block grant to states, and it is not an entitlement program. TANF does not guarantee that all those eligible will receive assistance (Wise, Chavkin, and Romero, 1999). Medicaid, on the other hand, is still an entitlement program. "TANF and Medicaid have been 'decoupled' so that women and children can maintain health insurance even if they lose income support" (Wise, Chavkin, and Romero, 1999). While families may still be eligible for Medicaid once they leave the welfare rolls, statistics are showing a decline in the Medicaid caseloads as well (Wise, Chavkin, and Romero, 1999). It is possible that clients are confused and do not understand what they are eligible for, and whether programs "go together", like Medicaid and AFDC used to be. This could pose a problem to women's reproductive health and infant health if they are not receiving the medical services for which they are eligible.

> Consequently, if disenrollment in Medicaid leads to a reduction in access to these services ['obstetric interventions and intensive health services for critically ill newborns'], it could result in an increase in local neonatal and infant mortality or morbidity rates. Conversely, access to intensive medical services for neonates could mitigate the consequences of worsened social circumstances for their mothers (Wise, Chavkin, and Romero, 1999).

Wise, Chavkin, and Romero's article (1999) demonstrates an interest in future studies which will evaluate the effects of welfare reform on different health indicators. They cover national surveys and studies which provide useful data, and then discuss the importance of using local and state data for analyses. Because the block grant to states has truly diversified the TANF program across the country, it is especially important to conduct local studies assessing the effects of welfare reform on health. Wise, Chavkin, and Romero continue by reviewing the challenges of conducting studies on this issue, as

well as discussing the lack of studies looking at the effects of welfare reform on health indicators. They conclude by saying: "The importance of the PRWORA to the social well-being of millions of American families makes its evaluation as compelling as it is difficult". Because PRWORA is up for review in 2002, it is especially critical for these evaluations to be done so that we can understand the outcomes, both negative and positive, of welfare reform on the nation's health.

Ability for parents to care for their children

Welfare reform may also affect a parent's ability to care for her children because of the stringent work requirements that accompany TANF. Heymann and Earle looked at the types of jobs that mothers leaving welfare were likely to have, and how flexible those jobs would be in terms of caring for their sick children. According to them:

> Meeting children's health and developmental needs requires time off from work to accommodate children to well-child or illness-related medical appointments, to care for sick children at home when necessary, and to have children with learning difficulties or behavioral problems evaluated, among many other responsibilities (1999).

Unfortunately, this study determined that mothers leaving welfare for work were more likely than mothers never on welfare to have jobs that did not have paid sick leave, paid vacation, or flexibility at work to care for their children's needs. They were also more likely to have at least one child with asthma ($P<.001$) and at least one with a chronic condition ($P<.001$) than mothers who were never on welfare. The authors discuss the possibility that the women who were once on welfare probably had lower levels of education and skills than the mothers never on welfare. This may have led the women leaving welfare to accept any job they were offered: for fear of not finding another, or out of frustration of looking for a job and not being offered one.

It is important for policymakers to take this study into account, for not having a parent around when a child is sick could be consequential to the child's physical and emotional development. In addition, the women who have inflexible jobs without paid leave will lose their wages for time they take off to care for their children, and may even lose their jobs. These women do not have good options when their children become sick.

Food Security and Hunger

Food Security is defined as:

> ...access by all people at all times to sufficient food for an active and healthy life. Food security includes at a minimum the ready availability of nutritionally adequate and safe foods and an assured ability to acquire personally acceptable foods in socially acceptable ways (Boyle and Morris, 1999).

Thus, food insecurity refers to the inability to acquire or have access to food of adequate quality or sufficient quantity in acceptable ways. Researchers have studied food security (and insecurity) and hunger, and found that food security has grown to be a widespread problem in the United States. In general, food insecurity and hunger are often attributed to living a life in poverty (Boyle and Morris, 1999). According to Boyle and Morris (1999), food insecurity is more common among female-headed households, as well as among Black and Hispanic households, among those with children, and among families living in inner city areas.

A report produced by the U.S. Department of Agriculture demonstrated that during the period from 1996 to 1998, almost 10% of households (at least 10 million households) in the U.S. were food insecure. Of those food insecure households, about 3.5% were experiencing severe food insecurity which led to hunger in at least one family member (Nord, Jemison, Bickel, 1999). The prevalence of food security varied

widely among states; those with high food insecurity rates also tended to have higher poverty rates and higher use of food stamps (Nord, Jemison, Bickel, 1999). These rates of food insecurity are still evident, and not showing a declining trend in spite of the strong national economy.

Another report published by the U.S. Department of Agriculture looked at household food security from 1995 to 1998; data came from the U.S. Bureau of Census in the Food Security Supplement to the Current Population Survey of April 1995, September 1996, April 1997, and August 1998. A principal finding of this report is that "households with children experienced food insecurity at more than double the rate for households without children" (U.S. Department of Agriculture, Food and Nutrition Service, 1999). This report also documents a trend of improved food security through 1997, followed by a decline in the last 12 months of the study, ending in August 1998. It is difficult to determine whether the decline in food security was affected by welfare reform; thus, it will be important to examine the case data from the Census' Current Population Survey to see which participants were either former or current TANF recipients. Comparing TANF recipients' responses on food security questions before and after welfare reform would provide an even more useful and reliable way to determine the true association between food insecurity and welfare reform.

The U.S. Conference of Mayors conducted a survey in 30 cities across the nation to provide information on the current status of hunger and homelessness. The data was gathered by the individual or agency in the local government designated to be the contact for the survey. The data was collected from November to December 1998, and the questions covered the period from November 1997 to the end of October 1998.

Overall findings indicate that low-paying jobs were a main cause of food insecurity; others causes included housing costs, unemployment, food stamp cuts, poverty, low welfare benefits, and substance abuse (U.S. Mayors, 1998). Seventy-eight percent of the cities surveyed reported an increase since the previous year in requests for emergency food assistance; in those cities, an increase in requests of approximately 14 percent was reported. The number of families with children seeking emergency food assistance increased in 84% of the cities (U.S. Mayors, 1999). Nine of the cities surveyed claimed that the increase in demand for emergency assistance was "due mostly to welfare reform"; eight other cities proclaimed welfare reform was "equal to other factors" (Sherman et al., 1998).

The Children's Defense Fund published a report (Sherman et al.,1998) on early studies of the effects on people leaving the welfare rolls; the report indicated that former welfare recipients are having difficulty buying enough food for their households. The report summarizes findings from studies done around the country. According to the Second Harvest food bank network, many former welfare recipients are turning to emergency food assistance programs (soup kitchens and food pantries) as a means of getting food (Sherman et al., 1998). This finding is in accordance with those of the U.S. Conference of Mayors (1998).

The South Carolina Department of Social Services conducted a survey in the form of interviews with former TANF recipients and found that 17% had no way to buy food "some of the time" since leaving welfare. This finding was statistically significant compared to families experiencing this problem while on public assistance (Sherman et

al., 1998). While these are only examples, it important to consider the possible effects welfare reform might be having on food security and hunger.

The previously cited studies indicate that former TANF recipients are having difficulty affording enough food for their families. Hunger or food insecurity in the household could lead to long-term problems in children, including physical, behavioral, or learning problems. Thus, it is critical to assess the role that welfare reform is having on both children who are currently receiving TANF benefits, as well as children who are former recipients of TANF. By comparing the outcomes of current TANF recipients to those who have left the TANF welfare rolls, we can also get a better understanding of whether the TANF program helps provide for the positive development of children, and whether being off the program is detrimental to children.

Food and Nutrition Programs

Along with adjustments and changes to what was known as AFDC, the PRWORA also included provisions for the country's federal nutrition programs, including those particularly aimed at helping low-income children gain access to food. The program that was most affected was the Food Stamp Program (FSP), which has been viewed as a key safety net for all eligible low-income people unable to buy food. The FSP is the largest entitlement federal program in the United States; in 1997, an estimated 23 million people were on food stamps each month (Gundersen, LeBlanc, and Kuhn, 1999). The Food Stamp Program originally began as a way to assist low-income people during the Great Depression. Subsequently, the Food Stamp Act of 1964 was enacted to remove the nation's surplus, use the food supply, and assist in providing low-income persons with access to nutritious food (Gundersen, LeBlanc, and Kuhn, 1999).

The FSP has always been an entitlement program, meaning that all who are eligible are entitled to participate. The PRWORA changed eligibility criteria, and thus reduced the number of people who would be eligible for the program. Eligibility is based on income (household income cannot exceed 130% of the poverty line), assets, and citizenship.

With the new eligibility criteria and reductions in benefits, the Food Stamp Program is expected to cut at least $23 billion by the year 2002 (Gundersen, LeBlanc, and Kuhn, 1999). Along with stricter eligibility requirements, the benefit levels are changed from being based on 103 % of the Thrifty Food Plan[1] to 100 % of the Thrifty Food Plan, thereby reducing the maximum amount of food stamp (Oliveira, 1998). The FSP has also experienced changes in both the administration and implementation of the program.

As an eligibility requirement, families must meet the gross and net income tests, and an asset test. Gross income includes all cash income, and with PRWORA families are now required to include sources of income that were not previously included in estimation, like state energy assistance and children's earnings (Zedlewski and Brauner, 1999; Gundersen, LeBlanc, and Kuhn, 1999). "While these changes eliminated food stamp eligibility for a few families at the high end of benefit eligibility range, their main effect was to reduce benefit levels for all families" (Zedlewski and Brauner 1999). Net income is "gross income minus six allowable deductions: a standard deduction, and deductions for earned income, dependent care, medical expenses, child support, and excess shelter expenses" (Oliveira, 1998). The new law also froze the standard

[1]Thrifty Food Plan (TFP) is a short-term emergency diet. The poverty line is based on the TFP and is calculated by multiplying the TFP by 3.3 (this calculation assumes that low-income people spend 1/3 of their income on food).

deduction at fiscal year 1996 levels (i.e. $134 for the 48 contiguous states and Washington, DC), and will not be adjusted for inflation. It also put a cap on excess shelter deduction; the excess shelter deduction is equal to shelter costs (e.g., rent or mortgage) that account for more than half of the household's income. This deduction is limited through 2001 and will be frozen at those levels from then on (Oliveira, 1998).

According to Edelman (1997), about two thirds of those affected by the changes in the FSP will be families with children. This is extremely disconcerting as these families depend on food stamps to put food on their tables.

In addition, the Food Stamp Program is now coordinated with the TANF program. Before welfare reform, the Food Stamp Program raised a family's benefits if their AFDC benefits declined, but the PRWORA prohibits such an increase in food stamp benefits when a TANF recipient fails to comply with the welfare reform act (Food and Research Action Center, 1999; Zedlewski and Brauner, 1999). States are also given the flexibility to decide whether they will sanction food stamp benefits when a client is sanctioned in the TANF program.

Because of PRWORA, the Food Stamp Program cut assistance to legal immigrants in the US until they become citizens; an estimated 1.3 million recipients were soon considered ineligible because of this new stipulation. Connecticut currently runs a state-funded program for former Food Stamp recipients who were cut off strictly due to citizenship status. These former recipients continue to receive state-funded food stamps; legal immigrants who entered the United States after the law was passed, however, are not afforded these benefits (Connecticut Department of Social Services, verbal communication, 2000). While legal immigrants were cut from food stamps, in

1998, 11% of adult TANF recipients were non-citizens residing in the U.S. legally. In Connecticut, only 4.7% of TANF recipients were non-citizens.

The Food Stamp Program also put a time limit on able-bodied adults between the ages of 18 and 50 without dependent children. If these adults are unemployed, they are only entitled to three months of food stamps every three years. "The Center on Budget and Policy Priorities describes this as 'probably the single harshest provision written into a major safety net program in at least 30 years'" (Edelman, 1997).

The PRWORA also affected other nutrition programs. Welfare reform lowered the reimbursement rates for family day care homes that participate in the Child and Adult Care Food Program (CACFP). It also eliminated the option of providing a snack to children who are in day care for more than eight hours (Food and Research Action Center, 1999). Welfare reform also decreased the benefit levels for lunch for children who participate in the Summer Food Program.

All these changes and cuts in the budget of the Food Stamp Program are significant in the study of welfare reform, as reducing a family's capacity to access food will affect low-income families in more ways than one. If food stamp allotments are decreased, spending on food is likely to decline, along with declines in spending on housing, medical assistance, and clothing due to the family's reallocation of funds.

> Lower transfer payments lead to reduced expenditures on food, changes in the kinds of food consumed, and reduced expenditures on other goods by low-income households...Lower food expenditures and changing food consumption patterns, particularly for children, may have significant effects on nutrition and long-term consequences for cognitive development, medical outlays and productivity losses (Gundersen, LeBlanc, and Kuhn, 1999).

Hence, it is particularly important to concentrate on the affects that welfare reform will have on the Food Stamp Program, and consequently, on children.

Zedlewski and Brauner examined whether there is an association between the declining welfare caseloads, and the parallel decline in food stamp participation. The data came from the NSAF. As mentioned previously, the NSAF oversampled households living in poverty, so researchers could pay close attention to people living in low-income households and how they differ from those with higher incomes. It also oversampled households from 13 states, to get additional insight into the lives of the residents in those particular states, which are home to more than half of the country's population. The methodology consisted of random-digit dialing for households with telephones, and "a supplementary area sample conducted in person for those households without telephones" (Zedlewski and Brauner, 1999). Zedlewski and Brauner (1999) focused on families with children under 18 who had received food stamps at some point since 1995; their unweighted sample was 5,228.

Results demonstrate that families leaving the food stamp program are more likely to "be white, married, have never received AFDC/TANF, and have at least one full-time employee than their counterparts still on food stamps at the time of the interview...They also have higher earnings and income levels" (1999). Food stamp leavers also differed in marital status from current food stamp recipients. Forty-five percent of leavers were married, compared to 25% of current recipients. Furthermore, less than 30% of the leavers were single, compared to almost 50 percent of those still receiving food stamps (Zedlewski and Brauer, 1999).

Results also showed that one-third of families who left food stamps also left welfare: a big share of all families who left the food stamp program. In fact, they left the food stamp program at a much higher rate than those who had not been on welfare

(Zedlewski and Brauner, 1999). It is disturbing that of the former welfare recipients who left the food stamp program,

> the differences were most significant at the lowest ends of the earnings and income distribution. Overall, 62 percent of former welfare families left food stamps compared to 46 percent for nonwelfare families. Former welfare families with very low incomes (below 50 percent of poverty) were twice as likely to leave food stamps as nonwelfare families (45 percent compared to 23 percent, respectively) (1999).

This is important to consider because, as discussed above, those leaving welfare for work are likely to have low-paying jobs.

Without cash assistance and food stamps, a family is forced to reallocate their funds, and spend their money on what they consider a priority when they have money on them. The fact that a substantial amount of those leaving welfare are also leaving food stamps raises concerns because many of them are still eligible for food stamp benefits. In their study, Zedlewski and Brauner (1999) found that only 42% of former welfare recipients who were still eligible for food stamps were participating in the food stamp program. The findings from NSAF support the phenomenon that eligible families who leave welfare are not participating in the food stamp program; NSAF results show that only two out of five former welfare recipients who were eligible for food stamps participated in the program.

Zedlewski and Brauner (1999) attempted to determine what kept eligible families from participating in the food stamp program. The majority of respondents (72%) said they left the FSP because of a new job or increased wages.

> We do not know whether this means that they assumed (or were told) that they no longer qualify for food stamps because they now have earnings, or if they chose to leave the welfare system when they began working. Interestingly, families *never* on welfare were less likely to report that earnings were the reason they left food stamps...The significant difference between the responses of

> former welfare recipients and nonwelfare food stamp leavers could mean that more former welfare recipients believe that earnings disqualify them for food stamps (Zedlewski and Brauner, 1999).

Another common reason for leaving the food stamp program was administrative problems or hassles. Families who were not on welfare reported this significantly more often than those who had been on welfare. Zedleweski and Brauner (1999) comment that this suggests that administrative hassles related to the PRWORA are probably not a main reason why families left the FSP.

These reasons do not fully explain the phenomenon we are seeing: that food stamp caseloads are falling as rapidly as welfare caseloads. Some suggest that once a family is off TANF assistance, they must actively seek food stamp benefits. However, while they were on welfare, caseworkers usually coordinated the two programs, so that recipients of cash assistance would also be enrolled in the FSP (Zedlewski and Brauner, 1999). A study by Mathematica Policy Research, Inc. hypothesized that families do not understand the changes in the FSP, or may not be aware that they are still eligible for food stamps. Consequently, they are not applying for food stamps (Wegener, 1999). The National Center for Policy Analysis suggests the following as possibilities for the decline in food stamp caseloads: increased stigma, the strong economy, and a "push to get recipients off welfare" that "has discouraged people from applying for food assistance" (National Center for Policy Analysis, no date).

The problem with families leaving the food stamp caseloads is that these families are experiencing problems affording food for their families, thus making them food insecure households. Zedlewski and Brauner (1999) found that about two thirds of those who left the FSP had *some* problems affording food, and that about one third of

them had *serious* difficulties affording food for their families. Their results also showed that "food affordability issues occurred significantly more often for food stamp leavers than for all low-income families". The question that needs to be answered is whether these findings are different from when these families were still on food stamps; as discussed in the food security and hunger section, it is important to compare food security before and after welfare reform.

Sentinel site monitoring systems

Sentinel surveillance is a type of 'sample surveillance' in which reporting sources are located at different sites covering a specific geographical area and/or a specific high-risk group (e.g., inner city low-income minority children). This surveillance approach avoids unnecessary waste of resources in massive and unfocused surveillance systems. Well thought out sentinel site surveillance can provide a good assessment of sentinel health outcomes or risk factors for disease in a timely fashion in the population of interest. A key aspect of building a sentinel site surveillance system is the selection of the sites and indicators of interest. Once this decision is made, the next step is to develop the sampling procedures within the sites which could involve probabilistic or purposive sampling (Noah, 1997).

Surveillance is currently carried out on a plethora of health-related topics, including hospital acquired infections and accident reporting, along with the monitoring of infectious and chronic diseases (Stone, Morrison, and Ohn, 1998; Noone and O'brien, 1997; Goldberg, 1999). Surveillance activities are often collected at the national and state level. The national data, however, are often not relevant for local-

level prevention, or for understanding the magnitude of the problem in a specific community. The national data, especially when dealing with a topic like welfare reform where states have the flexibility to set their own rules, may not be suitable because it will not provide enough insight into the effects of welfare reform at the local level. These insights are necessary to provide appropriate primary and secondary prevention, and to provide policymakers with data applicable to the particular community.

There are advantages to using sentinel site monitoring. Sentinel sites capture a large number of participants who are part of the community being studied at a reasonable cost. In addition, policymakers will have the data from their immediate community, and may be able to enforce local policies as a result of the findings from the monitoring system. The data from sentinel site monitoring systems can provide professionals with insight to the current local situation, and they can act on what the survey results reveal. For instance, in the example of welfare reform, the Department of Social Services might assist in providing the appropriate assistance to former TANF recipients who need help in their transition phase off welfare. It could also develop and implement a program for those in the transition off welfare to get what they need to be self-sufficient.

There are also disadvantages to using a sentinel site monitoring system. Most important is that it is not based on probabilistic sampling techniques; since it is not based on random sampling, there is the question of representation when comparing the results to those of national surveys. Also, while sentinel site monitoring systems are advantageous for local decisions, they may not be representative of the local population. Another disadvantage of the sentinel site surveillance approach is that key social,

economic, and demographic characteristics of populations served by the sites may change dramatically over time in countries like the US where the social and demographic profile of the population is rapidly changing. Thus, secular changes can only be understood if these population characteristic changes are measured and taken into account.

The literature review on sentinel site monitoring systems provides an array of examples of different realms in which this type of monitoring can be used. This system has been used to monitor the patterns of use of olestra: to assess the effects of food containing this dietary fat replacer, and to assess long-term effects of olestra consumption (Kristal, Patterson, Neuhouser, Thornquist, et al., 1998). Several researchers have used sentinel sites to measure the prevalence of HIV infection, and trends of HIV. Nguyen, Hoang, Pham, van Ameijden, Deville, and Wolffers (1999) measured these in Vietnam amongst their sentinel population, which included sexually transmitted disease patients, female sex workers, injecting drug users, pregnant women, and military conscripts. They compared the prevalence of HIV among the high-risk versus low-risk groups. In South Africa, sentinel site surveillance was used to monitor the HIV/AIDS epidemic. Researchers compared the data from the sentinel surveys in a resource-poor health district (the sentinel site) to province-wide sentinel surveillance.

Talan, et al (1998) studied infectious diseases in emergency departments, and concluded that "emergency departments may be useful sentinel sites for infectious disease surveillance" because many at-risk patient (i.e., uninsured, homeless) groups seek help from emergency departments. Goldberg (1998) concluded that there is a need for sentinel population-based surveillance systems for heart failure (HF) due to the lack

of epidemiological data on HF, particularly from defined sentinel sites. Because of the growth of the elderly population in the U.S. and the declines in mortality rates from coronary heart disease, new sentinel site surveillance systems are needed to describe the magnitude of HF and recent trends.

Sentinel site monitoring is a promising approach for welfare reform: it is simple, is easy to administer, and has the ability to capture many people across time and work under urgent situations. This type of monitoring is likely to capture the time-related trends of welfare reform. Because welfare reform is relatively new, it will be crucial to study it in the coming years to get an idea of its effects on the quality of life of our most disadvantaged populations.

CHAPTER II: OBJECTIVES

Given the fact that some TANF recipients in Connecticut have already reached their life-time limit of cash assistance, local monitoring efforts are necessary to understand how these people are faring once off welfare reform. It is important to assess the effect that welfare reform is having on health, food security, housing, employment, and poverty status across time. Data is needed describing both short and long-term effects of leaving the welfare rolls. According to Wise, Chavkin, and Romero (1999), a major "problem inherent in using extant national or state data sets is that detailed information on both welfare and health is rarely available in the same data set". A local monitoring system containing questions on both welfare reform and health is critical in understanding the health and nutritional status of both current and former recipients.

The objective of this thesis is to develop a low cost, simple, and valid monitoring tool that can be implemented through a sentinel site monitoring system in the city of Hartford to understand the effect of welfare reform on child health, nutrition, and food security indicators across time. For the system to be successful, it will need to be practical, valid, relevant, accessible, and effective (Stone, Morrison, and Ohn, 1998). The monitoring system will generate valid data, meaning that it will be of sound, scientific quality (including sensitivity, specificity, and accuracy), and will be as representative as possible of the population being studied. It is also important that the data collected is interpreted and disseminated so that the data translates into specific

actions and policy decisions. Policymakers should use the data to design and/or implement new policy, making the system effective.

Specific objectives

1. Identify indicators simple to measure that predict influence of welfare reform on child health and nutrition.
2. Develop an instrument that can be used for sentinel site monitoring.
3. Conduct interviews with key informants to assess the feasibility of developing and implementing a welfare reform sentinel site monitoring system in Hartford.

Hypotheses

H01: Welfare reform affects household food security and child nutrition indicators through its influence on work.

H02: Welfare reform affects household food security and child nutrition indicators through its influence on housing.

H03: Welfare reform affects household food security and child nutrition indicators through its influence on food stamps.

H04: Welfare reform affects household food security and child nutrition indicators through its influence on cash benefits.

H05: It is feasible to develop and implement a welfare reform sentinel site monitoring system in the city of Hartford.

CHAPTER III: MONITORING INSTRUMENT

The following sections describe the methodology and statistical approach followed to conduct the secondary data analyses presented in this thesis.

Background- ANNA Survey

The Acculturation and Nutrition Needs Assessment (ANNA)[1] was conducted by the Connecticut Family Nutrition Program Infants, Toddlers, and Children (FNP-IT)[2] from May 1998 to September 1999. Data were collected from adult caretakers with children between the ages of 1 and 6 years. In addition to the child's age requirement, the selection criteria included the following: the participants had to identify themselves as being Puerto-Rican, be the primary caretaker of the child included in the study, and be either eligible for or receiving health or food benefits targeting low-income households. In addition, the child in the study had to be in "good" health at the time of the interview, meaning without any medical conditions which would require a special diet or restrained physical activity.

[1] ANNA principal investigators: Rafael Pérez-Escamilla, PhD and David Himmelgreen, PhD

[2] FNP-IT is a partnership between the University of Connecticut, College of Agriculture and Natural Resources and the Hispanic Health Council. The program is funded by the USDA Food Stamp Program through the State Department of Social Services based on a 1:1 state match formula.

Data Collection

The sample was recruited from several different locations in Hartford, Connecticut in order to increase the representation of the sample. These locations include: the Hispanic Health Council (42.8%), the local WIC office (28.9%), the Connecticut Children's Medical Center (9%), and the school system (2%). Participants were also recruited through street outreach (6.5%), and word of mouth (7.5%). FNP-IT staff and Hispanic Health Council outreach workers approached potential participants at the previous locations to determine interest. For those willing to participate, an appointment was set up for the administration of ANNA. Ninety percent of the interviews were conducted in the participants' homes, and the remaining 10% were done at the Hispanic Health Council. Four trained interviewers interviewed the 201 participants. Respondents received an educational package on nutrition and $5 compensation for participating in the study.

Sample Characteristics

Two hundred and one Puerto-Rican caretakers, all but one of which were women, were included in the study. The mean age of the respondent was 28.7 years of age, and the mean age of the children was 33.1 months. Close to 78% of the respondents were the head of the household. Eighty percent of the participants were the child's mother. In 34.8% of the households, the father of the child lived in the home; 48.8% of the participants claimed to be single and have no partner, 15.9% were married, and 23.9% were in common-law marriages. The educational background of the caretakers ranged from no formal schooling to college graduate; 45.8% had had some high school.

One hundred percent of the sample had a television and refrigerator, and 84.6% had a phone, 97.5% had a radio, and 41.3% had a car. Close to 94% had received food stamps at some point in their lives, and 77.6% were receiving food stamps at the time of the interview. Welfare (AFDC or TANF) had been received by 86.6% of the participants at some point in their lives, and 59.2% were receiving TANF at the time of the interview (Tables 3.1a and 3.1b).

Table 3.1a: Characteristics of sample from ANNA (Acculturation and Nutrition Needs Assessment)

	n	% or Mean (Std Dev)
Respondent's gender		
Male	1	0.05%
Female	200	99.5%
Respondent's mean age (y)	201	28.73 (9.71)
Child's gender		
Male	107	53.2%
Female	94	46.8%
Child's mean age (mo)	201	33.14 (months) (15.73)
Respondent's Ethnicity		
Puerto Rican	173	86.1%
Puerto Rican-American	16	8.0%
Puerto Rican-Italian	1	0.05%
Hispanic or Latino	11	5.5%
Marital Status		
Single/No partner	98	48.8%
Married	32	15.9%
Common law	48	23.9%
Separated	12	6.0%
Divorced	11	5.5%
Highest grade reached in school		
No formal schooling	2	1.0%
$\leq 8^{th}$ grade	31	15.4%
Some high school	92	45.8%
High school grad/GED	50	24.9%
Trade/technical training	7	3.5%
Some college	12	6.0%
College graduate	7	3.5%
Mean # of people in household	201	4.34 (1.73)
Respondent's employment status		
Full time	30	14.9%
Part time	17	8.5%
Full time homemaker	114	56.7%
Student (not working)	8	4.0%
Unemployed	27	13.4%
Disabled	3	1.5%
Other	2	1.0%
Ever homeless as an adult		
Yes	59	29.4%
No	142	70.6%

Table 3.1b: Characteristics of sample from ANNA (Acculturation and Nutrition Needs Assessment)

	n	%
Have a phone		
Yes	170	84.6%
No	31	15.4%
Have a radio		
Yes	196	97.5%
No	5	2.5%
Have a car		
Yes	83	41.3%
No	118	58.7%
Currently receiving food stamps		
Yes	156	77.6%
No	45	22.4%
Currently receiving AFDC/TANF		
Yes	119	59.2%
No	81	40.3%

ANNA Survey Development and Content

The ANNA survey was developed with the intention of increasing the understanding of the effects of acculturation on food habits and nutritional status of inner-city Puerto-Rican families. As the survey covers a wide variety of topics, it yields important data on the health and nutrition of the families, in addition to information on the participants' involvement in food assistance and other social programs.

The survey included questions in the following areas: socioeconomic status, demographics, homelessness, nativity and migration patterns, social networks, acculturation (measured through self-identification, language, assimilation into U.S. society, ethnic boundaries of social relations, media and popular culture, family values, and importance placed on maintaining ethnic culture), eating habits, food security, food intake, food sources and food purchasing habits, self-efficacy, involvement in food assistance programs, welfare reform, breastfeeding, self-reported health information,

and caretaker nutrition knowledge. Following the questionnaire, interviewers took anthropometric measurements for both the caretaker and child.

The secondary data analyses presented in this thesis were based on data from several sections of the ANNA questionnaire to look at the effects of welfare reform on children's health and nutritional status. These sections include the questions on welfare reform, food security, dietary intake, emergency food assistance, and perception of child's health status.

The following pages present specifics on those sections of the ANNA survey that were central for the analyses presented in this thesis.

Welfare Reform

The welfare reform questions were developed by a multidisciplinary team including three anthropologists, a nutritionist, a public health scientist, and five members of the inner-city, Puerto-Rican community. The questions were extensively evaluated, tested and revised, and they include constructs that cover different aspects of welfare reform (i.e., jobs, housing, day care for children, food stamps) (Table 3.2). Thus the survey was determined to be valid with respect to its content and face validity.

This survey began to be administered in 1998, nearly two years after the PRWORA was enacted. Because of Connecticut's shorter TANF time-limit it was expected to capture people who had recently left the welfare rolls. Thus, by asking respondents specifically if welfare reform had affected them in the specific ways, the survey may make it possible to examine the effects that welfare reform is having on the respondents' quality of life.

Table 3.2: Questions on welfare reform from ANNA Survey [a]

Please indicate if welfare reform has affected you in any of the following:[1]
a) no longer receive cash benefits
b) no longer receive food stamps
c) reduced cash benefits
d) reduced food stamps
e) have had problems with the EBT system[2]
f) the amount of food available to my family has decreased
g) the health of my child has been affected[3]
h) my privacy has been invaded[2]
i) I am forced to seek work without adequate day care arrangements for my children
j) I am happier now because thanks to welfare reform I have a job or will soon get one
k) I can no longer afford adequate housing
l) I feel more rejected by society
m) I am more uncertain about where I will get food for my family
n) I feel less optimistic about life
o) I don't understand all the new rules to avoid being penalized
p) Is there any other positive or negative way that welfare reform has affected your life?[4]
q) none of the above, welfare reform has not affected my life

[a] For additional welfare reform question, see Appendix
[1] Respondents' answers were coded as follows: Yes, No, Don't Know, Refused
[2] If respondents replied "yes", they were asked, "please explain"
[3] If respondents replied "yes", they were asked "how"
[4] Open ended question

Food Insecurity and Hunger

The survey section on food insecurity and hunger came from the Radimer/Cornell Hunger Scale, a validated instrument which has been used to differentiate households among different levels of food insecurity. The scale captures both quantitative and qualitative aspects of the food available in the household, as well as social and psychological food insecurity aspects experienced by the family. Households are classified as either food secure or food insecure. If insecure, the levels of food insecurity are as follows and they progress from least severe to most severe: household insecurity, individual insecurity, and child hunger. The food secure and food insecure categories are mutually exclusive (i.e., the total of four categories adds up to 100%).

Kendall, Olson, and Frongillo (1995) demonstrated the construct validity of the Cornell Hunger Scale using factor analysis, which supported "the conceptual framework that hunger and food insecurity have distinct levels and components". Criterion validity was assessed by comparing dietary intake/quality and poverty status among household in one of four mutually-exclusive groups: food secure, household insecure, individual insecure, and child hunger groups. The internal consistency of the instrument was measured using the Cronbach's alpha test.

The questions on the Radimer/Cornell hunger scale were analyzed according to the factor loadings, so that the ten items (Table 3.3) were broken down into four categories by following a specific formula validated by Kendall, Olson, and Frongillo. For each statement, the respondents were asked to answer "never true", "sometimes true", or "often true". As recommended by Kendall, Olson, and Frongillo, for the

purpose of analyses, "sometimes true" and "often true" were collapsed into one category.

Table 3.3: Questions from the Radimer/Cornell Hunger Scale[a]

Interviewer – Read Aloud: I'm going to read you a series of statements that people made about their food situation. For the next ten questions, tell me whether the statements are OFTEN TRUE, SOMETIMES TRUE, or NEVER TRUE for your household or the individuals in your household.	
1	I worry whether my food will run out before I get money to buy more.
2	The food that I bought just didn't last, and I didn't have money to buy more.
3	I ran out of the foods that I needed to put together a meal and I didn't have money to get more food.
4	We eat the same thing for several days in a row because we only have a few different kinds of food on hand and don't have money to buy more.
5	I can't afford to eat properly.
6	I am often hungry, but I don't eat because I can't afford enough food.
7	I eat less than I think I should because I don't have enough money for food.
8	I cannot give my child(ren) a balanced meal because I can't afford that.
9	My child(ren) is/are not eating enough because I just can't afford enough food.
10	I know my child(ren) is/are hungry sometimes, but I just can't afford more food.

[a] The formulas for the four food security/insecurity categories are as follows:
food security = "never true" to all 10 questions
household insecurity = "sometimes or often true" to either question 1, 2, 3, or 4, and "never true" to questions 5 through 10
adult insecurity = "sometimes or often true" to question 5, or 6, or 7, or 8, and "never true" to questions 9 and 10
child hunger = "sometimes or often true" to question 9 or 10

Dietary Intake

Dietary intake was measured using both a 14-item short food frequency questionnaire (Table 3.4) and a 75-item detailed food frequency questionnaire (see Appendix for ANNA Survey). Respondents were asked to answer questions about foods both they and their children eat. For each food, they were asked if they eat it, if the child eats it, and how often they and the child eat it (in times per day, week, month, or year).

Table 3.4: List of foods included in the 14-item questionnaire (Short Food Frequency)

	Do you eat…	How often do you eat…?	Does child eat…	How often does child eat…?
a) Fruits (excluding juices)	Y/N	___ d w m y	Y/N	___ d w m y
b) Legumes (beans, chick peas, lentils, pigeon peas)	Y/N	___ d w m y	Y/N	___ d w m y
c) Starchy Vegetables (yuca, yautia, malanga, batata)	Y/N	___ d w m y	Y/N	___ d w m y
d) Green Leafy Vegetables	Y/N	___ d w m y	Y/N	___ d w m y
e) Salads and other vegetables	Y/N	___ d w m y	Y/N	___ d w m y
f) Dairy products (e.g., milk, cheese, yogurt)	Y/N	___ d w m y	Y/N	___ d w m y
g) Meats(e.g., chicken, beef, pork)	Y/N	___ d w m y	Y/N	___ d w m y
h) Fish and Shellfish				
i) Eggs	Y/N	___ d w m y	Y/N	___ d w m y
j) Pasta, breads, and cereals (e.g., rice, spaghetti, tamal)	Y/N	___ d w m y	Y/N	___ d w m y
k) Fruit Juice (specify brand: _____)	Y/N	___ d w m y	Y/N	___ d w m y
l) Soft and Artificial Drinks (Tang, Sunny Delight, Pepsi, Coke)	Y/N	___ d w m y	Y/N	___ d w m y
m) Sweets and Desserts	Y/N	___ d w m y	Y/N	___ d w m y
n) Snack Foods (e.g., potato chips, Nachos, etc.)	Y/N	___ d w m y	Y/N	___ d w m y

Emergency Food Assistance

Emergency food assistance was measured by asking the respondents if they participate in emergency food assistance programs (Table 3.5).

Table 3.5: Question on emergency food assistance

Does your family participate in any of these food assistance programs?
a) Salvation Army
b) Food Pantries
c) Soup Kitchens
d) Other_____

Child Health

An assessment of the overall child's health status was self-reported by the caretaker. Interviewers asked "How would you rate your child's overall health?" and respondents were asked to answer "poor", "fair", "good", "excellent", or "don't know".

Statistical Analyses

The dependent variables, or outcomes, examined in these analyses were food insecurity, preschoolers dietary intake, emergency food assistance, and preschoolers' health. These variables are defined in Table 3.6.

Food Insecurity

As stated previously, the Radimer/Cornell Hunger Scale was used to measure food insecurity. A family was defined as "food secure" if they responded "never true" to all ten statements and "food insecure" if they responded "sometimes or often true" to any of the ten statements. Food insecurity is broadest category, and it encompasses both the physical and psychological aspects of hunger. Food insecurity is broken down into three levels in ascending order of severity: household insecurity, adult insecurity,

Table 3.6: Dependent Variables

DEPENDENT VARIABLES	DEFINITION	MEASUREMENT
Food Security	Access by all people at all times to enough food for an active, healthy life, and at the minimum includes the ready availability of nutritionally adequate and safe foods and the assured ability to acquire personally acceptable foods in a socially acceptable way (Campbell, 1991)	An affirmative response to "never true" to all 10 questions on the Cornell Hunger Scale (CHS).
- household insecurity	Limited or uncertain availability of food in socially unacceptable ways, including food anxiety, quantitative (food depletion), and qualitative (unsuitable food) components. This stage includes the four household items on the CHS.	An affirmative response to "sometimes true" or "often true" to either question 1, 2, 3, or 4 and "never true" to questions 5, 6, 7, 8, 9, or 10.
- adult insecurity	Limited quantity and quality of food at the adult level because of problems with food insecurity. This phase includes the adult quantity items on the CHS.	An affirmative response to "sometimes true" or "often true" to either question 5, 6, 7, or 8 and "never true" to questions 9 and 10 on the CHS.
- child hunger	The most extreme condition where children do not have enough food to eat. This phase includes the two child diet quantity items on the CHS (Kendall et al., 1995).	An affirmative response to "sometimes true" or "often true" to either questions 9 or 10 on the CHS
Emergency Food Assistance	Family's participation in food pantries, soup kitchens, churches, and Salvation Army.	An affirmative response to participation in either food pantries, soup kitchens, Salvation Army, or other
Child Dietary Intake	Usual dietary intake pattern of preschooler	Frequency of consumption
Child Health	Child overall health status	Respondent's perception of child's health: poor, fair, good, excellent, don't know

and child hunger. A household was identified as "household insecure" if the respondent answered "sometimes or often true" to either question 1,2,3, or 4 and answered "never true" for questions 5 through 10. "Individual insecure" was identified by the following pattern: if the respondent answered "sometimes or often true" to question 5 or 6 or 7 or 8, and "never true" to questions 9 and 10. Finally, "child hunger" was identified if the respondent answered "sometimes or often true" to either number 9 or 10.

Dietary Intake

Dietary intake was assessed using the 14-item short food frequency questionnaire. In order to standardize the measurements, the frequencies of all the respondents' items were converted to per/day frequencies, since the participants were given the option of responding in per day, week, month, or year.

Emergency Food Assistance

Emergency food assistance was assessed by asking respondents about their families' participation in the following food assistance programs: food pantries, soup kitchens, Salvation Army, and "other". Statistical analyses were conducted three different ways: 1) analyzed each category of emergency food assistance separately, 2) grouped food pantries and soup kitchens, and analyzed the two together as a group, 3) combined the four different types of emergency food assistance, and analyzed it as "any" emergency food assistance participation.

Child's Health

Preschooler's health was defined as how the caretaker perceived the child's overall health at the time of the interview.

Independent Variables

The independent variables were the different aspects of welfare reform captured in the welfare reform questions, and how long food stamps last per month (Table 3.7).

Table 3.7: Independent variables

INDEPENDENT VARIABLE	DEFINITION	MEASUREMENT[1,2]
Cash benefits	Influence of welfare reform on cash benefits	a) No longer receive cash benefits b) Reduced cash benefits
Food stamps	Influence of welfare reform on food stamps	a) No longer receive food stamps b) Reduced cash benefits
Food availability	Influence of welfare reform on the amount of food available to family	The amount of food available to the family has decreased
Privacy	Influence of welfare reform on privacy	My privacy has been invaded
Working without daycare	Influence of welfare reform on working without day care for child	I am being forced to seek work without adequate day care arrangements for children
Housing	Influence of welfare reform on the ability to afford housing	I can no longer afford adequate housing
Feelings of rejection	Influence of welfare reform on whether respondent feels more rejected by society	I feel more rejected by society
Uncertainty of how to get food	Influence of welfare reform on psychological aspect of food security	I am more uncertain about where to get food for my family
Optimism	Influence of welfare reform on optimism about life	I feel less optimistic about life
How long food stamps last per month	The amount of time food stamps last the family per benefit period	On an average month, how long do food stamps last you?

[1,2] Respondents answers for the welfare reform questions were coded as follows: yes, no, don't know; for the last independent variable, how long food stamps last, respondents answers were coded as "4 weeks" or "less than 4 weeks"

Selection of Indicators

The predictive validity approach was used to select the indicators for the monitoring instrument. Statistical significance was based on a p value < 0.05 (two-tailed test). Specifically, the approach consisted of examining the association between independent variables (e.g., influence of welfare reform) and each of the dependent variables related to the preschoolers' health and nutrition status (e.g., dietary intake). Those independent variables that were significantly associated with any of the outcomes were considered candidates for inclusion in the monitoring instrument. Forty-eight associations were tested for the food insecurity category (12 independent variables by 4 dependent variables) using chi-squared analyses. One hundred and forty associations were tested for dietary intake, 12 were tested for emergency food assistance, and 12 associations were tested for child's health, all using chi-square analyses.

Results

Food Insecurity

To understand the effects of welfare reform on food insecurity, analyses were conducted with the questions from the Radimer/Cornell Hunger Scale and all the independent variables. With regards to food security, results indicate that only 9.3% of respondents whose food stamps last less than four months were food secure (p=.001); those whose food stamps lasted the whole month were three times more likely to be food secure. Other factors relating to welfare reform which had a significant inverse association with food security were whether respondents experienced the following because of welfare reform: forced to seek work without daycare (p=.018), could no

longer afford adequate housing (p=.023), food available had decreased (p=.040) and whether they were uncertain about how to get food for their family (p=.014). As an example, of those who responded that they were forced to seek work without daycare (N=38), only three were food secure versus 38 (N=148) among those for which this was not an issue. And of those who said they could no longer afford adequate housing (N=17), none were food secure, compared to 40 (N=167) for those who responded that they could afford housing. Among all the significant associations with food security, the magnitude of the differences were threefold (Table 3.8).

Bivariate analyses revealed no significant associations between household food insecurity and welfare reform. The only trend (p=.064) involving household security is that those who were uncertain about how to get food for their family were more likely to be household insecure than those who were not uncertain about how to get food.

Several significant associations were found between adult food insecurity and welfare reform. This was unexpected when it was revealed that there were no significant associations between the variables and household insecurity, because household insecurity is expected to be less severe than adult insecurity; therefore, one would not expect significant associations with adult insecurity if they were not seen in household insecurity. However, when analyzed with adult insecurity, significant associations surfaced across all the constructs of welfare reform. Similar to food security, the variables affecting adult food insecurity were how long food stamps last (p=.001), forced to seek work without daycare (p=.014), whether the respondent could no longer afford adequate housing (p=.001), food availability had decreased (p=.002),

Table 3.8: Bivariate associations of independent variables with food security outcomes[1]

	Food Security[2]			Household Insecurity[3]			Adult Insecurity[4]			Child Hunger[5]		
	n[6]	%	P[7]	n	%	P	n	%	P	n	%	P
How long food stamps last			.001			.231			.001			.172
4 wks (N=77)	24	31.2		34	44.2		9	11.7		10	13	
< 4 wks (N=75)	7	9.3		26	34.7		26	34.7		16	21.3	
Because of Welfare Reform:												
Forced to seek work without daycare			.018			.572			.014			.515
No (N=148)	38	25.7		62	41.9		27	18.2		21	14.2	
Yes (N=38)	3	7.9		14	36.8		14	36.8		7	18.4	
Can no longer afford adequate housing			.023			.597			.001			.722
Afford (N=167)	40	24		70	41.9		32	19.2		25	15	
Can't afford (N=17)	0	0.0		6	35.3		9	52.9		2	11.8	
Food available has decreased			.040			.431			.002			.900
No (N=163)	40	24.5		69	42.3		29	17.8		25	15.3	
Yes (N=21)	1	4.8		7	33.3		10	47.6		3	14.3	
Reduced food stamps			.924			.140			.019			.594
No (N=159)	35	22		70	44		30	18.9		24	15.1	
Yes (N=19)	4	21.1		5	26.3		8	42.1		2	10.5	
Uncertain about how to get food for my family			.014			.064			.005			.034
No (N= 167)	21	24.6		72	43.1		32	19.2		22	13.2	
Yes (N=19)	0	0.0		4	21.1		9	47.4		6	31.6	

[1] This table includes only the independent variables that were significantly associated with at least 1 food security/insecurity variable.
[2] Answered "never true" to any of the 10 questions on the Radimer/Cornell Hunger Scale (CHS).
[3] An affirmative response to "sometimes true" or "often true" to either question 1, 2, 3, or 4 and "never true" to questions 5, 6, 7, 8, 9, or 10.
[4] An affirmative response to "sometimes true" or "often true" to either question 5, 6, 7, or 8 and "never true" to questions 9 and 10 on the CHS.
[5] An affirmative response to "sometimes true" or "often true" to either questions 9 or 10 on the CHS.
[6] N = total amount of respondents in that particular category; n = subgroup sample size, e.g., those who answered food secure among the total group who answered that their food stamps last 4 weeks (24/77=31.2%); %= n/N*100.
[7] P value corresponding to chi-square analysis.

and uncertainty about where to get food (p=.005). Reduced AFDC/TANF (cash benefits) (p=.010) and reduced food stamps because of welfare reform were also significantly associated with adult insecurity (p=.019). Of those whose food stamps lasted four weeks, about 12% were adult insecure, compared to almost 35% of those whose food stamps lasted less than four weeks (p=.001); and of those who experienced reduced food stamps because of welfare reform (N=19), 8 or 42.1% were adult insecure (p=.019) compared to 30 (or 18.9) percent of adult insecurity among those respondents whose food stamps were not reduced.

Child hunger was significantly associated with uncertainty about how to get food for the family (p=.034).

The independent variables which were *not* significantly associated with any of the four food insecurity variables can be seen in Table 3.9.

Table 3.9: Bivariate associations of independent variables with food security outcomes[1]

	Food Security[2]			Household Insecurity[3]			Adult Insecurity[4]			Child Hunger[5]		
Because of Welfare Reform:	n[6]	%	P[7]	n	%	P	n	%	P	n	%	P
No longer receive AFDC/TANF			.551			.778			.451			.245
No (N=157)	34	21.7		65	41.4		32	20.4		26	16.6	
Yes (N=26)	7	26.9		10	38.5		7	26.9		2	7.7	
No longer receive food stamps			.105			.966			.064			.878
No (N=173)	37	21.4		71	41.0		39	22.5		26	15.0	
Yes (N=12)	5	41.7		5	41.7		0	0.0		2	16.7	
Reduced AFDC/TANF			.400			.180			.010			.904
No (N=157)	35	22.3		69	43.9		29	18.5		24	15.3	
Yes (N=21)	3	14.3		6	28.6		9	42.9		3	14.3	
Privacy has been invaded			.614			.500			.176			.954
No (N=179)	40	22.3		74	41.3		38	21.2		1	14.3	
Yes (N=7)	1	14.3		2	28.6		3	42.9		27	15.1	
Feel more rejected by society	.228					.336			.326			.114
No (N=181)				75	41.4		39	21.5		26	14.4	
Yes (N=5)	41	22.7		1	20.0		2	40.0		2	40.0	
	0	0.0										
Less optimistic about life			.084			.955			.533			.174
No (N= 176)	41	23.3		72	40.9		38	21.6		25	14.2	
Yes (N=10)	0	0.0		4	40.0		3	30.0		3	30.0	

[1] This table includes only the independent variables that were **not** significantly associated the food security/insecurity variables.
[2] Answered "never true" to any of the 10 questions on the Cornell Hunger Scale (CHS).
[3] An affirmative response to "sometimes true" or "often true" to either question 1, 2, 3, or 4 and "never true" to questions 5, 6, 7, 8, 9, or 10.
[4] An affirmative response to "sometimes true" or "often true" to either question 5, 6, 7, or 8 and "never true" to questions 9 and 10 on the CHS.
[5] An affirmative response to "sometimes true" or "often true" to either questions 9 or 10 on the CHS.
[6] N = total amount of respondents in that particular category; n = subgroup sample size, e.g., those who answered food secure among the total group who answered "no" to the question asking if they no longer receive AFDC/TANF (34/157=21.7%); %= n/N*100.
[7] P value corresponding to chi square analysis.

Dietary Intake

To assess the influence of welfare reform on dietary intake, bivariate analyses were conducted with each of the items on the short food frequency questionnaire and the twelve independent variables. Responses from the food frequency questionnaire were converted to per day frequencies in order to standardize child intake (caretakers responded in per day, per week, per month, and per year frequencies). Median child frequency of intake was then calculated for each of the items on the short food frequency, in order to recode intake into above or below the median.

Nine independent variables were significantly associated to at least one dietary intake variable: food stamps, whether they continue to receive them and how long they last (4 weeks vs. <4 weeks), reduced cash benefits, whether respondents were forced to work without adequate daycare for their children, whether or not they can afford adequate housing because of welfare reform (Tables 3.10a and 3.11a), uncertainty about how to get food, and food available has decreased. Psychological variables that were significantly associated with at least one dietary intake variable were that privacy had been invaded and whether they feel less optimistic about life, both because of welfare reform (Tables 3.10b and 3.11b). Of all the different food items, starchy vegetables were the item most affected by the independent variables. Intake was above the median for only 28% of those whose food stamps lasted less than four weeks, compared to almost 47% of those whose food stamps lasted the whole month. For respondents who were forced to seek work without daycare because of welfare reform, only 7 out of the 38 children were eating above the median of starchy vegetables (18.4%), compared to almost 40% of those who were not forced to seek work without daycare. For

respondents who could no longer afford adequate housing, about 12% were eating above the median, whereas 38% of those who could afford adequate housing were eating above the median of starchy vegetables.

Vegetable intake (called 'salad' on the food frequency questionnaire) was also significantly affected by two variables: whether the family continues to receive food stamps because of welfare reform, and whether they can no longer afford adequate housing because of welfare reform. Only 25% of those who were no longer receiving food stamps ate higher than the median intake for vegetable, compared to almost 53% of those who continued to receive food stamps ($p=.033$). Similarly, only 23.5% of those who could no longer afford adequate housing because of welfare reform ate above the median of vegetable, compared to almost 54% of those who could afford housing ($p=.022$).

Six of the food items were not significantly associated (at $p < .05$) to any of the independent variables: dairy, eggs, fruit, fruit juice, legumes (which include beans, chick peas, lentils, and pigeon peas), and snacks (Tables 3.12a and 3.12b). Those dietary items that were significantly associated to at least one of the independent variables were bread, fish, greens, meat, salad, starchy vegetables, and sweets.

Table 3.10a: Bivariate Associations of Independent variables with child food group intake[1]

	Bread			Dairy			Fish			Egg			Fruit			Fruit Juice			Legumes		
> median of food serving consumed / day[2]	n[3]	%	P	n	%	P	n	%	P	n	%	P	n	%	P	n	%	P	n	%	P
How long food stamps last			.295			.106			.767			.985			.289			.072			.793
4 wks (N=77)	32	41.6		28	36.4		45	60.0		54	70.1		40	52.6		30	39.0		42	54.5	
< 4 wks (N=75)	25	33.3		37	49.3		48	62.3		53	70.7		33	44.0		19	25.3		45	60.0	
Because of welfare reform:																					
Continues to receive food stamps			.336			.879			.000			.839			.907			.306			.719
Yes (N=173)	67	39.0		76	43.9		105	60.7		120	69.4		83	48.3		53	30.6		96	55.5	
No (N=12)	3	25.0		5	41.7		6	54.5		9	75.0		6	50.0		2	16.7		8	66.7	
Reduced TANF			.741			.055			.407			.759			.193			.806			.560
No (N=156)	61	39.1		72	45.9		97	61.8		108	68.8		73	46.8		49	31.2		86	54.8	
Yes (N=21)	9	42.9		5	23.8		11	52.4		16	76.2		13	61.9		6	28.6		14	66.7	
Forced to seek work without daycare			.100			.594			.123			.097			.659			.825			.556
No (N=148)	60	40.8		63	42.6		88	59.9		98	66.2		70	47.3		44	29.7		80	54.1	
Yes (N=38)	10	26.3		18	47.4		24	63.2		32	84.2		19	51.4		12	31.6		24	63.2	
Can no longer afford adequate housing			.020			.475			.003			.454			.352			.266			.595
Affords (N=166)	67	40.4		74	44.3		103	62.0		114	68.3		78	47.0		51	30.5		95	56.9	
Can't Afford (N=17)	2	11.8		6	35.3		7	41.2		14	82.4		10	58.8		3	17.6		8	47.1	

[1]Includes only independent variables that were significantly associated with at least 1 dietary intake variable

[2]Median frequency of intake: Bread (1 time/day); Dairy (3 times/day); Fish (0.03 times/day); Egg (0.29 times/day); Fruit (0.93 times/day); Fruit Juice (3 times/day); Legumes (0.57 times/day)

[3]N = total amount of respondents in that particular category; n = subgroup sample size, e.g., those who were above the median for bread among the total group who answered that their food stamps last 4 weeks (32/77=41.6%); %= n/N*100

4 P value corresponding to chi square analyses

Table 3.10b: Bivariate Associations of Independent variables with child food group intake[1]

	Bread			Dairy			Fish			Egg			Fruit			Fruit Juice			Legumes		
> median of food serving consumed / day[2]	n[3]	%	P	n	%	P	n	%	P	n	%	P	n	%	P	n	%	P	n	%	P
Because of Welfare Reform:																					
Uncertain how to get food for family			.274			.893			.011			.145			.506			.364			.286
Yes (N=19)	5	26.3		8	42.1		10	52.6		17	89.5		10	55.6		4	21.1		8	42.1	
No (N=166)	65	39.2		73	43.7		102	61.4		113	67.7		79	47.3		52	31.1		96	57.5	
Food available has decreased			.148			.597			.018			.773			.512			.483			.316
Yes (N=21)	5	23.8		8	38.1		11	52.4		16	76.2		11	55.0		5	23.8		15	71.4	
No (N=162)	65	40.1		72	44.2		100	61.7		113	69.3		77	47.2		51	31.3		88	54.0	
Privacy has been invaded			.190			.111			.596			.209			.208			.928			.446
Yes (N=7)	1	14.3		1	14.3		3	42.9		7	100.0		5	71.4		2	28.6		5	71.4	
No (N=178)	69	38.8		80	44.7		109	61.2		123	68.7		84	47.2		54	30.2		99	55.3	
Feel less optimistic about life			.232			.816			.000			.897			.439			.994			.798
Yes (N=10)	2	20.0		4	40.0		4	40.0		7	70.0		6	60.0		3	30.0		5	50.0	
No (N=175)	68	38.9		77	43.8		108	61.7		123	69.9		83	47.4		53	30.1		99	56.3	

[1]Includes only independent variables that were significantly associated with at least 1 dietary intake variable

[2]Median frequency of intake: Bread (1 time/day); Dairy (3 times/day); Fish (0.03 times/day); Egg (0.29 times/day); Fruit (0.93 times/day); Fruit Juice (3 times/day); Legumes (0.57 times/day)

[3]N = total amount of respondents in that particular category; n = subgroup sample size, e.g., those who above the median for bread among the total group who answered that they were uncertain about how to get food for their family (5/19=26.3%); %= n/N*100

Table 3.11a: Bivariate Associations of Independent variables with child food group intake°

	Green Leafy Vegetables[1]			Meat			Salad			Soda and Artificial Drinks			Snack			Starchy Vegetable			Sweets		
> median of food serving consumed /day [2]	n[3]	%	P	n[3]	%	P	n	%	P	n	%	P	n	%	P	n	%	P	n	%	P
How long food stamps last			.272			.055			.541			.010			.752			.049			.119
4 wks (N=77)	40	26.5		8	10.4		31	50.6		15	19.5		51	66.2		36	46.8		33	42.9	
< 4 wks (N=75)	45	60.8		2	2.7		40	53.3		11	14.7		52	69.3		21	28.0		37	49.3	
Because of welfare reform:																					
Continues to receive food stamps			.217			.261			.033			.472			.650			.097			.074
Yes (N=173)	96	55.5		13	7.5		91	52.6		31	17.9		107	61.8		63	36.4		72	41.6	
No (N=12)	4	36.4		2	16.7		3	25.0		1	8.3		9	75.0		4	33.3		9	75.0	
Reduced TANF			.114			.677			.049			.932			.540			.147			.021
No (N=157)	88	56.4		11	7.0		85	54.1		26	17.2		95	60.5		60	38.2		62	39.5	
Yes (N=26)	8	38.1		2	9.5		7	33.3		4	19.0		15	71.4		5	23.8		15	71.4	
Forced to seek work without daycare			.594			.049			.899			.047			.062			.008			.950
No (N=148)	78	53.1		14	9.5		75	50.7		23	15.5		87	58.8		59	39.9		63	42.6	
Yes (N=38)	22	57.9		0	0.0		19	50.0		9	23.7		30	78.9		7	18.4		17	44.7	
Can no longer afford adequate housing			.009			.214			.022			.667			.841			.041			.353
Affords (N=166)	94	56.6		14	8.4		90	53.9		29	17.4		104	62.3		64	38.3		69	41.3	
Can't Afford (N=17)	4	23.5		0	0.0		4	23.5		3	17.6		11	64.7		2	11.8		9	52.9	

°Includes only independent variables that were significantly associated with at least 1 dietary intake variable

[1]Median frequency for green leafy vegetables was not used due to 89 participants with no greens intake. Statistics represent those who did eat greens.

[2]Median frequency of intake: Meat (1 time/day); Salad (0.29 times/day); Snack (0.29 times/day); Starchy Vegetable (0.07 times/day); Sweets (0.43 times/day)

[3] N = total amount of respondents in that particular category; n = subgroup sample size, e.g., those who were above the median for meat among the total group who answered that their food stamps last 4 weeks (8/77=10.4%); %= n/N*100

4 Pvalue corresponding to chi square analyses

Table 3.11b: Bivariate Associations of Independent variables with child food group intake°

	Green Leafy Vegetables[1]			Meat			Salad			Soda and Artificial Drinks			Snack			Starchy Vegetable			Sweets		
> median of food serving consumed /day [2]	n[3]	%	P	n[3]	%	P	n	%	P	n	%	P	n	%	P	n	%	P	n	%	P
Because of welfare reform:																					
Uncertain how to get food for family			.112			.189			.178			.703			.756			.022			.667
Yes (N=19)	7	36.8		0	0.0		6	31.6		2	10.5		13	68.4		3	15.8		10	52.6	
No (N=167)	93	56.0		14	8.4		88	52.7		30	18.0		104	62.3		63	37.7		70	41.9	
Food available has decreased			.527			.162			.700			.538			.588			.071			.521
Yes (N=21)	10	47.6		0	0.0		9	42.9		3	14.3		15	71.4		3	14.3		9	42.9	
No (N=163)	89	54.9		14	8.6		85	52.1		29	17.8		100	61.3		63	38.7		70	42.9	
Privacy has been invaded			.168			.442			.114			.829			.326			.034			.579
Yes (N=7)	2	28.6		0	0.0		1	14.3		1	14.3		5	85.7		1	14.3		3	42.9	
No (N=179)	98	55.1		14	7.8		93	52.0		31	17.3		111	62.0		65	36.3		77	43.0	
Feel less optimistic about life			.026			.354			.030			.292			.685			.444			.711
Yes (N=10)	2	20.0		0	0.0		1	10.0		2	20.0		4	50.0		2	20.0		4	40.0	
No (N=176)	98	56.0		14	8.0		93	52.8		30	17.0		112	63.6		64	36.4		76	43.2	

°Includes only independent variables that were significantly associated with at least 1 dietary intake variable

[1]Median frequency for green leafy vegetables was not used due to 89 participants with no greens intake. Statistics represent those who did eat greens.

[2]Median frequency of intake: Meat (1 time/day); Salad (0.29 times/day); Snack (0.29 times/day); Starchy Vegetable (0.07 times/day); Sweets (0.43 times/day)

[3] N = total amount of respondents in that particular category; n = subgroup sample size, e.g., those who above the median for meat among the total group who answered that they were uncertain how to get food for their family (7/19=36.8%); %= n/N*100

Table 3.12a: Bivariate Associations of Independent variables with child food group intake[1]

	Bread			Dairy			Fish			Egg			Fruit			Fruit Juice			Legumes		
> median of food serving consumed / day[2]	n[3]	%	P	n	%	P	n	%	P	n	%	P	n	%	P	n	%	P	n	%	P
Because of Welfare Reform:																					
Continues to receive AFDC/TANF			.212			.787			.042			.769			.694			.438			.719
Yes (N=156)	62	39.7		68	43.3		96	61.1		108	68.8		75	14.8		48	30.6		86	54.8	
No (N=26)	7	26.9		12	46.2		15	60.0		19	73.1		13	52.0		6	23.1		16	61.5	
Feel more rejected by society			.404			.871			1.00			.331			.713			.617			.798
Yes (N=5)	1	20.0		2	40.0		4	80.0		5	100.0		2	40.0		1	20.0		3	60.0	
No (N=180)	69	38.3		79	43.6		108	60.0		125	69.1		87	48.3		55	30.4		101	58.8	
Reduced Food Stamps			.452			.300			.415			.488			.262			.647			.266
Yes (N=19)	6	31.6		6	31.6		10	52.6		15	78.9		11	61.1		5	26.3		14	73.7	
No (N=158)	64	40.5		70	44.0		99	68.6		109	68.6		75	47.2		50	31.4		86	54.1	

[1]Includes only independent variables that were **not** significantly associated with any dietary intake variables

[2]Median frequency of intake: Bread (1 time/day); Dairy (3 times/day); Fish (0.03 times/day); Egg (0.29 times/day); Fruit (0.93 times/day); Fruit Juice (3 times/day); Legumes (0.57 times/day)

[3]N = total amount of respondents in that particular category; n = subgroup sample size, e.g., those who above the median for bread among the total group who answered that they continue to receive AFDC/TANF (62/156=39.7%); %= n/N*100

4 P value corresponding to chi square analyses

Table 3.12b: Bivariate Associations of Independent variables with food group intake°

	Green Leafy Vegetables[1]			Meat			Salad			Soda and Artificial Drinks			Snack			Starchy Vegetable			Sweets		
> median of food serving consumed /day [2]	n[3]	%	P	n[3]	%	P	n	%	P	n	%	P	n	%	P	n	%	P	n	%	P
Because of welfare reform:																					
Continues to receive AFDC/TANF			.952			.919			.073			.720			.209			.328			.055
Yes (N=157)	85	54.5		13	8.3		85	54.1		29	18.5		93	59.2		60	38.2		63	40.1	
No (N=26)	14	53.8		2	7.7		8	30.8		4	15.4		20	76.9		6	23.1		17	65.4	
Feel more rejected by society			.523			.518			.779			.367			.254			.132			.847
Yes (N=5)	2	40.0		0	0.0		2	40.0		0	0.0		2	40.0		0	0.0		2	40.0	
No (N=181)	98	54.4		14	7.7		92	50.8		32	17.7		115	63.5		66	36.5		78	43.1	
Reduced food stamps			.570			.568			.645			.979			.730			.889			.084
Yes (N=19)	11	61.1		2	10.5		8	42.1		3	15.8		13	68.4		6	31.6		12	63.2	
No (N=159)	86	54.1		11	6.9		85	53.5		28	17.6		98	61.6		59	37.1		63	40..3	

°Includes only independent variables that were **not** significantly associated with any dietary intake variables

[1]Median frequency for green leafy vegetables was not used due to 89 participants with no greens intake. Statistics represent those who did eat greens.

[2]Median frequency of intake: Meat (1 time/day); Salad (0.29 times/day); Snack (0.29 times/day); Starchy Vegetable (0.07 times/day); Sweets (0.43 times/day)

[3] N = total amount of respondents in that particular category; n = subgroup sample size, e.g., those who above the median for meat among the total group who answered that they continue to receive AFDC/TANF (85/157=54.5%); %= n/N*100

4 p value corresponding to chi square analyses

Emergency Food Assistance

When respondents were asked if their families participated in any food assistance programs, 21 responded that they used the Salvation Army, 14 used food pantries, 5 used soup kitchens, and 7 used "other" (6 received assistance from churches, and 1 from the Comadrona program at the Hispanic Health Council). Three types of analyses were conducted to examine the effect of welfare reform on emergency food assistance participation.

First, analyses were done for each separate category (Salvation Army, food pantries, soup kitchens, and "other"). These analyses demonstrated a significant association between the respondents' uncertainty as to how to get food and the use of food pantries (p=.020) (Table 3.13) as well as a significant association with uncertainty and the use of soup kitchens (p=.027). In these preliminary analyses, soup kitchens were also significantly associated with whether the respondent was forced to seek work without daycare (p=.028) (Table 3.14).

Second, analyses were conducted only among those who used food pantries and soup kitchens; these two types of emergency food assistance were combined into one category. Salvation Army was excluded from this analysis. Because Salvation Army provides both food pantries and soup kitchens, there was concern whether respondents who answered affirmatively to both Salvation Army and food pantries and/or soup kitchens, may have used Salvation army in conjunction with other services, or whether the food pantry or soup kitchen they went to was run by the Salvation Army. Thus, because of this confusion, and the risk of inflated numbers for any of these categories of food assistance, the Salvation Army was excluded. The two independent variables that

were significantly associated with this category of emergency food assistance, food pantries and soup kitchens, were how long food stamps last (p=.032) and whether the respondents' privacy had been invaded because of welfare reform (p=.003) (Table 3.15). The variable, uncertainty about how to get food, was not statistically significant (p=.081); it does, however, indicate that there is a trend of emergency food assistance participation among those who were uncertain about how or where to get food for their families (Table 3.16).

For the last analyses, any participation was considered; the four different types of emergency food assistance were combined into one category. This analysis showed that the only independent variable significantly associated with emergency food assistance was "privacy was invaded because of welfare reform" (p=.026) (Table 3.17). The variables that were not significantly associated with this category, use of any of the emergency food assistance facilities, are shown in Table 3.18

Table 3.13: Bivariate associations of independent variables and food pantries[1]

	Use of Food Pantries		
	n[2]	%	P
Because of welfare reform:			
Uncertain how to get food			.020
Yes (N=19)	4	21.1	
No (N=165)	10	6.1	

[1] Includes only independent variable that was significantly associated with food pantry use

[2] N = total amount of respondents in that particular category; n = subgroup sample size, e.g., those who used food pantries among the total group who answered that they are uncertain about how to get food (4/19=21.1%); %= n/N*100

Table 3.14: Bivariate associations of independent variables and soup kitchens[1]

	Use of Soup Kitchens		
	n[2]	%	P
Because of welfare reform:			
Uncertain how to get food			.027
Yes (N=19)	2	10.5	
No (N=165)	3	1.8	
Forced to seek work without daycare			.028
Yes (N=38)	3	7.9	
No (N=146)	2	1.4	

[1] Includes only independent variables that were significantly associated with soup kitchen use

[2] N = total amount of respondents in that particular category; n = subgroup sample size, e.g., those who used food pantries among the total group who answered that they are uncertain about how to get food (2/19=10.5%); %= n/N*100

Table 3.15: Bivariate associations of independent variables and emergency food assistance (Food pantries and Soup kitchens)[1]

	Use of emergency food assistance (food pantries and soup kitchens)		
	n[2]	%	P
Privacy invaded because of welfare reform			.003
Yes (N=7)	3	42.9	
No (N=177)	15	8.5	
How long food stamps last			.032
4 weeks (N=76)	4	5.3	
< 4 weeks (N=75)	12	16.0	

[1] Includes only independent variables that were significantly associated with emergency food assistance (food pantries and soup kitchens)

[2] N = total amount of respondents in that particular category; n = subgroup sample size, e.g., those who used food pantries and soup kitchens among the total group who answered that their privacy has been invaded how to get food (3/7=42.9%); %= n/N*100

Table 3.16: Bivariate associations of independent variables and emergency food assistance (Food pantries and Soup kitchens)[1]

	Use of emergency food assistance (food pantries and soup kitchens)		
	n[2]	%	P
Because of welfare reform:			
No longer receive TANF/AFDC (cash benefits)			.726
Yes (N=25)	2	8.0	
No (N=156)	16	10.3	
No longer receive food stamps			.259
Yes (N=11)	0	0.0	
No (N=172)	18	10.5	
Reduced AFDC/TANF			.972
Yes (N=20)	2	10.0	
No (N=156)	16	10.3	
Reduced Food Stamps			.490
Yes (N=18)	1	5.6	
No (N=158)	17	10.8	
Food available has decreased			.952
Yes (N=21)	2	9.5	
No (N=161)	16	9.9	
Forced to seek work without daycare			.432
Yes (N=38)	4	14.2	
No (N=146)	13	8.9	
Can no longer afford adequate housing			.216
Can't afford (N=17)	3	17.6	
Affords (N=165)	14	8.5	
Feels more rejected by society			.436
Yes (N=5)	1	20.0	
No (N=179)	17	9.5	
Uncertain how to get food			.081
Yes (N=19)	4	21.1	
No (N=165)	14	8.5	
Less optimistic about life			.284
Yes (N=10)	0	0.0	
No (N=174)	18	10.3	

[1] Includes only independent variables that were not significantly associated with emergency food assistance (food pantries and soup kitchens)

[2] N = total amount of respondents in that particular category; n = subgroup sample size, e.g., those who used food pantries and soup kitchens among the total group who answered that they no longer receive TANF/AFDC (2/25=8.0%); %= n/N*100

Table 3.17: Bivariate associations of independent variables and any emergency food assistance (Salvation Army, food pantries, soup kitchens, or "other")[1]

	Use of all emergency food assistance		
	n	%	P
Privacy invaded because of welfare reform			.026
Yes (N=7)	3	42.9	
No (N=177)	23	13.0	

[1] Includes only independent variable that was significantly associated with all emergency food assistance

[2] N = total amount of respondents in that particular category; n = subgroup sample size, e.g., those who used food pantries and soup kitchens among the total group who answered that their privacy has been invaded how to get food (3/7=42.9%); %= n/N*100

Table 3.18: Bivariate associations of independent variables and any emergency food assistance (Salvation Army, food pantries, soup kitchens, or "other")[1]

	Use of Emergency Food Assistance		
	n[2]	%	P
How long food stamps last			.170
4 weeks (N=76)	9	11.8	
< 4 weeks (N=75)	15	20.0	
Because of welfare reform:			
No longer receive TANF/AFDC (cash benfits)			.717
Yes (N=25)	3	12.0	
No (N=156)	23	14.7	
No longer receiving food stamps			.164
Yes (N=11)	0	0.0	
No (N=172)	26	15.1	
Reduced AFDC/TANF			.523
Yes (N=20)	2	10.0	
No (N=156)	24	15.4	
Reduced Food Stamps			.644
Yes (N=18)	2	11.1	
No (N=158)	24	15.2	
Food available has decreased			1.00
Yes (N=21)	3	14.3	
No (N=161)	23	14.3	
Forced to seek work without daycare			.742
Yes (N=38)	6	15.8	
No (N=146)	20	13.7	
Can no longer afford adequate housing			.218
Can't afford (N=17)	4	23.5	
Affords (N=165)	21	12.7	
Feels more rejected by society			.702
Yes (N=5)	1	20.0	
No (N=179)	25	14.0	
Uncertain how to get food			.107
Yes (N=19)	5	26.3	
No (N=165)	21	12.7	
Less optimistic about life			.187
Yes (N=10)	0	0.0	
No (N=174)	26	14.9	

[1] Includes only independent variables that were not significantly associated with all emergency food assistance.

[2] N = total amount of respondents in that particular category; n = subgroup sample size, e.g., those who used food pantries and soup kitchens among the total group who answered that they no longer receive TANF/AFDC (3/25=12.0%); %= n/N*100.

Child Health

Respondents were asked how they perceived the child's overall health, and the responses were as follows: 63 responded "excellent" (31.3%), 117 responded "good" (58.2%), 19 responded "fair" (9.5%), and 2 responded "poor" (1.0%). For statistical analyses, "poor" and "fair" were combined because of the small number of respondents who answered that the child's overall health was "poor". None of the independent variables were significantly associated with overall health (Table 3.19).

Table 3.19: Bivariate associations of independent variables and overall child's health[1]

	Child's Health Poor/Fair		
	n[2]	%	P
How long food stamps last			.636
4 weeks (N=76)	9	11.7	
< 4 weeks (N=75)	7	9.3	
Because of welfare reform:			
No longer receive TANF/AFDC (cash benfits)			.914
Yes (N=25)	3	11.5	
No (N=156)	17	10.8	
No longer receiving food stamps			.164
Yes (N=11)	2	16.7	
No (N=172)	18	10.4	
Reduced AFDC/TANF			.568
Yes (N=20)	3	14.3	
No (N=156)	16	10.2	
Reduced Food Stamps			.982
Yes (N=18)	2	10.5	
No (N=159)	17	10.7	
Food available has decreased			.339
Yes (N=21)	1	4.8	
No (N=163)	19	11.7	
Privacy invaded			.349
Yes (N=7)	0	0.0	
No (N=179)	20	11.2	
Forced to seek work without daycare			.524
Yes (N=38)	3	7.9	
No (N=148)	17	11.5	
Can no longer afford adequate housing			.527
Can't afford (N=17)	1	5.9	
Affords (N=165)	18	10.8	
Feels more rejected by society			.431
Yes (N=5)	0	0.0	
No (N=181)	20	11.0	
Uncertain how to get food			.110
Yes (N=19)	0	0.0	
No (N=167)	20	12.0	
Less optimistic about life			.259
Yes (N=10)	0	0.0	
No (N=176)	20	11.4	
How long food stamps last			.636
4 weeks (N=77)	9	11.7	
< 4 weeks (N=75)	7	9.3	

[1] Includes only independent variables that were not significantly associated with child's overall health

[2] N = total amount of respondents in that particular category; n = subgroup sample size, e.g., those who responded that the child's overall health was poor/fair among the total group who answered that they no longer receive TANF/AFDC (3/26=11.5%); %= n/N*100

Indicators for Sentinel Site Monitoring System

The results demonstrate that a number of independent variables were significantly associated with food insecurity, dietary intake, and/or emergency food assistance (Table 3.20). Interestingly, all of the different constructs affected by welfare reform, including work and daycare issues, housing, food stamps, and cash benefits, were shown to ultimately have a negative association with children's health and nutrition. The independent variables that were significantly associated with more than one of the dependent variables were chosen as indicators for the monitoring instrument. Thus, the following questions should be included in the sentinel site monitoring instrument:

1. Are you forced to seek work without appropriate daycare arrangements for your children because of welfare reform?
2. Can you no longer afford adequate housing because of welfare reform?
3. Has the food available to you decreased because of welfare reform?
4. Are you uncertain about how to get food for your family because of welfare reform?
5. Have your cash benefits been reduced because of welfare reform?
6. If you receive food stamps, how long do the food stamps last every month?

Table 3.20: Independent variables significantly associated with dependent variables, food insecurity, dietary intake, emergency food assistance, and child health[1]

	Food Insecurity	Child Dietary Intake	Emergency Food Assistance	Child Health
How long food stamps last	✓	✓	✓	
Because of welfare reform:				
Reduced TANF/AFDC	✓	✓		
Reduced food stamps	✓			
No longer receives food stamps		✓		
Housing problems	✓	✓		
Job without daycare	✓	✓	✓	
Food available has decreased	✓	✓		
Uncertain how to get food	✓	✓		
Privacy invaded		✓	✓	
Less optimistic about life		✓		

[1] Significant associations are marked by a ✓.

Figure 3.1: Monitoring Instrument

Welfare Reform Monitoring Instrument

1. Gender: (please circle) Male Female

2. Age:_____

3. Ethnicity: Caucasian African American Black Caribbean

   Hispanic (specify_____) Other (specify_____)

4. Race:_____

5. Number of children:_____

6. Education: (please circle)
   - No formal schooling
   - Eighth grade or less
   - Some high school
   - High school graduate or GED equivalency
   - Trade or technical training (specify highest grade reached):_____
   - Some college
   - College graduate
   - Post-graduate
   - Refused

7. Household income:_____

8. Are you forced to seek work without appropriate daycare arrangements for your children because of welfare reform? Yes No

9. Can you no longer afford adequate housing because of welfare reform? Yes No

10. Has the food available to you decreased because of welfare reform? Yes No

11. Are you uncertain about how to get food for your family because of welfare reform?
    Yes No

12. Have your cash benefits (TANF benefits) been reduced because of welfare reform?
    Yes No

13. If you receive food stamps, how long do the food stamps last?
    4 weeks less than 4 weeks

Discussion

The results presented here support concerns that welfare reform may potentially have negative effects on recipients and their children; they indicate that welfare reform has already begun to show initial negative associations with children's nutritional status.

Food insecurity

An important finding was that only a minority of respondents were food secure, leaving the majority to experience some form of food insecurity. Moreover, food insecurity was significantly associated with the different constructs affected by welfare reform: work, housing, food stamps, and reduced cash benefits. This is a seminal finding because, to the best of our knowledge, this is one of the first studies to ask individuals directly about the consequences of welfare reform. This is consequential because it suggest that food insecurity may be linked to factors that are directly influenced by welfare reform. These findings are also significant, because they demonstrate that all the different aspects of welfare reform have a significant impact on food insecurity. The findings support previous studies discussed in the literature review which show that former TANF recipients are experiencing difficulties providing food for their families (Sherman et al., 1998).

Food security is supposed to capture those households that did not experience the psychological aspect of not having enough food in the home, or worrying about how one will get food. So it is interesting that the independent variables measuring the respondents' feelings with regards to welfare reform ("I feel more rejected by society" and "I feel less optimistic about life") were not significantly associated with food security. One psychological factor that was significantly associated with both food

security and adult insecurity was uncertainty about how to get food for the family as a result of welfare reform. While this variable, uncertainty about how to get food, was not statistically associated with household insecurity, there appears to be a trend suggesting that those who felt uncertain about how to get food would be more likely to experience household food insecurity. This finding parallels what was found in another study that showed that households classified as household insecure were the households that "were uncertain about their ability to obtain sufficient food" (Olson, 1999). It is interesting to note that while only one of the independent variables representing the psychological aspect of food insecurity proved to be statistically significant, it was established that several of the more concrete variables, such as reduced food stamps, how long food stamps last, or decreased food availability, were significantly associated with food insecurity. The fact that these variables were significant predictors of food insecurity is important and instrumental for the development of the monitoring tool, as it is for policymaking.

Another interesting finding was that reduced TANF/AFDC (cash benefits) was significantly associated with the adult insecure level. This may mean that respondents who were experiencing reduced cash benefits were depriving themselves of food in order to feed their children. Even if children do not experience food insecurity themselves it is likely that they could be negatively affected if they are surrounded by food insecure adult(s).

Dietary Intake

As with the food security outcomes, dietary intake was also significantly associated with the different constructs of welfare reform. A meaningful finding was that

welfare reform is having an effect on children's intake of starchy vegetables. This is of particular interest because the diet of the sample population, Latino (mostly Puerto Rican) caretakers and their children, consists largely of rice, legumes, and starchy vegetables. Starchy vegetables are a positive component to their diet, and the results show that the different constructs affected by welfare reform were all negatively associated with the children's intake of these particular vegetables, which are an important part of their culture and heritage.

On the other hand, it is a relief to note that several important components to children's diets were not significantly affected by welfare reform; these include dairy, fruit, and legumes. It is possible that dairy products were not affected by welfare reform because of the emphasis that doctors and caregivers put on making sure that young children drink milk for proper health and development. The fact that fruit was not significantly affected by welfare reform may be due to a recent mass-media campaign targeting low income Latinos in the Hartford, CT area. The campaign, called 'Salud', used Latino celebrities to encourage Latinos to increase their daily servings of fruit and vegetables. As far as legumes go, it is a positive outcome that they were not significantly associated to welfare reform since legumes are also a positive constituent of these children's diets. It is important that these children are at least getting legumes as part of their diet, since the consumption of starchy vegetables appeared to be significantly affected by welfare reform.

Emergency Food Assistance

Emergency food assistance was significantly associated with welfare reform. Preliminary studies and news reports have indicated that the use of emergency food

assistance has increased over the past couple years; the results from this study indicate that between 10% and 15% of the sample participated in emergency food assistance. While the actual numbers may appear low, this proportion of people seeking emergency food assistance reflects an underlying problem with regards to food access; this is cause for public health concern.

It appears that the majority of people who participated in emergency food assistance were more likely to respond that they were not negatively affected by welfare reform. (In the section for welfare reform in the ANNA survey participants were given the option to answer that "welfare reform has not affected my life in any way". Bivariate analysis was conducted for this variable and the dependent variable, emergency food assistance.) Maybe these respondents knew where to go for food assistance, and thus did not feel as victimized by welfare reform as those who claimed that they *were* negatively affected by welfare reform. It is possible that those who responded that they were negatively affected by welfare reform have no outside help and they not be aware of the resources available to them in the time of need, such emergency food assistance. This finding shows the importance of asking specific questions; if participants were only asked general questions, a significant effect would not have been found.

Child's Health

Child's overall health was not significantly associated with welfare reform. There are several possible explanations for why this association was not detected. First of all, child's overall health was measured as perceived by the caretaker. It is important to take into account that it was a subjective measure, and not a clinical health assessment. Caretakers may have responded that the child's overall health was "good" or "excellent"

because the child seems active and healthy to them. However, many different variables (e.g. behavioral problems or difficulties learning) make up a "healthy" child, and the caretakers may not have taken those into account. In addition, it is possible that the child's health was reported as "good" or "excellent" because the parent or caretaker feared being thought of as bad or neglectful. Previous studies have demonstrated a link between both food insecurity and dietary intake and poor physical and psychological health outcomes (Olson, 1999; Hamelin, Habicht, and Beaudry, 1999). So while the child's overall health was not significantly associated with welfare reform, it is still possible that this social policy could be taking a toll on children's health: an effect that may become more evident as time moves on.

CHAPTER IV: FEASIBILITY OF A MONITORING SYSTEM

Developing a structure for the monitoring system is critical in order to create a successful system that will provide a good assessment of the outcomes in a timely fashion. As discussed in the literature review in Chapter I, the key aspects of building a sentinel site surveillance system are selecting the sites and the indicators of interest. The process of selection of indicators has already been presented in the previous chapter; this chapter focuses on assessing the feasibility of developing and implementing the required sentinel site monitoring system.

Specific Objective

The specific objective was to conduct interviews with key informants to assess the feasibility of developing and implementing a sentinel site monitoring system in Hartford to track the influence of welfare reform on children's well being across time.

Methodology

High level professionals working in the community in the fields of nutrition, food insecurity, children's health, poverty, and research/data collection were identified and contacted for interviews. These individuals were interviewed to gauge whether this project was important and worthwhile for their agencies, as well as to assess Hartford's capacity for implementing such a monitoring system, and to identify sentinel sites which would provide access to at-risk populations. These interviews helped to determine what organizations would be able to share their resources, in terms of data collection capacity and velocity of response.

Key Informant Interviews

The informants were from the Hartford Food System, Connecticut Children's Medical Center (CCMC), Expanded Food and Nutrition Education Program (EFNEP), the Connecticut WIC office, and Connecticut Association for Human Services (CAHS). The following table (Table 4.1) lists the questions asked in the interviews.

Table 4.1: Questions from Informant Interviews

1. Does your agency have the capacity to collect data?
2. Who (participants and organizations) can you see participating in the monitoring system?
3. Do you have the capacity to centralize and analyze data?
4. Do you have the capacity to use the data and translate it into policy? If so, how? If not, can you recommend who might be able to do this?
5. Do you think this type of research is important?
6. Would you be *potentially* interested in participating? If so, would it be useful to have a simple, short form to use?
7. If the monitoring instrument was approved locally or nationally, do you think your agency/program would: a) have access to subjects and b) be interested?

Results

No names will be used in the following discussion, as the informants were told that the interview was confidential.

Connecticut Children's Medical Center

An informant from the Connecticut Children's Medical Center (CCMC) indicated that CCMC has the capacity to centralize and analyze the data gathered with the monitoring instrument. She asked whether clinical data would be useful because, while it is not easily retrievable, there is an abundance of clinical data available there. She thought it might be interesting to note whether the children came in with a nutrition-related diagnosis, and thought it could be possible to build that into the system. When asked if CCMC had any programs dealing with welfare reform, she said no. However,

she thought that we could track Infoline calls and look at different points in time, both before and after welfare reform, to see if those calls could detect a difference or change in trends, since the Infoline calls are a good indicator of demand and need for services. Other suggestions she had were to track grocery store data for those on welfare or food stamps, and to go to the school for numbers on those eligible for the school lunch and breakfast programs. She also said the schools have a plethora of information on children's health and nutrition which often is not tapped into. The School Health Form is filled out on every child every year, and it contains a considerable amount of health information.

With regards to who might have the capacity to use the data collected from the monitoring tool and translate it into concrete policy changes, she thought any child lobbyist or advocacy group would be appropriate, particularly Connecticut Voices for Children.

Overall, this informant thought the research was worthwhile. She in fact had just added questions on hunger to surveys conducted in prenatal clinics, and believes it is important to study the effects that welfare reform may have on children. Although it is difficult to commit to participating in the data collection, she said that if the tool were validated and not burdensome, she would potentially be interested. CCMC has access to 30,000-40,000 children a year. However, the staff is not increasing as the patient load does, so if implemented, it would have to be done with sensitivity to the staff who already have a heavy work load.

WIC Program

The second interview was done with a representative from the WIC program (Special Supplemental Nutrition Program for Women, Infants, and Children). WIC has the capacity to collect data, as they already collect statewide data (demographics, height, weight, bloodwork). Their data goes to the Office of Policy and Management in the Department of Public Health who feeds it to the national WIC office every couple years. When asked if WIC would have the capacity to centralize or analyze the data, she said no, and recommended CCMC, Aetna Foundation, and the University of Connecticut Department of Nutritional Sciences.

When asked if she or people she worked with had noticed any trends since welfare reform was implemented, she replied that she has noticed a steady decline in client caseloads since 1995, but believes that it is coincidental. Recently WIC has had a new management information system implemented, and she believes that this must be a factor explaining the apparent decline in clients.

With regards to policy changes, she thought the WIC Program would be a good place to start. Others interested in affecting change have used the WIC program in the past to identify the issues for local agencies. This interviewee thought this research is "most definitely" worthwhile and important, and she is anticipating the results. She said she would potentially be interested in participating once the tool is developed, because she believes we are "doing good work". However, WIC has been bombarded with unfunded mandates, and they have to be selective about which they will put into place. She said they have to be selective, and that the process to implement this tool as a

procedure is lengthy. Meanwhile, she said that WIC does have access to subjects, and the interest is certainly there.

Expanded Food and Nutrition Education Program

The third interview was conducted with a woman from the Expanded Food and Nutrition Education Program (EFNEP). The EFNEP program mainly provides nutrition education to families with children, and works mostly with preschool-aged children and infants. However, EFNEP also works with teenagers. They currently collect statewide pre and post program participation data which gets sent to the national office. While they have the capacity to collect the data, they do not have the capacity to analyze or centralize it. The staff is small; each office enters its data into a centralized system, and a computer program analyzes that data.

When discussing translating the data into policy, this interviewee recommended agencies who have programs that clearly relate to the issue: for example, the Department of Social Services or the Department of Education, which administers the Child Nutrition Programs. She said the data would be useful to EFNEP, for it will let them know who the high-risk groups are; the information can help EFNEP focus on targeting high-risk populations. Other people who can get involved are those who can help eliminate barriers to access of food. This may include the Department of Transportation (bus schedules), or city planning groups (those who plan the location of grocery stores and markets).

The interviewee thought this research was very important because we are talking about children's ability to learn and their quality of life. These are two reasons why she is so involved in EFNEP-- to try to improve those areas for children.

We talked about whether EFNEP would be interested in participating, and she said maybe. The program already does extensive of data collection. While EFNEP definitely has access to subjects, particularly pre-school aged children, she said that including the screening tool will increase the small staff's burden of reporting yet more information.

When we discussed the variables I would be looking at, she recommended including positive indicators as well. What are the assets or qualities that some families have that keep them healthy? What are their coping mechanisms? What are the characteristics of both the family and the community that help people in the time of need? Do they have social capital? Families or friends to go to, get food from, or stay with? She thought that maybe focus groups could contribute to this piece.

Connecticut Association for Human Services

The fourth interview was conducted with a representative from the Connecticut Association for Human Services (CAHS). This informant was skeptical about finding good indicators for the screening tool. She said that some people think that the problem is not welfare reform, but rather the issue of single parenting. She talked about the costs of being a single parent, and the jobs that these single parents have to work in order to pay the bills and provide food for their families. We went off on a tangent talking about the link between income, food, and poverty. She brainstormed on data sources, and brought in colleagues to help. The following are some ideas and places she thought would be worthwhile to explore. School data can provide the number of children eligible for free lunch, and the information on free and reduced meals. It would be interesting to see if the numbers have increased since the enactment of welfare reform. She thought the

school fitness test might provide insight to children's health. She recommended contacting hospitals for a snapshot of the rates of stunting, anemia, failure to thrive, lead poisoning, and the numbers of those without insurance. She thought it would be interesting to compare the numbers before and after the new welfare reform.

While CAHS does not have the capacity to centralize or analyze these data, the organization is an appropriate one to work on policy changes. CAHS is an administrative and legislative advocacy organization with three main units: public education, research and evaluation, and outreach. They do public speaking, policy statements, and press releases about different issues, and try to change policy.

Hartford Food System

The fifth interview was with a representative of the Hartford Food System. The Hartford Food System runs food programs and deals with food policy issues at the local, state, and national level. This organization lacks the capacity to centralize or organize data. While the individual interviewed had concerns with the project (i.e., it would be difficult to do random testing, and it could be difficult to implement because agencies already have so much paperwork to fill out), he thought if the monitoring tool was included as part of job descriptions and responsibilities of those who would be directly involved with the instrument, then it may be feasible to implement.

End Hunger Connecticut was recommended as the key group to help translate the findings into policy. He recommended getting caseload figures from all state agencies whose clients are participants of the main food assistance programs and who may be affected by welfare reform. These would include: the Department of Social Services (food stamp numbers), the Department of Public Health (WIC caseloads), the Department

of Education (School child nutrition programs and day care programs), and the Department of Agriculture (Farmer's Market Nutrition Program).

When asked if this research project was important, he in turn asked if any similar research is currently underway. I explained that I was unaware of anyone studying this issue specifically, but that there are studies about the effect of welfare reform on children's welfare, as well as studies looking at whether there is a connection between the declining food stamp and welfare caseloads. He suggested speaking with representatives from the Food Research Action Center (FRAC) and Project Bread in Massachusetts.

Once the interview was over, he recommended I speak to a graduate student who is currently mapping out available resources and correlating them with household food security. I learned from her that she is investigating the way people learn about assistance programs, the type of transportation they take to the grocery store, and other variables that may affect food security. With regards to welfare reform, she referred me to the Tufts Center of Hunger and Poverty, where research on different aspects of welfare reform is conducted. She recommended I inquire as to whether they have looked at child health and nutrition indicators.

After my conversation with this student, I called the Center of Hunger and Poverty at Tufts University. The woman I spoke to there told me that they had not looked at child health and nutrition indicators, but recommended websites and other organizations to me.

Hispanic Health Council

The last interview was conducted with an employee of the Hispanic Health Council (HHC) who is currently working in the maternal and child health and nutrition

unit at HHC. She informed me that the HHC has the capacity to collect, centralize, and analyze data. The HHC already has many research projects underway, both in the research unit and in the Family Nutrition Program.

When asked who would have the capacity to translate the data into policy, she had several recommendations. But "in terms of authentic commitment", she recommended End Hunger Connecticut, a statewide organization working in the area of hunger and food security, and people who serve on the board. Furthermore, End Hunger Connecticut contracts "good policy people". She also recommended speaking to people working in the emergency food assistance area, particularly to those connected with Second Harvest, a nationwide food bank organization that collects data and tracks patterns of use of emergency food assistance programs.

Conclusions

The interviews provided a better understanding of the organizations in Connecticut who have the capacity to collect data and have access to potential participants. However, from the interviews, it was evident that many organizations already have much data to collect, usually national or statewide data that is required by national organizations. A common concern to some of the interviewees was that, while the research is important, a monitoring instrument would add to the staff's burden of reporting data. As a whole, the interviewees seemed to think that this research project was worthwhile and interesting, and that the results could provide some valuable information. Not only could the results provide data for policy making, but they could

also provide information on ways the organizations could improve their programs or access other programs to meet the needs of their clients.

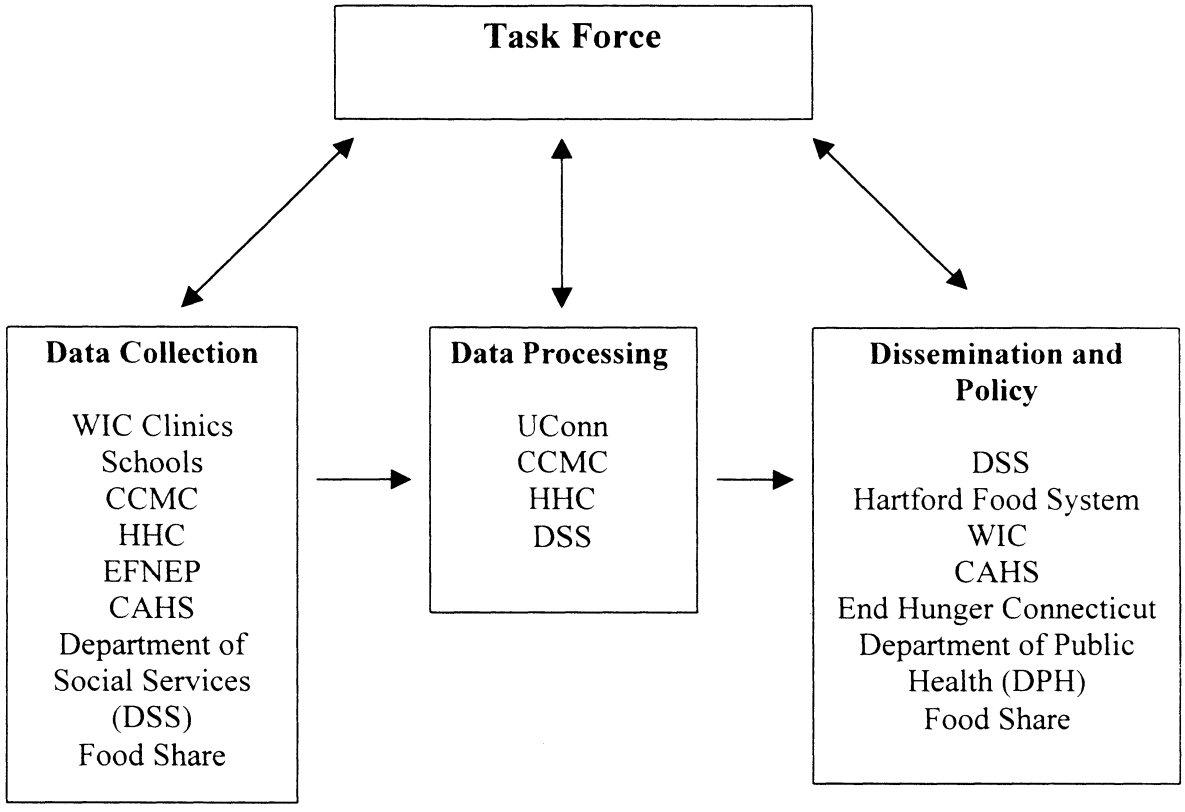
The data from the monitoring tool could potentially be analyzed at CCMC or the Hispanic Health Council. Potential sentinel sites could include WIC clinics, CCMC, the Hispanic Health Council, Department of Social Services (DSS), and schools; participants for the monitoring system could also be recruited through EFNEP or CAHS (through outreach workers).

As a next step, it is recommended to form a task force to oversee the design and implementation of the monitoring system. Three main operations should be in place in the system: data collection, data processing, and dissemination and policy. These three activities should work off each other and contribute to further development of the other activities. These individuals responsible for data collection should report to those in data processing, who in turn will report the findings, leading to dissemination and policy action. Those in policy should also report back to data collection units on what other variables might be studied to further understand the effects of welfare reform. Again, these three activities should all be coordinated under one roof (Fig. 4.1).

The interviews indicate that there is considerable interest in monitoring the effects of welfare reform on children, but that data collection would present a burden to staff members at the data collection sites. They also suggest that if there were a policy that mandated the collection of this data, agencies might not be reluctant to participate. If state agencies, such as the Departments of Public Health or Social Services, could get involved in encouraging agencies and organizations to participate in a pilot test, and if the

task of data collection or processing was included in the job descriptions of those working on the monitoring system, maybe the interviewed agencies would be more eager to participate.

Figure 4.1: Hypothetical Structure of a Monitoring System



CHAPTER V: RECOMMENDATIONS AND POLICY IMPLICATIONS

Recommendations

Findings of this study indicate that welfare reform is associated with: the inability to afford adequate housing, being forced to seek work without daycare, and not having enough food available for the household. Furthermore, welfare reform was associated with reduced food stamps. These variables are in turn associated with food insecurity and poorer diets of children. Different steps can be taken at the federal, state, and local level to ensure that TANF participants and former welfare recipients are protected from food insecurity, poverty, and other negative health effects once they leave the welfare rolls.

It is important to try to rectify the situation so that low-income families receive the assistance they need to transition off of welfare. Studies have demonstrated that children growing up in poverty are more likely to experience nutritional deficiencies which may ultimately lead to behavioral, learning, or cognitive problems (Murphy, Wehler, Pagano, et al., 1998; Willis, Kliegman, Meurer, and Perry, 1997).

> Poverty in infants and children is strongly associated with undernutrition and subsequently poor or fair health compared with a child of a more affluent family. There is strong evidence that children born into poverty are at greater risk of impaired growth and delayed cognitive development owing to food insecurity and/or other poor health risk factors (Willis, Kliegman, Meurer, and Perry, 1997).

Federal level recommendations

Federal funds should be invested into childcare. If states receive additional funding, they could improve the quality and affordability of childcare for low-income parents who need to work. This could have major implications for children's health. If parents forced to work had adequate day care arrangements for their children, then they

would not be as likely to experience food insecurity or poor dietary intake. It would also be beneficial if the minimum wage was raised so that people working jobs at minimum wage would be able to lift their families above the poverty line.

Another step the federal government could take would be to allow children to continue to receive TANF funds after their parents have used up the lifetime limit of cash assistance. That way families could receive additional funds to help with the cost of child raising. The federal government could also restrict budget cuts from services or benefits that assist low-income children and families.

More research should be conducted at the federal level to understand the effects of welfare reform on children's health. While there are many studies looking at the effects of welfare reform on children's welfare, it appears that few are investigating its specific effects on health and nutrition.

State level recommendations

States should make full use of all the money available for childcare so that parents can afford it, and feel comfortable leaving their child in a quality establishment. In addition to subsidizing childcare, they should provide subsidies so that low-income families can afford to live in adequate housing while they are moving from welfare to work. State money should also be invested in job training, education, and "expanded opportunities for work-study"; low-income TANF participants should receive assistance in looking for and finding a stable job (Sherman et al., 1998). More money should also be invested in the public school system; improving the quality of education low-income children receive could go a long way. In addition to teaching the routine curricula, schools should foster practical skills and knowledge, as well as encourage independent,

critical thinking. If students were to receive a better education, they could leave school with skills they could use in the workforce, and hopefully be empowered to use those skills to their advantage.

Other efforts states can make to help lift welfare recipients out of poverty are to do away with provisions that are more severe at the state than at the federal level (i.e., the TANF time limit in Connecticut is only 21 months, compared to the federal five-year time limit) (Sherman et al., 1998). States can also provide programs for those who have already reached the time limit, or for legal immigrants or able-bodied recipients, whose assistance has been terminated. For example, Connecticut already has a food assistance program in place for legal immigrants who had their food stamp assistance discontinued by the federal government.

States should also conduct research and keep track of families leaving the welfare rolls. Are they faring better? Are they having food insecurity problems, and are they making enough money to support their families without any assistance? These types of issues must be monitored to examine the effect of welfare reform on the recipients in that particular state, since states have flexibility and different provisions for some of the TANF regulations. It would also be interesting for food pantries, shelters, and other service organizations to track the number of former TANF recipients using their services (Sherman et al., 1998). That would help determine if those leaving the welfare rolls are seeking other forms of assistance because they are not earning enough money to make it on their own.

Community level recommendations

Outreach is probably the most important component for community-level activities. Barriers should be eliminated for those who are eligible for different types of assistance. For example, those eligible for food stamps should take advantage of the assistance available to them. Case workers, child advocates, and service providers should be familiar with the Connecticut TANF and food stamp eligibility guidelines and rules, and they should encourage all those eligible to apply and participate. Recent studies show that many former welfare recipients are leaving the food stamp caseloads at a higher rate than those who were not on welfare. Researchers are having trouble distinguishing why this phenomena is happening, but they attribute it to the fact that once off TANF, people have to actively seek food stamps. Many former TANF recipients are unaware that they are still eligible for food stamps. Some believe that their new earnings from work have disqualified them from receiving food stamps (Zedlewski and Brauner, 1999). All these issues must be confronted, and both current and former TANF recipients need to be informed of their food stamp eligibility. Outreach efforts should also be made to ensure that low income families take advantage of other services available to them, such as Medicaid, child support enforcement assistance, and Earned Income Tax Credits (Sherman et al., 1998).

Local businesses should also be encouraged to hire and train TANF recipients, and to provide childcare assistance at the workplace. States could provide incentives for local businesses that employ low-income people. Service organizations, churches, and other community groups should "make systematic efforts to identify families with severe barriers to employment, link them with needed help", and provide peer support for those

trying to make it from welfare to work (Sherman et al., 1998). They should also provide "other supports for mothers who are struggling against barriers such as family violence, disability illiteracy, etc." (Sherman et al., 1998). If these organizations cannot provide the services themselves, they should link their clients with other organizations that are able to provide the assistance necessary.

"Service providers, advocacy groups, congregations, and other community groups should collaborate on grassroots monitoring efforts to determine how low income children and families are faring, and to educate the public and officials about their findings" (Sherman et al., 1998). Research and tracking should also be conducted at the local level. The monitoring system proposed herein is a precise example of a potential monitoring effort at the local level to determine how the children's well being is being affected by welfare reform.

In conclusion, for the above recommendations to be favorably received and implemented, it is important to stress that advocacy for welfare reform recipients is critical. Research at the public and private level should be conducted to illustrate the adverse effects of welfare reform on children and their families. This information will provide data that may demonstrate that change is necessary and will establish legitimacy for advocacy groups and politicians to lobby for welfare recipients. Hopefully, with fervent advocacy, there will be the political will to carry out the recommendations discussed above.

Policy Implications

The monitoring instrument (Fig. 3.1) will help policymakers monitor and understand the effect of welfare reform on the quality of life of low-income families and children across time. Because the items on the instrument are predictors of child health and nutrition indicators, the instrument will also provide a good assessment of changes in children's health and nutritional status (namely food security and dietary intake, which have been proven to affect children physically and cognitively) as a result of welfare reform.

There is no monitoring system currently in place in Connecticut to track the effects that welfare reform is having on the nutrition and health of recipients. The sentinel site methodology proposed herein could provide policymakers with timely data on both short and long term outcomes of those leaving the welfare rolls. WIC clinics, schools, and service providers that work with low-income clients would be ideal places to first implement the system, since there is easy access to potential participants. From the data collected, advocates and policymakers will be able to determine whether they need to collaborate with state or federal officials to help in improving food access, housing assistance, or food stamp outreach accordingly. The data from the monitoring system will be help understand how welfare reform is affecting the quality of life of families and children. States can work with programs to strengthen community networks and facilitate them to increase their outreach efforts. State agencies must keep the community organizations informed and up-to-date on the local TANF and food stamp policies. They should also play a role in eliminating the barriers that families are facing when trying to receive the assistance to which they are entitled.

Research shows that the Personal Responsibility Act is expected to pull more children into poverty because of decreased cash benefits, time limits, and work requirements which compel recipients to work low-paying, entry-level positions (Willis, Kliegman, Meurer, and Perry, 1997; Sherman, 1999). As stated previously, poverty is clearly linked to food insecurity and poor health outcomes and cognitive development (Willis, Kliegman, Meurer, and Perry, 1997). The monitoring system and tool proposed in this thesis could provide policymakers with the information they need to take action and put new policies or provisions into place which will directly help families make the transition from poverty to independent living where they can provide for and support their families.

Future Research Recommendations

This thesis documents potential short-term consequences from welfare reform for children. The results presented here were based on a cross-sectional study. Further research should be done do assess the long-term effects of welfare reform. The ideal study would be longitudinal, and it would follow people who receive welfare through their transition off the welfare rolls and beyond. It should also include a control group formed by individuals remaining on welfare.

Future studies should also include different ethnic groups in order to ensure that the indicators are appropriate and valid across all ethnicities. More studies should be conducted to examine the effects of welfare reform on children's health, and to validate the indicators presented here and identify other indicators.

More qualitative research should also be conducted. The results from the interviews presented here indicate that the research is important, and that there is interest in the research by those working in the areas of poverty, children's health and/or well-being, and food security. A second wave of interviews with more agencies (i.e., the Department of Social Services, the Department of Public Health), and more professionals would be useful.

Besides conducting more research to validate the indicators and potentially identify additional indicators, pilot testing should occur with the monitoring instrument. Sentinel sites should be encouraged to start using the instrument to assess the true feasibility of implementing it into existing programs. Preliminary testing would also help in refining the instrument.

This thesis identified short-term influences of welfare reform on children; hopefully this is only the beginning to understanding the effects, both short-term and long-term, on children's overall health and nutrition. The instrument and monitoring system presented here could be written into policy and implemented to further understand the association between welfare reform and children's well being across time.

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Appendix

Acculturation and Nutrition Needs Assessment (ANNA)

A Collaborative Study of the Hispanic Health Council and the University of Connecticut

Hello, my name is *** and I am working with the Hispanic Health Council and Nutrition Department at the University of Connecticut.

Do you have children 1 to less than 5 years of age in your household?

-Interviewer: If answer is no, thank respondent and end the interview. If yes, continue. Only 1 child per household should be sampled. Child to be sampled should be the youngest born of those present (within the desired age range).

We are doing a study of nutritional problems in Hispanic families and are interested in what children 1 to less than 5 years of age are eating. We also want to determine whether Hispanic families are getting proper food assistance from programs like Food Stamps, WIC, and others, and if these programs are helping the community.

We are asking parents and caretakers to take part in the study. Are you the primary caretaker of this child? Would you like to participate?

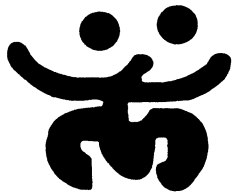
-Interviewer: If respondent does not want to participate in study or is not the primary caretaker, thank him/her and end the interview. If yes, continue.

Let me tell you about the study. The study consists of the following:

1) One and a half hour questionnaire of dietary information on the family and the child.
2) Measurement of you and your child's weight and height.
3) Giving you an educational package of nutritional information and $7.

-Interviewer READ ALOUD: If you are still interested in participating this study, we would like to ask you a few more questions to make sure you are eligible.

Acculturation and Nutrition Needs Assessment (ANNA)



A Collaborative Study of the Hispanic Health Council and the University of Connecticut

SELECTION CRITERIA

1. Are you Puerto Rican?
   If yes, continue.... *If no, stop. Thank the respondent.*

2. Do you have a child who is 1 to less than 5 years old?
   If yes, continue....(we take youngest child in that age group)
   If no, stop. Thank the respondent.

3. What is the child's birth date?
   Verify if child's between 1 to <5 years...

4. Are you the primary caretaker of the child?
   If yes, continue.... *If no, stop. Thank the respondent.*

5. Does the child live with you?
   If yes, continue.... *If no, stop. Thank the respondent.*

6. How old are you?
   If 17 years or older, continue... *If 16 years or younger, stop.*

7. Do you live in Hartford?
   If yes, continue.... *If no, stop. Thank the respondent.*

8. Are you currently receiving Food Stamps?

9. Are you currently receiving AFDC / TANF?
   If answered yes or no to either q. 6 or 7, continue....

10. Are you currently pregnant?
    If no, continue.... *If yes, stop. Thank the respondent.*

If the respondent satisfies all criteria, set up the date, time, and location of interview:
(Complete the information on the recruiting log)

1. When do you want to do the interview?
   Date:____/____/____
   Time:_____ am or pm

2. Where do you want to do the interiew?
   HHC or home.

If the respondent chooses to do the interview at HHC (Hispanic Health Council), aks her to bring the study child for height and weight measurements. If the participant can bring the study child, ask if she will be bringing other children and how many. If the respondent can not bring the study child, arrange some other visit after the interview to take measurements on the study child.

If the respondent chooses to do the interview at home, please make sure she has the study child at home. If not, arrange some other visit after the interview to take measurement on the study child.

Interviewer: - READ ALOUD - When we do the interview, we would ask you to read and sign the consent form, or we would read it for you. We can give you a copy of the form if you so request.

What to assemble or bring for an interview:

a) scale for weight
b) measuring stick for height
c) extra consent forms - Spanish and English
d) Laminated pages:
   i. Food Guide Pyramid
   ii. Food Label
e) questionnaires - Spanish or English
f) nutrition education packet
g) $
h) receipt book
i) response sheets

INFORMED CONSENT

The Hispanic Health Council and the University of Connecticut are concerned with how well Puerto Rican families in Hartford are eating and growing. This study is looking at how living in the United States affects the eating habits and nutritional status of Hispanics. Specifically, we are very interested in what kinds of foods you and your child eat and how often. The results of this study will be used to benefit the health and well-being of families in your community.

This study will entail several parts. First, we will ask for some information about you, your family and your household. The second part of the study will look at your interaction and participation in the Puerto Rican culture and community of Hartford. The third part of this study will look at the ways in which living in the U. S. affects the way Hispanics eat. Here, we will be asking questions about you and your family's diet, including the kinds of foods you eat, how often you and your child eat them, and how your eating pattern has changed over time. The interview will last approximately one and a half hours. At the end of the interview, we will place you and your child on a scale to measure weight and height.

Because of your generosity in giving us your time and assistance, we will compensate you with $7.00 and some educational materials on nutrition and community services. You may withdraw from the study at any time. We may ask you to participate in a follow-up interview and ask you questions about how your diet has changed over time. If you participate in this follow-up interview, it will last about 30 minutes and you will be compensated an additional $5 dollars.

Your participation in this study is completely voluntary, and you do not have to answer any questions you do not wish to. We will not use your name or your child's name in any publications or reports of this project - you will remain completely anonymous. We will, however, provide you with information about your interview upon your request.

If you have any questions or concerns, please feel free to contact the directors of this study, Dr. David Himmelgreen at (860) 527-0856 or Dr. Rafael Pérez-Escamilla at (860) 486-5073.

We deeply appreciate your help and cooperation in conducting this study. Please sign below if you agree to participate in this project.

X_____ _____/_____/_____

Signature of Primary Care Taker **Date**

INTERVIEWER INSTRUCTIONS

1. Allow respondent to answer questions with more than one response.

2. Insert the child's name where you see ("the child").

3. After interview is completed, score responses to the acculturation scale.

4. Caretakers with low, medium, and high levels of acculturation will be targeted for the follow-up interview.

INTERVIEW INFORMATION

Code #:_____

Interviewer name:_____

Date of interview:_____

Location of interview:_____

Place of recruitment:_____

A. DEMOGRAPHICS/SOCIOECONOMIC STATUS

Respondent's name: _____

Address:_____

Phone: _____

Sex: Male / Female Age:_____

Child's name:_____

Child's sex: Male / Female Child's age:_____

Child's date of birth: (MM/DD/YY) ___/___/___

1. Are you the mother of the child?
   01 Yes
   02 No----(please specify relationship):_____.

2. Does the father of this child live in the house?
   01 Yes
   02 No
   88 Don't know
   99 Refused

3. Who takes care of the child during the day?
   01 Child's mother/father
   02 Child's grandmother/grandfather
   03 Other relative
   04 Friend/ no relation
   05 Baby sitter
   06 Day care center
   77 Other (please specify):_____
   88 Don't know
   99 Refused

4. In which language would you prefer to be interviewed?
   01 English
   02 Spanish
   03 Either English or Spanish

Marital Status:

5. What is your current marital status?
   01 Single/no partner
   02 Married
   03 Common Law
   04 Separated
   05 Divorced
   06 Widowed
   77 Other (please specify):_____
   88 Don't know
   99 Refused

Education:

6. What is the highest grade you reached in school?
   01 No formal schooling
   02 Eighth grade or less
   03 Some high school
   04 High school graduate or GED equivalency
   05 Trade or technical training (specify highest grade reached):_____
   06 Some college
   07 College graduate
   08 Post-graduate
   99 Refused

The Household:

7. Is this apartment/house...
   01 Rented
   02 Owned
   03 Borrowed
   88 Don't know
   99 Refused

8. How many people, including you, live in your house/apartment? ____

9. How many people older than 18 years, including yourself, are there in your household? ____

10. How many children younger than 10 years are there in your household? ____

11. How many children between 1-5 years of age are there in your household? ____

12. How many times have you been pregnant? _____

12a. How many sons _____ and daughters _____ do you have?

13. Do you practice a specific religion?
   01 Yes-----(please specify):_____
   02 No
   88 Don't know
   99 Refused

Living Standards:

14. Do you have a _____ in your household?

telephone?	01 Yes	02 No	99 Refused
radio?	01 Yes	02 No	99 Refused
stereo/CD player?	01 Yes	02 No	99 Refused

television?	01 Yes	02 No	99 Refused
computer?	01 Yes	02 No	99 Refused
car?	01 Yes	02 No	99 Refused
refrigerator?	01 Yes	02 No	99 Refused
microwave?	01 Yes	02 No	99 Refused
washing machine?	01 Yes	02 No	99 Refused
stove?	01 Yes	02 No	99 Refused
toaster?	01 Yes	02 No	99 Refused
sewing machine?	01 Yes	02 No	99 Refused
dishwasher?	01 Yes	02 No	99 Refused

Head of Household:

15. What is your present employment status?
    01 Employed full time Job:_____
    02 Employed part time Job:_____
    03 Full-time homemaker/caretaker
    04 Student(not working)
    05 Unemployed
    06 Disabled due to poor health
    07 Retired
    77 Other (please specify):_____
    99 Refused

16. Do you consider yourself the head of the household, i.e., the person who provides economically for your family?
    01 Yes---(Skip to q. 19)
    02 No
    99 Refused

17. Who is the head of the household?_____
(**Interviewer**: If there is more than one household head, record **all** household heads.)

18. What is the current employment status of the household head?
    01 Employed full time Job:_____
    02 Employed part time Job:_____
    03 Full-time homemaker/caretaker
    04 Student(not working)
    05 Unemployed
    06 Disabled due to poor health
    07 Retired
    66 Not applicable
    77 Other (please specify):_____
    99 Refused

19. Do you do anything to make additional income in your home (e.g., sewing, cooking, secretarial work, babysitting, care of elderly, etc.)?
    01 Yes Specify activity:_____
    02 No
    99 Refused

Homelessness: that is, living in the streets, shelter, halfway house or living with others because you don't have enough money to pay your own rent.

20. Have you ever been homeless as an adult?
    01 Yes---specify where_____ (e.g., living on the streets, shelter, halfway house or with another family)
    02 No---(Skip to q. 24)
    88 Don't know
    99 Refused

21. Have you ever been homeless since the birth of ("child")?
    01 Yes
    02 No---(Skip to q. 24)
    66 Not applicable
    88 Don't know
    99 Refused

22. On how many occasions have you been homeless since the birth of ("child")?
    Enter number_____
    66 Not applicable
    88 Don't know
    99 Refused

23. Are you currently homeless?
    01 Yes---specify where_____ (e.g., living on the streets, shelter, halfway house or another family)
    02 No
    66 Not applicable
    88 Don't know
    99 Refused

Nativity and Migration Patterns:

24. Please provide the birth place for your mother, your father, your child, and yourself:

	Age	Birth place		Size of birth place (check one)		
		City	Country	Urban	Semi-urban	Rural
Caretaker's mother						
Caretaker's father						
Study child						
Caretaker						

Urban: large city (population>100,000) (i.e., Ponce, Hartford CT).
Semi-urban: large town, small city (population = 10,000 to 100,000) (e.g., Florida PR, Camuy).
Rural: small town, country setting (population<10,000) (e.g., Morovis).
N/A for not applicable; **D/K** for don't know; and **D** for deceased.

Skip to q. 26 if caretaker was born here
25. How old were you when you came to the continental U.S.?
_____ yrs old
88 Don't know
99 Refused

26. How long did you live in the United States before (the child) was born?
_____ months _____ years

27. Where did you grow up?
City:_____
Country:_____
99 Refused

28. Is that area:
01 Urban (large city = population>100,000)?
02 Semi-urban (large town, small city = population 10,000 to 100,000)?
03 Rural (small town, country setting = population<10,000)?
99 Refused

29. Has your mother lived in the continental U.S.?
01 Yes Specify for how long:_____
02 No
88 Don't know
99 Refused

30. Has your father lived in the continental U.S.?
    01 Yes Specify for how long:_____
    02 No
    88 Don't know
    99 Refused

31. Have you returned to or visited Puerto Rico since you were born in or moved to the U.S.A.?
    01 Yes
    02 No---if no, skip to q. 38
    99 Refused

32. Approximately how often do you return to Puerto Rico?
    01 Twice a year or more
    02 Once a year
    03 Once every two years
    04 Once every three years
    05 Once every four years
    06 Once every five years
    07 Less than once every five years
    77 If you have lived in the United States < 1 yr. (# times____)
    99 Refused

33. Since first moving to the mainland, how many times have you returned to Puerto Rico and stayed longer than one month?
    01 None
    02 Once
    03 Two to three times
    04 Four to five times
    05 Six times or more
    99 Refused

34. When did you last return to Puerto Rico?
    Month_____Year_____

35. On your last trip to the Island , where in Puerto Rico did you go?
    Specify city or town:_____

36. On your last trip to the Island, how long did you stay there?
    01 Less than one month
    02 One to two months
    03 Three to six months
    04 Seven months to one year
    05 More than one year
    99 Refused

37. For what reason did you make your last trip back to Puerto Rico?
    01 Visit family and friends
    02 Take care of family member(s)
    03 School
    04 Work/Business
    05 Special event (e.g., wedding, funeral, graduation, etc.)
    06 Health reasons
    77 Other (please specify):_____
    99 Refused

38. In the next three years, how many times are you thinking of traveling to Puerto Rico?
    00 None
    01 Once
    02 Twice
    03 Three times
    04 Four times
    05 Five or more times
    88 Don't know
    99 Refused

39. In the future, are you thinking of living in Puerto Rico for good?
    01 Yes (When?_____)
    02 No
    88 Don't know
    99 Refused

Social Networks:

40. List up to 4 family members/friends who are the most important to you:

# of person	Relationship to caretaker	Importance of relationship	Sex		Age (y)	Ethnicity				
		1 2 3 4 5 low.....high	M	F		PR	oth His	Afr Am	White	other
1										
2										
3										
4										

PR: Puerto Rican. Oth His: other Latino/Hispanic or mixed Hispanic.
Afr Am: Black/African American (not Hispanic). White: white (not Hispanic).
N/A for not applicable; **D/K** for don't know; and **D** for deceased.

41. Do you lend or borrow money from any friends or relatives?
    01 Yes - Specify relationship(s): _____
    02 No
    99 Refused

42. Do you lend or borrow goods (e.g., food, household items, clothes) from any friends or relatives?
    01 Yes - Specify relationship(s): _____
    02 No
    99 Refused

43. Do you exchange services (e.g., errands, babysitting, cooking) with any friends or relatives?
    01 Yes - Specify relationship(s): _____
    02 No
    99 Refused

B. ACCULTURATION INSTRUMENT

This scale views acculturation as a multi-dimensional process. The following questions measure acculturation through: 1) self-identification, 2) language, 3) structural assimilation into U.S. society, 4) political views, 5) ethnic boundaries of social relations, including endogamy and exogamy, 6)media and popular culture, 7) family values, and 8) the importance placed on maintaining ethnic culture.

Self Identification

1. How do you identify yourself?
    01 Puerto Rican
    02 Hispanic or Latino
    03 Puerto Rican-American
    04 American
    05 Black Hispanic
    06 Black or African American (does not specify Hispanic)
    07 White Hispanic
    08 White (does not specify Hispanic)
    09 Latin American
    10 Spanish
    77 Other (please specify):_____
    99 Refused

Language

2. Are you...
   01 Monolingual, English only
   02 Monolingual, Spanish only---(skip to q. 4)
   03 Bilingual (English and Spanish)
   77 Other (please specify): _____
   99 Refused

3. Do you speak English...
   01 Fluently
   02 Very well
   03 Well
   04 Fair
   05 Not very well
   99 Refused

4. What was the first language you learned to speak?
   01 English
   02 Spanish
   77 Other (please specify):_____
   88 Don't know
   99 Refused

5. What language do you primarily speak in your home?
   01 English
   02 Spanish
   03 English and Spanish equally
   77 Other (please specify):_____
   99 Refused

Migration History

6. How many generations of your family have lived in the U.S.?
(**Interviewer**: Explain what a generation is: e.g., your great grandparents, grandparents, parents, the respondent; each one is a generation. Thus, if the respondent's grandparents and parents lived on the mainland, then that is a total of three generations, including the respondent. **Do not count the respondent's children**.)
   01 One
   02 Two
   03 Three
   04 Four
   05 Five or more
   99 Refused

Politics

7. To what degree do you follow politics in Puerto Rico?
   01 A great deal
   02 Somewhat
   03 Not too much
   04 Not at all
   99 Refused

7a. Do you think Puerto Rico should become a:
   01 state of the United States
   02 commonwealth
   03 independent from the United States
   04 no opinion
   99 Refused

8. Did you vote in the last U.S. national or local election?
   01 Yes
   02 No
   03 Could not vote, but would have if able
   99 Refused

Social Relations

9. Is your current employer Latino? (If not employed, skip to q. 11).
(**Interviewer:** answer "Yes" if respondent works for an individual, business or organization that is Hispanic. For example, if respondent works for the Hispanic Health Council, the answer would be yes even if their particular supervisor is not Latino).
   01 Yes
   02 No
   88 Don't know
   99 Refused

10. Are most of the people you work with Latino?
   01 Yes
   02 No
   88 Don't know
   99 Refused

11. Is your spouse/boyfriend/girlfriend Latino?
   01 Yes---(Skip to q. 13)
   02 No
   66 Not applicable (don't have one)
   99 Refused

12. If not Latino, what ethnicity is your spouse/boyfriend/girlfriend?
    Specify ethnicity: _____
    88 Don't know
    99 Refused

Think of the first four friends that come to mind, then tell me, for each person, if they are Latino or not:

13a. Person #1:

01 Latino	02 not Latino	88 Don't know	99 Refused

13b. Person #2:

01 Latino	02 not Latino	88 Don't know	99 Refused

13c. Person #3:

01 Latino	02 not Latino	88 Don't know	99 Refused

13d. Person #4:

01 Latino	02 not Latino	88 Don't know	99 Refused

14. Do you live in a predominantly Latino neighborhood?
    01 Yes
    02 No
    99 Refused

15. How often do you attend a Spanish language/Latino church?
    01 Always
    02 Sometimes
    03 Almost never
    04 Never
    66 Not applicable (does not attend any church)
    99 Refused

16. Do you belong to any Latino clubs/organizations (e.g., social, cultural, political, academic or business)?
    01 Yes---please specify _____.
    02 No
    66 Not applicable (does not belong to any clubs/organizations)
    99 Refused

Media/Popular Culture

17. What kind of music do you mainly listen to?
    01 Latino (e.g., salsa, merengue, Spanish classics, ballads)
    02 Non-Latino (e.g., rock and roll, rap, Rhythm & Blues, alternative, country, classical)
    03 Both
    66 Not applicable (does not listen to music)
    99 Refused

18.Do you watch Spanish language/Latino television stations (e.g., Channel 13-Telemundo, Channel 17-Univision, or Channel 5-Hartford Public Access)? How often?
    01 Often
    02 Sometimes
    03 Almost never
    04 Never
    66 Not applicable (does not watch any TV)
    99 Refused

19. Do you listen to Spanish language/Latino radio stations (e.g., *Latino 1230, La Voz Hispana 1550, La Puertorriqueñisima 1120 or La Gigante 840*)? How often?
    01 Often
    02 Sometimes
    03 Almost never
    04 Never
    66 Not applicable (does not listen to any radio)
    99 Refused

20. Do you read Spanish language/Latino newspapers or magazines (e.g., *El Vocero, El Extra News, La Voz Hispana,* etc.)? How often?
    01 Often
    02 Sometimes
    03 Almost never
    04 Never
    66 Not applicable (does not read any newspapers/magazines)
    99 Refused

21. Do you attend Latino cultural events (e.g, concerts, dance performances, art exhibits, lectures, parades, etc.)? How often?
    01 Often
    02 Sometimes
    03 Almost never
    04 Never
    66 Not applicable (does not attend any cultural events)
    99 Refused

22. Do you prepare and/or serve Puerto Rican food in your household?
    01 Yes
    02 No---(Skip to q. 24)
    99 Refused

23. How often do you eat Puerto Rican food at home?
    01 Every day
    02 Four to six times a week
    03 One to three times a week
    04 Once every two to three weeks
    05 Once a month or less
    99 Refused

Feelings, Values and Attitudes

*Please tell me whether you **strongly agree, somewhat agree, somewhat disagree, or strongly disagree** with the following statements.*

24. I believe my children should know about Puerto Rican history.
(from the Acculturation and Structural Assimilation Scale: San Antonio Heart Study, at http://riceinfo.rice.edu/projects/Hispanic Health/Acculturation.html)
    01 Strongly agree
    02 Somewhat agree
    03 Somewhat disagree
    04 Strongly disagree
    88 Don't know
    99 Refused

25. My Puerto Rican background is most important in defining my personal identity, my beliefs and my values. (from the Latino Ethnic Attitude Survey, http://falcon.cc.ukans.edu/~droy/)
    01 Strongly agree
    02 Somewhat agree
    03 Somewhat disagree
    04 Strongly disagree
    88 Don't know
    99 Refused

26. I should try to keep in contact with my grandparents, aunts, uncles, or cousins.
    01 Strongly agree
    02 Somewhat agree
    03 Somewhat disagree
    04 Strongly disagree
    88 Don't know
    99 Refused

27. I hope my children live in Puerto Rico when they grow up.
    01 Strongly agree
    02 Somewhat agree
    03 Somewhat disagree
    04 Strongly disagree
    88 Don't know
    99 Refused

28. I want my children to know about Puerto Rican art, music and culture.
    01 Strongly agree
    02 Somewhat agree
    03 Somewhat disagree
    04 Strongly disagree
    88 Don't know
    99 Refused

29. Most likely, I would not date or marry someone that was not Puerto Rican.
    01 Strongly agree
    02 Somewhat agree
    03 Somewhat disagree
    04 Strongly disagree
    88 Don't know
    99 Refused

30. Daughters who are unmarried should live with their parents even when they are adults. (Modified from the Acculturation and Structural Assimilation Scale.)
    01 Strongly agree
    02 Somewhat agree
    03 Somewhat disagree
    04 Strongly disagree
    88 Don't know
    99 Refused

31. I would discourage my children from moving back to Puerto Rico when they grow up.
    01 Strongly agree
    02 Somewhat agree
    03 Somewhat disagree
    04 Strongly disagree
    88 Don't know
    99 Refused

32. I will be disappointed if my children do not speak Spanish.
    01 Strongly agree
    02 Somewhat agree
    03 Somewhat disagree
    04 Strongly disagree
    88 Don't know
    99 Refused

33. Since I live in Hartford now, I do NOT think it is important to follow Puerto Rican customs and ways of life.
    01 Strongly agree
    02 Somewhat agree
    03 Somewhat disagree
    04 Strongly disagree
    88 Don't know
    99 Refused

34. My parents encouraged me to learn about Puerto Rican culture and history.
    01 Strongly agree
    02 Somewhat agree
    03 Somewhat disagree
    04 Strongly disagree
    88 Don't know
    99 Refused

35. I feel more comfortable being around other Puerto Ricans than being around Americans.
    01 Strongly agree
    02 Somewhat agree
    03 Somewhat disagree
    04 Strongly disagree
    88 Don't know
    99 Refused

36. I am worried my children will be too "American".
    01 Strongly agree
    02 Somewhat agree
    03 Somewhat disagree
    04 Strongly disagree
    88 Don't know
    99 Refused

37. It would bother me if my children did not marry someone who is Puerto Rican.
    01 Strongly agree
    02 Somewhat agree
    03 Somewhat disagree
    04 Strongly disagree
    88 Don't know
    99 Refused

38. It is important to have a close relationship with your extended family (i.e., grandparents, aunts, uncles and cousins). (from the Acculturation and Structural Assimilation Scale.)
    01 Strongly agree
    02 Somewhat agree
    03 Somewhat disagree
    04 Strongly disagree
    88 Don't know
    99 Refused

39. I intend to live in Puerto Rico someday.
    01 Strongly agree
    02 Somewhat agree
    03 Somewhat disagree
    04 Strongly disagree
    88 Don't know
    99 Refused

40. It is important for my family to celebrate Puerto Rican holidays, such as January 6-Three Kings Day, July 25-Constitution Day, June 24-San Juan Bautista Day or March 22-Abolition Day. (Adapted from the Acculturation and Structural Assimilation Scale.)
    01 Strongly agree
    02 Somewhat agree
    03 Somewhat disagree
    04 Strongly disagree
    88 Don't know
    99 Refused

41. It would bother me to live in an area where there aren't many Puerto Ricans.
    01 Strongly agree
    02 Somewhat agree
    03 Somewhat disagree
    04 Strongly disagree
    88 Don't know
    99 Refused

42. I worry about the economic, political and social future of Puerto Ricans more than I worry about the future of U.S. society as a whole. (from the Latino Ethnic Attitude Survey)
    01 Strongly agree
    02 Somewhat agree
    03 Somewhat disagree
    04 Strongly disagree
    88 Don't know
    99 Refused

43. It is important to know your ancestry (family tree).
    01 Strongly agree
    02 Somewhat agree
    03 Somewhat disagree
    04 Strongly disagree
    88 Don't know
    99 Refused

C. CORNELL HUNGER SCALE

-Interviewer- READ ALOUD: I'm going to read you a series of statements that people have made about their food situation. For the next ten questions, tell me whether the statements are **OFTEN TRUE, SOMETIMES TRUE** or **NEVER TRUE** for your household or the individuals in your household.

1. I worry whether my food will run out before I get money to buy more.
    01 Often true
    02 Sometimes true
    03 Never true

2. The food that I bought just didn't last, and I didn't have money to get more.
    01 Often true
    02 Sometimes true
    03 Never true

3. I ran out of the foods that I needed to put together a meal and I didn't have money to get more food.
    01 Often true
    02 Sometimes true
    03 Never true

4. We eat the same thing for several days in a row because we only have a few different kinds of food on hand and don't have money to buy more.
   01 Often true
   02 Sometimes true
   03 Never true

5. I can't afford to eat properly.
   01 Often true
   02 Sometimes true
   03 Never true

6. I am often hungry, but I don't eat because I can't afford enough food.
   01 Often true
   02 Sometimes true
   03 Never true

7. I eat less than I think I should because I don't have enough money for food.
   01 Often true
   02 Sometimes true
   03 Never true

8. I cannot give my child(ren) a balanced meal because I can't afford that.
   01 Often true
   02 Sometimes true
   03 Never true

9. My child(ren) is/are not eating enough because I just can't afford enough food.
   01 Often true
   02 Sometimes true
   03 Never true

10. I know my child(ren) is/are hungry sometimes, but I just can't afford more food.
    01 Often true
    02 Sometimes true
    03 Never true

D. DIETARY INFORMATION

During the last 3 days have you eaten:	
<u>Traditional Puerto Rican</u>: 1) Boiled plantain w/ meat/ Pasteles	Y / N
2) Rice with pigeon peas/ Arroz mezclado con gandules	Y / N
3) Rice with beans with beefsteak/ Arroz mezclado con habichuelas con bistec	Y / N
4) Rice with chicken/ Arroz mezclado con pollo	Y / N
5) Rice with Vienna sausages/ Arroz mezclado con salchichas Viena	Y / N
6) Milk custard/ Flan	Y / N
7) Boiled starchy roots/ Viandas	Y / N
8) Fried mashed plantains/ Tostones	Y / N
9) Salted cod fish/ Bacalao	Y / N
10) Fried plantain w/ garlic & stock/ Mofongo	Y / N
11) Fried plantain dough with meat/ Alcapurrias	Y / N
12) Soup of assorted roots with vegetables/ Sancocho	Y / N
13) Other Puerto Rican dishes/ otro platillo puertorriqueño Specify_____	Y / N
<u>Traditional "American"</u>: 14) Hamburgers/ Hamburguesas	Y / N
15) Hot dogs/ Perros calientes	Y / N

During the last 3 days have you eaten:	
16) American sandwich/ Sandwich tipo americano	Y / N
17) Pizza	Y / N
18) Spaghetti/ Espaghettis	Y / N
19) Macaroni and cheese/ Macarrones con queso	Y / N
20) Apple pie/ Pie de manzana	Y / N
21) Other pies/ Otro pie	Y / N
22) French fries/ Papas fritas	Y / N
23) Steak/ Bistec	Y / N
24) Baked potato/ Papas al horno	Y / N
25) Ketchup/ catsup	Y / N
Neutral: 26) Yogurt	Y / N
27) Chinese food/ Comida china	Y / N
28) Mexican food/ Comida mexicana	Y / N
29) Thai food/ Comida tailandesa	Y / N
30) French food/ Comida francesa	Y / N
31) Greek food/ Comida griega	Y / N
32) Vietnamese food/ Comida vietnamita	Y / N
33) Indian food/ Comida indu	Y / N
34) Japanese or Korean food/ Comida japonesa o coreana	Y / N

Short Food Frequency: *I am now going to ask you questions about foods you and your child eat. For each food, I want to know whether you eat it (yes or no), if your child eats it (yes or no), and also approximately how many times you and he/she eats it, (times per day, week, month, or year).*

	Do you eat...	How often do you eat?	Does child eat...	How often does the child eat?
a) Fruits (excluding juices)	Y / N	___ d w m y	Y / N	___ d w m y
b) Legumes (Beans, chick peas, lentils, pigeon peas)	Y / N	___ d w m y	Y / N	___ d w m y
c) Starchy Vegetables (Yuca, Yautia, Malanga, Batata)	Y / N	___ d w m y	Y / N	___ d w m y
d) Green Leafy Vegetables	Y / N	___ d w m y	Y / N	___ d w m y
e) Lettuce, tomato, and other vegetables	Y / N	___ d w m y	Y / N	___ d w m y
f) Dairy product (e.g., milk, cheese, yogurt)	Y / N	___ d w m y	Y / N	___ d w m y
g) Meats (e.g. chicken, beef, pork, ham)	Y / N	___ d w m y	Y / N	___ d w m y
h) Fish and Shell fish	Y / N	___ d w m y	Y / N	___ d w m y
i) Eggs	Y / N	___ d w m y	Y / N	___ d w m y
j) Pasta, Breads and Cereals (e.g rice, spaghetti, tamal)	Y / N	___ d w m y	Y / N	___ d w m y
k) Fruit Juices (specify brand: _____)	Y / N	___ d w m y	Y / N	___ d w m y
l) Soft and Artificial Drinks (Tang, Sunny Delight, Pepsi, Coke)	Y / N	___ d w m y	Y / N	___ d w m y
m) Sweets and Desserts	Y / N	___ d w m y	Y / N	___ d w m y
n) Snack foods (e.g., potato chips, Nachos, etc.)	Y / N	___ d w m y	Y / N	___ d w m y

EXTENDED FOOD FREQUENCY: *This section is an expanded version of what we just did. Only this time, for each food, I just want to know whether your child eats it (yes or no), and also approximately how many times he/she eats it, (times per day, week, month, or year).*

FRUITS/ FRUTAS

	Frequency per:	Day	Week	Month	Year
aa) Peach/ Melocoton, Plum/ Ciruela, Apricot/ Albaricoque,	Y/N	____	____	____	____
ab) Banana/ Guineo, Banano	Y/N	____	____	____	____
ac) Cantaloupe/ Melon, other melons	Y/N	____	____	____	____
ad) Tropical fruits (Mango, Pineapple/ Pina, Genip/ Quenepa)	Y/N	____	____	____	____
ae) Grape / Uva	Y/N	____	____	____	____
af) Orange/ Naranja, China	Y/N	____	____	____	____
ag) Strawberry/ Fresa, Cherry/ Cereza	Y/N	____	____	____	____
ah) Apple/ Manzana, Pear/ Pera	Y/N	____	____	____	____
ai) Fruit juice/ Nectares y Jugos (orange, apple, grape, etc.) Specify brand: _____	Y/N	____	____	____	____
aj) others/otros_____	Y/N	____	____	____	____

VEGETABLES/ VEGETALES

ba) Broccoli, Cauliflower/ Coliflor, Brussels sprouts/colesitas de Bruselas, Cabbage/ Repollo, Cole slaw/ Ensalada de Repollo	Y/N	____	____	____	____
bb) Avocado/ Aguacate	Y/N	____	____	____	____
bc) Beans/ Habichuelas	Y/N	____	____	____	____
bd) Lentils/ Lenteja, peas/ Chícharo, petit pois, Pigeon peas/ Gandules, Chickpeas/ Garbanzos	Y/N	____	____	____	____
be) Corn/ Maiz	Y/N	____	____	____	____
bf) Cucumber/ Pepinillo	Y/N	____	____	____	____
bg) Carrot/ Zanahoria	Y/N	____	____	____	____
bh) Zucchini, Squash, Pumpkin/ Calabaza, Eggplant/ Berenjena	Y/N	____	____	____	____
bi) Starchy vegetables/ Viandas (Sweet Potato/ Batata, Taro root/ Malanga, Yam/ ñame)	Y/N	____	____	____	____

	Frequency per:	Day	Week	Month	Year
bj) Lettuce and/or Tomato/Lechuga y/o Tomate (Ensalada, Romaine Lettuce or Iceberg)	Y/N	____	____	____	____
bk) Potatoes/ Papas, Potato Salad/ Ensalada de Papa	Y/N	____	____	____	____
bl) Fried potatoes/ Papas fritas	Y/N	____	____	____	____
bm) Green plantain/ Platano o Guineo verde, Ripe plantain/ platano maduro (fried, boiled/frita, hervida)	Y/N	____	____	____	____
bn) Others/ Otros_____	Y/N	____	____	____	____

MEATS/ CARNES

ca) Beef (Beefsteak/ Bistec, Other beef cuts/ Carne de res)	Y/N	____	____	____	____
cb) Hamburger meat/ Carne molida	Y/N	____	____	____	____
cc) Processed meats (Ham or cold cuts/ Jamon o carnes frias como bologna, salami, sausage/salchicha)	Y/N	____	____	____	____
cd) Pork (Pork chops/ Chuleta, Pig feet/ Patitas, Pork shoulder/ Pernil (lomo de puerco), Other pig meats/ Puerco o cerdo/)	Y/N	____	____	____	____
ce) Bacon /Tocineta	Y/N	____	____	____	____
cf) Chicken or turkey with skin/ Pollo o pavo con pellejo	Y/N	____	____	____	____
cg) Skinless chicken or turkey / Pollo o pavo sin pellejo	Y/N	____	____	____	____
ch) Eggs / Huevos	Y/N	____	____	____	____
ci) Hot dogs / Perros calientes	Y/N	____	____	____	____
cj) Liver or organs/ Higados o víceras	Y/N	____	____	____	____
ck) Otros/Others (especificar)_____	Y/N	____	____	____	____

FISH OR SEAFOOD/ PESCADOS O MARISCOS

da) Tuna/ Atún	Y/N	____	____	____	____
db) Salted Codfish/ Bacalao	Y/N	____	____	____	____
dc) Other fish/ Otro pescado	Y/N	____	____	____	____
de) Shellfish/ Mariscos (crab, shrimp, octopus /guey, camarón, pulpo)	Y/N	____	____	____	____

MIXED DISHES/ PLATILLOS COMPUESTOS Y SOPAS

	Frequency per:	Day	Week	Month	Year
ea) Rice in general/ Arroz en general	Y/N	____	____	____	____
eb) Rice with/ Arroz mezclado con -vegetables/ vegetales: con gandules, y/o green peas/petit pois/chícharos y/o habichuelas) or meat/ carne	Y/N	____	____	____	____
ec) Rice by itself / Arroz solo	Y/N	____	____	____	____
ed) Pasta (with tomato sauce/ con salsa de tomate, with meat and/or cheese/ con carne y/o queso)	Y/N	____	____	____	____
ef) Pizza	Y/N	____	____	____	____
eg) Plantain with meat/Plátano con carne (ej. Alcapurria)	Y/N	____	____	____	____
eh) Boiled plantain with meat/ Pastel	Y/N	____	____	____	____
ei) Vegetable soup/sopa de vegetales	Y/N	____	____	____	____
ej) Vegetable soup w/meat/ sopa de vegetales c/ carne	Y/N	____	____	____	____
ek) Other mixed dish/Otro platillo compuesto_____	Y/N	____	____	____	____

MILK AND DAIRY PRODUCTS/ LECHE Y PRODUCTOS LÁCTEOS

fa) Whole milk/Leche entera	Y/N	____	____	____	____
fb) 2%/1%Low fat milk/ 2%/1% Leche baja en grasa Skim milk/Leche sin grasa	Y/N	____	____	____	____
fc) Cheese in general, cheese spreads/ Queso en general, untados de queso	Y/N	____	____	____	____
fd) Yogurt/Yogurt	Y/N	____	____	____	____
fe) Other/Otro_____	Y/N	____	____	____	____

BREADS AND CEREALS/ PAN Y CEREALES

ga) Whole wheat bread/Pan integral	Y/N	____	____	____	____
gb) Corn bread/ Pan de maíz (including corn muffins) Corn tortilla/Tortilla de maíz	Y/N	____	____	____	____

	Frequency per:	Day	Week	Month	Year
gc) Sweet breads and Muffins/ Pan dulce, Muffins	Y/N	____	____	____	____
gd) Bread rolls/ bollos, white bread/ pan blanco, bagel, White tortilla (flour) /Tortilla de harina de trigo	Y/N	____	____	____	____
ge) Breakfast cereals/Cereales de desayuno	Y/N	____	____	____	____
gf) others/otros_____	Y/N	____	____	____	____

SNACKS, SWEETS AND DESSERTS/ MERIENDAS, DULCES Y POSTRES

ha) Butter, peanut butter/ Mantequilla, mantequilla de maní	Y/N	____	____	____	____
hb) Peanuts, nuts/ Maní, nueces	Y/N	____	____	____	____
hc) Popcorn, plain or butter / Palomitas de maiz simple o con mantequilla	Y/N	____	____	____	____
hd) Potato chips, pretzels, corn chips, other salty snacks/ Papitas, pretzels, doritos, otras frituras saladas	Y/N	____	____	____	____
he) Sweet cookies, snack cakes/ Galletas dulces, biscochos	Y/N	____	____	____	____
hf) Hard candy, gum/ Bombones o dúlces sólidos	Y/N	____	____	____	____
hg) Jelly, honey, sugar/ mermelada, miel, azúcar	Y/N	____	____	____	____
hh) Milk custard/ Flan	Y/N	____	____	____	____
hi) Fruit jello/ Gelatina de fruta	Y/N	____	____	____	____
hj) Ice cream/ Mantecado, Milkshakes/ Batido de leche	Y/N	____	____	____	____
hk) Chocolate, candy w/ chocolate, candy bars	Y/N	____	____	____	____
hl) Otros/Others_____	Y/N	____	____	____	____

DRINKS AND BEVERAGE/ BEBIDAS

ia) Soft drinks/ Sodas	Y/N	____	____	____	____
ib) Tang, Kool Aid, Hawaiian Punch, Sunny Delight	Y/N	____	____	____	____
ic) Other/otros	Y/N	____	____	____	____

Please tell us how often you use these oils or fats when cooking:

		Times per: Day	Week	Month	Year
a) Vegetable oil/ Aceite vegetal	Y/N	___	___	___	___
b) Crisco/Manteca Vegetal	Y/N	___	___	___	___
c) Lard/ Manteca Animal	Y/N	___	___	___	___
d) Margarine/ Margarina	Y/N	___	___	___	___
e) Butter/ Mantequilla	Y/N	___	___	___	___
f) Whipped butter/ Mantequilla batida	Y/N	___	___	___	___
g) Bacon or Ham fat/ Tocineta	Y/N	___	___	___	___

Food Preparation Techniques: *Please tell me if you prepare foods using the following methods (yes or no), and, if so, how often (times per day, week, month or year)?*

		Times per: Day	Week	Month	Year
a) Fry foods	Y/N	____	____	____	____
b) Bake foods	Y/N	____	____	____	____
c) Boil foods	Y/N	____	____	____	____
d) Broil foods	Y/N	____	____	____	____
e) Steam foods	Y/N	____	____	____	____
f) Stew foods	Y/N	____	____	____	____
g) Grill foods	Y/N	____	____	____	____
h) Microwave foods	Y/N	____	____	____	____
i) Other_____	Y/N	____	____	____	____

Restaurant Types and Frequency of Use: *Please tell me if you and your family go to the following types of restaurants, and how often.*

		Times per: Day	Week	Month	Year
a) Hamburger outlet	Y/N	____	____	____	____
b) Pizza Shop	Y/N	____	____	____	____
c) Puerto Rican restaurant	Y/N	____	____	____	____
d) Fried chicken restaurant	Y/N	____	____	____	____
e) Mexican restaurant	Y/N	____	____	____	____
f) Seafood/fish restaurant	Y/N	____	____	____	____
g) Chinese restaurant	Y/N	____	____	____	____
h) Other_____	Y/N	____	____	____	____
i) Other_____	Y/N	____	____	____	____

Food Sources and Purchasing Decisions:

1.

Do you shop at:		What is the name of the store?	Where is the store located?	How many times per month do you go there?	What form of transportation do you use?[1]
a) Supermarket (e.g., BigY, Stop&Shop)	Y / N				
b) Convenience store (e.g., Seven-Eleven)	Y / N				
c) Small neighborhood market/grocery store (e.g., El Gitano, El Campesino)	Y / N				
d) Food warehouse (e.g., BJ's, Sam's)	Y / N				
e) Others	Y / N				

[1] For example: car, friend/relative drives respondent, bus, taxi, and walk
N/A for not applicable; **D/K** for don't know.

2. Do you buy food from street stands?
   01 Yes
   02 No
   88 Don't know
   99 Refused

Nutrient Supplements:

3. Do you take a nutrient supplement (e.g., vitamin, mineral, protein)?
   01 Yes Specify brand name:_____
   02 No
   99 Refused

4. Does your child take a nutrient supplement (e.g., vitamin, mineral, protein)?
   01 Yes Specify brand name:_____
   02 No
   99 Refused

5. Do you use nutrition supplements or herbal remedies?
   01 Yes Specify brand name:_____
   02 No
   99 Refused

Eating Habits:
(adapted from: Agras, W.S. Eating disorders: Management of Obesity, Bulimia and Anorexia Nervosa, NY, NY: Pergamon Press, 1987)

6. Do you ever feel that your eating pattern is abnormal or unusual compared to other people, either in amount eaten or how fast you eat?
   01 Yes
   02 No
   88 Don't know
   99 Refused

7. Do you ever eat large amounts of food very quickly in a short amount of time?
   01 Yes
   02 No
   88 Don't know
   99 Refused

8. Did you ever have episodes of overeating that you would refer to as binges?
   01 Yes
   02 No---(Skip to Self-Efficacy questions)
   88 Don't know
   99 Refused

9. What kind of food would you generally eat in one of these episodes?

_____
_____

10. How much of this food would you eat in an episode of overeating?
(e.g., 1 dozen donuts, 1 lb of deli meat, etc.)

_____
_____

11. How frequently do episodes like this tend to occur?
(e.g., per week? month? year?)

_____
_____

E. SELF-EFFICACY

(Modified from: Sallis et al. (1988) The development of self-efficacy scales for health-related diet and exercise behaviors. Health Education Research 3(3):283-292 & Agras, W.S. Eating disorders: Management of Obesity, Bulimia and Anorexia Nervosa, NY, NY: Pergamon Press, 1987).

Please rate the following items according to how confident you feel about your abilities to do the following things. For questions 1-7, please follow this scale:

1) Completely Confident
2) Moderately Confident
3) Slightly Confident
4) Not Confident

1. Persuade my child to consume 5 fruits and vegetables a day.	1	2	3	4
2. Choose to bake, broil, barbeque or steam food instead of frying.	1	2	3	4
3. Eat at least 5 fruits and vegetables every day myself.	1	2	3	4
4. Assure that my child eats breakfast everyday.	1	2	3	4
5. Choose fresh fruits and vegetables for snacks for my child instead of candy, cookies or ice cream.	1	2	3	4
6. Avoid eating foods high in fat.	1	2	3	4
7. Avoid eating foods high in salt.	1	2	3	4

8. How physically active are you? (Circle one)

01 Very active 02 Active 03 Average 04 Inactive 05 Very inactive

9. Do you exercise ½ hour at least 3 times a week?
   01 Yes
   02 No
   03 Sometimes
   88 Don't know
   99 Refused

F. FOOD ASSISTANCE

In this section we try to determine your knowledge and use of the following food assistance programs: Food Stamps, WIC Program, Food Banks, Salvation Army, and others.

1a. Have you ever received food stamps?
01 Yes
02 No---(Skip to q. 1d)
88 Don't know
99 Refused

1b. Are you currently receiving food stamps?
01 Yes
02 No---(skip to q. 1d)
88 Don't know
99 Refused

1c. On an average month, how long do Food Stamps last you?
_____ weeks---(skip to q. 2a)
66 Not applicable
88 Don't know
99 Refused

1d. Why doesn't your household receive Food Stamps now? Is it because...(circle all that apply)
01 Difficult to apply
02 Applied but have not received answer
03 Feels uncomfortable using Food Stamps
04 Problems with Food Stamps Office staff
05 Lack of transportation
06 Food Stamp benefits have stopped
07 No longer need Food Stamps
66 Not applicable
77 Other (please specify):_____
88 Don't know
99 Refused

2a. Have you ever received AFDC / TANF?
01 Yes
02 No---(Skip to q. 2d)
88 Don't know
99 Refused

2b. Are you currently receiving AFDC / TANF?
01 Yes
02 No---(skip to q. 2d)
88 Don't know
99 Refused

2c. On an average month, how long does AFDC / TANF last you?
_____ weeks---(skip to q. 3a)
66 Not applicable
88 Don't know
99 Refused

2d. Why is your household not receiving AFDC / TANF now. Is it because... (Circle all that apply)
01 Difficult to apply
02 Applied but have not received answer
03 Feels uncomfortable using AFDC / TANF
04 Problems with AFDC / TANF office staff
05 Lack of transportation
06 AFDC / TANF benefits have stopped
07 No longer need AFDC / TANF
66 Not applicable
77 Other (please specify):_____
88 Don't know
99 Refused

WIC Program: *The Supplemental Food Program for Women, Infants and Children, often called WIC, provides food and food vouchers for pregnant or breast-feeding women and families with infants or children.*

Maternal WIC:
3a. Did you receive WIC Program benefits either during your pregnancy or after this child's birth?
01 Yes, both
02 Yes, during pregnancy only
03 Yes, after birth only---(Skip to q. 3c)
04 Neither---(Skip to q. 3d)

3b. In what trimester of your pregnancy did you start receiving WIC benefits?
Enter trimester:_____
66 Not applicable
88 Don't know
99 Refused

3c. Are you currently receiving WIC benefits?
01 Yes---(Skip to q. 4a)
02 No
66 Not applicable
88 Don't know
99 Refused

3d. Could you tell me why you are not receiving WIC benefits now? Is it because..(circle all that apply)
01 Difficult to apply
02 Applied, but have not received answer
03 Feels uncomfortable using WIC benefits
04 Problems with WIC Program staff
05 Lack of transportation
06 Did not apply because respondent believed he/she is not eligible
07 Applied, but respondent is ineligible due to high income
08 Applied, but child is ineligible because of insufficient medical or nutritional need
09 Applied, but child is too old
66 Not applicable
77 Other Specify:_____
88 Don't know
99 Refused

Infant WIC:
4a. Has the child ever received WIC benefits?
01 Yes
02 No---(Skip to q. 5)
66 Not applicable
88 Don't know
99 Refused

4b. Is the child currently receiving WIC benefits?
01 Yes
02 No
66 Not applicable
88 Don't know
99 Refused

Other Food Assistance:

5. Does your family participate in any of these food assistance programs?

a) Salvation Army	01 Yes	02 No	88 D/K
b) Food Pantries	01 Yes	02 No	88 D/K
c) Soup Kitchens	01 Yes	02 No	88 D/K
d) Other _____	01 Yes	02 No	88 D/K

WELFARE REFORM

6. Has anyone explain to you the new welfare reform?
   01 Yes---(specify who give infomation _____ and when _____)
   02 No
   88 Don't know
   99 Refused

7. Have you ever used the EBT card system for food stamps?
   01 Yes
   02 No
   88 Don't know
   99 Refused

8. Have you ever used the EBT system for AFDC / TANF?
   01 Yes
   02 No
   88 Don't know
   99 Refused

*** if answered no to 7 and 8, skip to q. 10***

9. Do you find the EBT system:
   01 very easy to use
   02 easy to use
   03 not too diffcult to use
   04 difficult to use (Why? _____)
   05 very difficult to use (Why? _____)

10. For how much longer are you going to be receiving food stamps?
    _____ D, W, M
    66 not applicable (e.g. not currently receiving)
    77 other (specify): _____
    88 don't know
    99 refused

11. For how much longer are you going to be receiving AFDC / TANF?
_____ D, W, M
66 not applicable (e.g. not currently receiving)
77 other (specify): _____
88 don't know
99 refused

12. Have you participated in any jobs training program?
01 Yes (Specify type of job training _____)
02 No---(skip to q. 13)
88 Don't know
99 Refused

12a. when? _____

12b. for how long? _____

12c. did you get a job as a result?
01 Yes
02 No---(skip to q. 13)

12ca. What type of job is it? Please specify:_____

12cb. Is the job half-time or full-time?
01 Half time
02 Full time

12cc. What is the shift of the job?
01 day
02 afternoon
03 night

13. Has lack of transportation been an obstacle for you to comply with Welfare Reform rules?
01 Yes
02 No
88 Don't know
99 Refused

14. Please indicate if welfare reform has affected you in any of the following:
(**Interviewer: read each statement to the respondent**)
a) no longer receive cash benefits
01 Yes
02 No
88 Don't know
99 Refused

b) no longer receive food stamps
01 Yes
02 No
88 Don't know
99 Refused

c) reduced AFDC / TANF
01 Yes
02 No
88 Don't know
99 Refused

d) reduced food stamps
01 Yes
02 No
88 Don't know
99 Refused

e) have had problems with the EBT system
01 Yes---(Please explain:_____)
02 No
88 Don't know
99 Refused

f) the amount of food available to my family has decreased
01 Yes
02 No
88 Don't know
99 Refused

g) the health of my child has been affected
01 Yes---(how:_____)
02 No
88 Don't know
99 Refused

h) my privacy has been invaded
01 Yes---(Please specify:_____)
02 No
88 Don't know
99 Refused

i) I am being forced to seek work without adequate day care arrangements for my children
01 Yes
02 No
88 Don't know
99 Refused

j) I am happier now because thanks to welfare reform I have a job or will soon get one
01 Yes
02 No
88 Don't know
99 Refused

k) I can no longer afford adequate housing
01 Yes
02 No
88 Don't know
99 Refused

l) I feel more rejected by society
01 Yes
02 No
88 Don't know
99 Refused

m) I am more uncertain about how I will get food for my family
01 Yes
02 No
88 Don't know
99 Refused

n) I feel less optimistic about life
01 Yes
02 No
88 Don't know
99 Refused

o) I don't understand all the new rules to avoid being penalized
01 Yes
02 No
88 Don't know
99 Refused

p) Is there any other positive or negative way that welfare reform has affected your life?

_____

_____

q) none of the above, welfare reform has not affected my life in any way
01 Yes
02 No
88 Don't know
99 Refused

G. BREASTFEEDING

1. Were you employed outside of your home when (the child) was born?
01 Yes
02 No
88 Don't know
99 Refused

2. Did you breastfeed the child that was born prior to (the child)?
01 Yes
02 No---(Skip to q. 4)
66 Not applicable
88 Don't know
99 Refused

3. For how long?
_____Months _____Weeks _____Days

4. Were you breastfed as a child?
01 Yes
02 No
88 Don't know
99 Refused

5. Did you ever breastfeed (place study child name here)?
01 Yes
02 No---(Skip to q. 9)
66 Does not apply
88 Don't know
99 Refused

6. Are you currently breastfeeding (place study child name here)?
   01 Yes---(Skip to q. 10)
   02 No
   66 Does not apply
   88 Don't know
   99 Refused

7. How long did you breastfeed (place study child name here)?
   _____Months _____Weeks _____Days

8. What made you stop breastfeeding (place study child name here)?_____
   _____
   _____
   (If answered q. 8, skip to q. 10)

9. What made you decide NOT to breastfeed? _____
   _____
   _____
   (**Interviewer**: If mother responds with "because I did not want to" or "did not feel like it", etc., probe for a more specific answer).

10. Were you advised to breastfeed during prenatal visits?
    01 Yes
    02 No
    88 Don't know
    99 Refused

11. Were you advised to bottlefeed during prenatal visits?
    01 Yes
    02 No
    88 Don't know
    99 Refused

12. Were you advised to breastfeed at the hospital when you delivered your child?
    01 Yes
    02 No
    88 Don't know
    99 Refused

13. Were you advised to bottlefeed at the hospital when you delivered your child?
    01 Yes
    02 No
    88 Don't know
    99 Refused

H. CHILD AND CARETAKER HEALTH INFORMATION

1. How would you rate your overall health?
    01 Poor
    02 Fair
    03 Good
    04 Excellent
    88 Don't know
    99 Refused

2. How would you rate your child's overall health?
    01 Poor
    02 Fair
    03 Good
    04 Excellent
    88 Don't know
    99 Refused

3. Please tell us if you or your child has ever suffered from any of the following diseases:

	Caretaker			Child		
a) Diabetes	Yes	No	D/K	Yes	No	D/K
b) Liver disease	Yes	No	D/K	Yes	No	D/K
c) Heart disease	Yes	No	D/K	Yes	No	D/K
d) Hypertension	Yes	No	D/K	Yes	No	D/K
e) Asthma	Yes	No	D/K	Yes	No	D/K
f) Gall stones	Yes	No	D/K	Yes	No	D/K
g) Tuberculosis	Yes	No	D/K	Yes	No	D/K
h) Cancer	Yes	No	D/K	Yes	No	D/K
i) Renal disease	Yes	No	D/K	Yes	No	D/K
j) Other _____	Yes	No	D/K	Yes	No	D/K

4. Please provide child's medical conditions since birth:

	Does the child have...?			Number of times since birth
Allergies	Yes	No	D/K	
Asthma	Yes	No	D/K	____ times hospitalized
Diarrhea	Yes	No	D/K	
Colds or fever	Yes	No	D/K	
Ear infection	Yes	No	D/K	
Nausea or vomiting	Yes	No	D/K	

5. Has the child been hospitalized since birth?
   01 Yes
   02 No---(Skip to q. 7)
   88 Don't know
   99 Refused

5a. Did the child stay at least 1 night?
   01 Yes
   02 No
   88 Don't know
   99 Refused

6. Why has the child been hospitalized? (List all reasons for admission)

_____

_____

Interviewer--READ ALOUD: We are interested in information that will help mothers have healthier babies, and we would like to know more about your health. Your answers to the following questions are strictly confidential and will be used solely for the purpose of this study.

7. Do you smoke cigarettes?
   01 Yes
   02 No---(Skip to q. 9)
   88 Don't know
   99 Refused

8. How many cigarettes do you smoke per day?
   Enter number_____

9. Do you drink alcoholic drinks containing alcohol including wine and beer?
   01 Yes
   02 No---(Skip to q. 12)
   88 Don't know
   99 Refused

10. How often do you drink?
   a) During the week: _____ days per week
   b) On the weekend:(circle one) Saturday Sunday Both

11. On average, how many drinks do you drink each time?
   a) During the week:_____
   b) On the weekend:_____

Interviewer--listen to respondent's answer, mark ONE category only

12. Do you routinely use any recreational drugs such as marijuana, cocaine, crack, heroin, LSD (hallucinogens), or other?
   01 Yes
   02 No
   88 Don't know
   99 Refused

I. CARETAKER'S NUTRITION KNOWLEDGE

1. Have you ever seen this? (Show Food Guide Pyramid picture)
   01 Yes
   02 No
   88 Don't know
   99 Refused

2. What is it for? _____
   01 Food industry promotional material
   02 A game for children
   03 A guide for better eating
   77 Other:_____
   88 Don't know
   99 Refused

8. What do you look at on the food label when you are deciding which foods are the healthiest? (Circle all answers that apply)

a) Serving size	01 Yes	02 No	88 D/K
b) Calories	01 Yes	02 No	88 D/K
c) Total fat	01 Yes	02 No	88 D/K
d) Ingredients	01 Yes	02 No	88 D/K
e) Sodium	01 Yes	02 No	88 D/K
f) Cholesterol	01 Yes	02 No	88 D/K
g) Other _____	01 Yes	02 No	88 D/K

9. Have you heard about saturated fat?
   01 Yes
   02 No---(skip to q. 11)
   88 Don't know
   99 Refused

10. Which of these foods do you think is/are a good source of saturated fat?

a) Bananas	01 Yes	02 No	88 D/K
b) Pork	01 Yes	02 No	88 D/K
d) Rice	01 Yes	02 No	88 D/K
c) Potato	01 Yes	02 No	88 D/K
d) Bacon	01 Yes	02 No	88 D/K

11. Have you heard about cholesterol?
   01 Yes
   02 No---(skip to q. 13)
   88 Don't know
   99 Refused

12. Which of these foods do you think is/are a good source of cholesterol?

a) Sweet potato	01 Yes	02 No	88 D/K
b) Chicken	01 Yes	02 No	88 D/K
c) Papaya	01 Yes	02 No	88 D/K
d) Rice	01 Yes	02 No	88 D/K
e) Eggs	01 Yes	02 No	88 D/K

13. Which of the following foods would be a good source of calcium for your children?

a) Pork	01 Yes	02 No	88 D/K
b) Apples	01 Yes	02 No	88 D/K
c) Milk	01 Yes	02 No	88 D/K
d) Corn	01 Yes	02 No	88 D/K
e) Rice	01 Yes	02 No	88 D/K

3. How many portions of each food group should you and your family eat everyday?

	Number of portions:			
a) Fruits	1	2-4	6-11	D/K
b) Vegetables	1-2	3-5	6-11	D/K
c) Breads/cereals/rice	2-4	3-5	6-11	D/K
d) Milk/yogurt/cheese	2-3	5-7	6-11	D/K
e) Meat/beans	2-3	5-7	8-10	D/K

4. How old should your baby be before you begin feeding baby food?
(Example: cereal, applesauce....) (Choose only one)
01) Less than 2 months
02) 2 months
03) 4-6 months
04) 8 months
05) 12 months

5. What is the appropriate age to start giving whole cow's milk to children?
(Choose only one)
01) 2 months
02) 6 months
03) 8 months
04) After 12 months

6. Do you know what a food label is?
(Show example of food label when respondent answers)
01 Yes
02 No
99 Refused

7. When you are grocery shopping, do you read the food label before deciding what foods to buy?
01 Never---(Skip to q. 9)
02 Sometimes
03 Always
99 Refused

14. Which of these foods would be a good source of vitamin A for your children?

a) Carrots	01 Yes	02 No	88 D/K
b) Beans	01 Yes	02 No	88 D/K
c) Peanut butter	01 Yes	02 No	88 D/K
d) Bananas	01 Yes	02 No	88 D/K
e) Raisins	01 Yes	02 No	88 D/K

15. If your doctor tells you that your child is anemic, which of these nutrients is he/she likely to need?

a) Iron	01 Yes	02 No	88 D/K
b) Protein	01 Yes	02 No	88 D/K
c) Calcium	01 Yes	02 No	88 D/K
d) Phosphorus	01 Yes	02 No	88 D/K

16. Have you ever heard of spina bifida or neural tube defect?
    01 Yes
    02 No
    88 Don't know
    99 Refused

17. Do you know which of these nutrients can prevent spina bifida or neural tube defect from occurring if consumed by the mother very early in pregnancy? (Choose only one)
    01 Iron
    02 Calcium
    03 Folic Acid
    04 Protein
    88 D/K

18. Have you heard of the relationship between folic acid and neural tube defect?
    01 Yes---Please specify where you heard of it:_____
    02 No---(skip to q. 19)
    88 Don't know
    99 Refused

18a. Which of the following foods are good sources of folic acid?

a) apples	01 Yes	02 No	88 D/K
b) pork	01 Yes	02 No	88 D/K
c) orange juice	01 Yes	02 No	88 D/K
d) beans	01 Yes	02 No	88 D/K
e) milk	01 Yes	02 No	88 D/K
f) spinach	01 Yes	02 No	88 D/K

19. Do you believe that childhood obesity could end up causing the following?

a) Heart disease	01 Yes	02 No	88 D/K
b) High blood pressure	01 Yes	02 No	88 D/K
c) Diabetes	01 Yes	02 No	88 D/K
d) Good health	01 Yes	02 No	88 D/K
e) Any other (specify)_____	01 Yes	02 No	88 D/K

20. Do any of these actions represent a healthy way for children to loose weight?

a) Prepare less fried foods	01 Yes	02 No	88 D/K
b) Limit fruits	01 Yes	02 No	88 D/K
c) Limit vegetables	01 Yes	02 No	88 D/K
d) Exercise	01 Yes	02 No	88 D/K
e) Drink more juice	01 Yes	02 No	88 D/K
f) Skip breakfast	01 Yes	02 No	88 D/K
g) Any other (specify)_____	01 Yes	02 No	88 D/K

J. ANTHROPOMETRY

--Interviewer: record measurements in METRIC units whenever possible

	Caretaker		Child	
	pounds	Kg	pounds	Kg
Weight 1				
Weight 2				
Average weight				
	ft & in	meters	ft & in	meters
Height 1				
Height 2				
Average height				

1. How many hours per week does your child watch television?

   _____ hours/week

2. Do you think your neighborhood or street is safe or unsafe?

   01 Very unsafe 02 Unsafe 03 Safe 04 Very safe

3. As a result, would you encourage or discourage your child to play outside in the streets?

   01 Discourage a lot 02 Discourage a little 03 Encourage a little 04 Encourage a lot