Columbia University
MAILMAN SCHOOL
OF PUBLIC HEALTH

On the Edge:
Children and Families Displaced by Hurricanes Katrina and Rita Face a Looming Medical and Mental Health Crisis

A report of the Louisiana Child & Family Health Study, based on a February 2006 household survey of families living in FEMA-subsidized community settings in Louisiana

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Louisiana Child & Family Health Study

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This study was approved by the Columbia University Medical Center Institutional Review Board.

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Executive Summary

The individuals and families who were displaced by Hurricanes Katrina and Rita and who have ended up in FEMA-subsidized community housing in Louisiana are facing a second crisis, one in which untreated and under-treated chronic medical problems and incipient mental health issues will overwhelm patients and providers. Among the displaced, children may be particularly vulnerable. In New Orleans alone, approximately 110,000 children under age eighteen – 85% of the pre-Katrina pediatric population – have not returned to the city since the hurricanes. These children, and others from outside of New Orleans, have been scattered throughout the Gulf Coast and across the fifty states. Louisiana's school enrollment dropped by 70,000 students, many of whom have resettled in other states, some who have not yet returned to school in Louisiana. The Louisiana Child & Family Health Study focused on the displaced population living in FEMA-subsidized housing in Louisiana, and who may be among the most needy. According to interviews with adults in 665 randomly selected households at trailer communities and hotels throughout the state, this displaced group of children and families suffers from a constellation of serious medical and mental health problems. Parents report high rates of asthma, behavioral problems, and learning disabilities among their children. Despite that, access to continuous medical care, appropriate mental health care, medications, specialized medical equipment, and specialty medical care, is either fragmented at best, or absent altogether.

The medical and mental health needs documented in this report may be regarded as the consequence of inadequately treated chronic diseases, psychological and emotional traumas secondary to the chaos and despair of a massive dislocation, and the social deprivations of the chronically-poor and the newly-impoverished. At a deeper level, though, the problems relate to the loss of stability in people's lives: families that are increasingly fragile, children who are disengaged from schools, and the wholesale loss of community, workplace, and health care providers and institutions.

How the Study was Conducted

During the period of February 11 through February 20, 2006, the Columbia-led Louisiana Child & Family Health Study, working in partnership with the Louisiana Department of Health and Hospitals, conducted a rapid assessment among Louisiana residents displaced by Hurricanes Katrina and Rita. The purpose of the study was to gather information that could inform local, state, and federal policymakers about the health and social service needs of displaced populations living in transitional community-based settings, such as trailer parks and hotels. Following a multi-stage sampling strategy based on lists of trailer parks and hotels with FEMA-subsidized housing units, 665 randomly-selected households were recruited in to the study, establishing a cohort representative of the over 12,000 displaced households living in FEMA-sponsored community-based housing as of January 31, 2006. The study also collected data on a randomized selection of children within the sampled households.

Key Findings

Children suffer from high rates of chronic health conditions and poor access to care

- 34% of children living in FEMA-subsidized community settings have at least one diagnosed chronic medical condition, a rate one-third higher than that of the general pediatric population in the United States. Compared to children surveyed in urban areas in Louisiana in 2003, the displaced children are more likely to suffer from asthma, behavioral or conduct problems, developmental delay or physical impairment, and learning disabilities.

- Nearly half the children who had a personal medical doctor who knew their medical history – a "medical home" – before Katrina did not have one after the hurricane. Several parents who reported that their child still had a personal medical doctor noted that they had not tried to contact the doctor since the hurricane, and were not sure where the doctor had moved or how to contact the physician.

- A number of parents reported that they had a child who was either hospitalized or required repeated visits to the emergency room for acute asthmatic episodes because they could not get their child's asthmatic medications. The reasons cited included the loss of medical records, lack of insurance coverage accepted at local pharmacies, inability to get to pharmacies, and medical providers who would not prescribe the medications because they were unfamiliar with the child's past medical history. One parent noted that her child could not receive medications for ADHD and depression until the social worker had completed a 45-day evaluation period, again a consequence of lost medical records and discontinuous medical care.

- Among the children who needed prescription medication in the prior three months, 14% did not receive all their prescribed medications, a rate seven times as high as that reported by parents of children surveyed in Louisiana in 2003.

- Parents in the displaced population are more likely to report that their children's health is fair or poor (11%), a rate over three times as high as the general pediatric population in the US, as reported by parents surveyed in 2003.

- Among children who needed specialized medical equipment, such as nebulizers, 61% of the parents reported that it proved to be a "big" or "moderate" problem to get the equipment. Among the parents surveyed pre-Katrina in urban areas of Louisiana, only 17% reported such problems.

Mental health is a significant issue for both parents and children

- Nearly half of the parents surveyed reported that at least one child in their household had emotional or behavioral difficulties that he or she didn't have

before the hurricane, such as feeling sad or depressed, being nervous or afraid, or having problems sleeping or getting along with others.

- Parents, and mothers in particular, scored very low on a standardized mental health screening tool, one which has been widely used to measure the extent to which poor mental health interferes with daily activities. Over half of the women caregivers scored at levels consistent with clinically-diagnosed psychiatric problems, such as depression or anxiety disorders. Children whose parents scored very low on this mental health score were two and a half times as likely to have experienced emotional or behavioral problems after the hurricane, according to the parents. Additionally, women caregivers were six times as likely to report that they were not coping well with the daily demands of parenting when compared to parents in a pre-Katrina survey of urban Louisianans.

- Several parents and caregivers reported difficulties finding appropriate and accessible mental health services. One parent, whose 6-year old was on an 18-month waiting list for psychiatric care, was told that she still needed a referral from her primary care physician even though he had relocated to Puerto Rico after the hurricane. Several respondents noted it was increasingly difficult or impossible for them to maintain their own prescribed psychotropic medications, either because they could not find appropriate psychiatric help or their medical records had been lost.

The safety nets designed to protect children's and family's welfare have major gaps

- Over one-fifth of the school-age children who were displaced were either not in school, or had missed 10 or more days of school in the past month.

- 44% of the caregivers surveyed reported that they did not have health insurance, although nearly half had at least one chronic medical condition. A number indicated that they had lost their insurance when they lost their jobs subsequent to the storm. 10% of children were uninsured.

- Several caregivers noted the inter-state differences they experienced in service availability after the hurricane. One grandparent caring for her seven grandchildren noted that when she was evacuated to Texas she was eligible for and received both Medicaid coverage and food stamps, both of which were denied when she returned to Louisiana, suggesting a difference in program requirements and eligibility criteria. A parent of a child with muscular dystrophy reported that when she was evacuated to Virginia, her child had access to both medications and medical services, both of which have proved to be bigger problems upon her return to Louisiana.

The displaced have lost stability, income, and security

- On average, households have moved 3.5 times since the hurricane, some as

many as nine times, often across state lines. Each move involved various issues of resettlement, and a number of parents described lags in re-enrolling children at a new school with each move.

- Nearly two-thirds of the households had at least one adult with a full-time or part-time job prior to Katrina, whereas only 45% had a salaried wage-earner after the hurricane. This drop in income of twenty percentage points was not offset by an increase in public benefits.

- Nearly half of parents and other caregivers believe that their children are either never or only sometimes safe in their community, compared to 21% of caregivers answering the same question in urban Louisiana pre-Katrina. 69% of caregivers believed there were people in their current nieghborhood who would be a bad influence on their children, compared to 52% of caregivers pre-Katrina.

- There was an ongoing need reported for specific services, particularly regarding financial matters (72% of households had a need in the past 3 months), household items or clothing (60%), and food, groceries, or meals (52%). A number of respondents noted that since FEMA had discontinued paying for the propane tanks for their trailers (a policy implemented during the study's fieldwork) they had elected to turn off the heat in their trailers and sharply curtail the use of hot water.

- Virtually all the respondents in the study came from one of five Louisiana parishes – Orleans (65%), Saint Bernard (11%), Saint Tammany (10%), Jefferson (7%), and Plaquemines (4%) – which were among the hardest hit by Katrina, and many of which are years from being redeveloped. 58% of the respondents would like to return to their former neighborhood, 30% would like to relocate elsewhere (including a number of respondents interested in purchasing their FEMA-subsidized travel trailers and then moving them elsewhere), and 11% were still unsure as to their future plans.

Summary

Failing to stabilize the systems of care in people's lives will likely have long-term consequences. Parents' mental health issues, such as untreated depression, have been shown to increase the risk of mental health disability among children, many of whom are traumatized and already psychologically vulnerable; the lack of sufficient school-based services and capacity, as well as students own lack of attendance, will likely lead to diminished academic performance and advancement, further limiting their economic opportunities; and social isolation may lead to increased risk behaviors such as drug use, which in turn increases the hazards of communicable disease, crime, and incarceration. Although these outcomes are far from assured, the absence of systems of care to address them now makes them far more likely to occur in the future.

Furthermore, the needs and system-wide gaps evidenced by the massive dislocation of an urban population suggest a review of disaster preparedness planning

for both mid-term and long-term recovery efforts by government and private sector providers, in particular the need to develop plans for reconstituting medical care and mental health systems and providing for continuity of care. Much as Hurricane Katrina served as a sobering test of the protocols of the newly-drafted National Response Plan and of state and local emergency response plans, it has also tested – and severely strained – the capacity of local health systems and public health departments to manage major population shifts and provider losses and still deliver preventive, chronic, and acute care services.

As lessons are drawn to ensure future preparedness, four systems deserve particular attention. The problems experienced by Louisiana's displaced children and families can be related to breakdowns in systems related to (1) access to care, (2) availability of ongoing primary, mental health, and dental care, (3) assurance of continuity of care, and (4) the ability of schools to reach out and engage students and their families. Making these system-wide issues even more challenging is the scope of these safety nets, which often have to be stretched to cover displaced populations across county and sometimes state lines. As noted above, respondents in this study reported problems related to loss of medical insurance subsequent to losing their jobs in the wake of the hurricane, their inability to qualify for or receive specific social welfare benefits (despite having qualified in a neighboring state), and maintaining medications and continuous medical care in the face of lost medical records. These problems suggest the need for post-disaster systems that can sustain long-term preventive and primary care, and assure access to medical records (perhaps through the use of such strategies as a standardized patient-held medical record, electronic medical records, or statewide registries of disaster victims). Equally important for children who find themselves displaced for long periods of time are stable school environments. In the aftermath of such major dislocations, school systems may need to institute outreach programs to expedite enrollment in schools and case-manage cases of disengagement or missed school days, as well as serving as a referral point for local service providers for both students and their families.

Finally, the data fail to capture what is immediately evident to even the most casual observer of the trailer communities. As emergency and transitional housing settings, the FEMA-developed trailer parks are more than adequate, providing residents with the essentials of private shelter, water, and sanitation. However, once the "emergent" phase is over the trailer parks evolve in to semi-permanent communities, and in this light they are often dismal and desolate. Hastily erected on available parcels of land, often in undesirable locations such as on the edge of a commercial airport, the parks feel more like military encampments than family neighborhoods. In contrast, the private trailer communities, most of which were well-established years before the hurricane and which often reflect an aesthetic of design and planning, feel more like established neighborhoods. There may be a lesson for preparedness planners from housing experiments such as Chicago's Gatreaux Program, in which public housing residents were resettled in scatter-site fashion in higher-income suburban settings, and who subsequently experienced better health, educational, and economic outcomes. If a relocation might last longer than six months, it may be worthwhile to consider a secondary resettlement of small clusters of residents from FEMA-style trailer parks to

well-established “healthy” neighborhoods, taking in to account the incentives necessary for both the relocating residents and the recipient communities.

Introduction

Half a year after Hurricanes Katrina and Rita struck the Gulf Coast, hundreds of thousands of people displaced from their homes are still not permanently resettled. Based on a rapid population estimate conducted by the City of New Orleans at the end of January 2006, only 181,000 people – or 37% of the city's pre-hurricane population of 485,000 – were living in the city[1]. Louisiana residents sought shelter after the hurricanes in temporary, transitional, or semi-permanent housing, or were placed in shelters and transitional housing as part of the massive evacuation and relocation effort undertaken by the Federal Emergency Management Agency (FEMA) and the American Red Cross . Most of the displaced have ended up living out of state; relocated within the state; doubled up with friends or family; or living in FEMA-subsidized housing in the state.

Determining the number of displaced people is difficult. The Louisiana Department of Health and Hospitals' Bureau of Primary Care and Rural Health used school enrollment data to estimate that, as of February 2006, approximately 371,000 people had left Louisiana[2]. Based on data made available to the authors by the Federal Emergency Management Agency, as of January 31, 2006 there were 2,836 occupied FEMA-subsidized travel trailers and mobile homes that were community-based, and 9,658 hotel units[3]. Assuming an average household size of 2.5 people per household, this represents 31,235 individuals. Very little is known about the conditions and needs of these people, who are among the most dependent upon government support to sustain their transitional housing. No representative sampling or systematic face-to-face interviews had been carried out with this population prior to this study.

During the nine-day period of February 12 - February 20, 2006, the Columbia University-led Louisiana Child & Family Health Study conducted a household survey of the health and well-being of these people. Working in partnership with the Louisiana Department of Health and Hospitals, the team followed a multi-stage sampling strategy and a randomized selection of children within households to interview a representative sample of all evacuees at congregate transitional housing sites throughout the state.

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[1] Rapid Population Estimate Project, Jan 28-29, 2006 Survey Report, Emergency Operations Center, City of New Orleans.

[2] Louisiana Department of Health and Hospitals Bureau of Primary Care and Rural Health, "Post-Disaster Population Estimates," downloaded March 22, 2006, http://www.gnocdc.org.

[3] Additionally, as of 1/31/06, FEMA had provided 30,142 travel trailers to private residences. These were set up in driveways and yards of damaged homes where there was sufficient community-wide electrical and water infrastructure to support them.

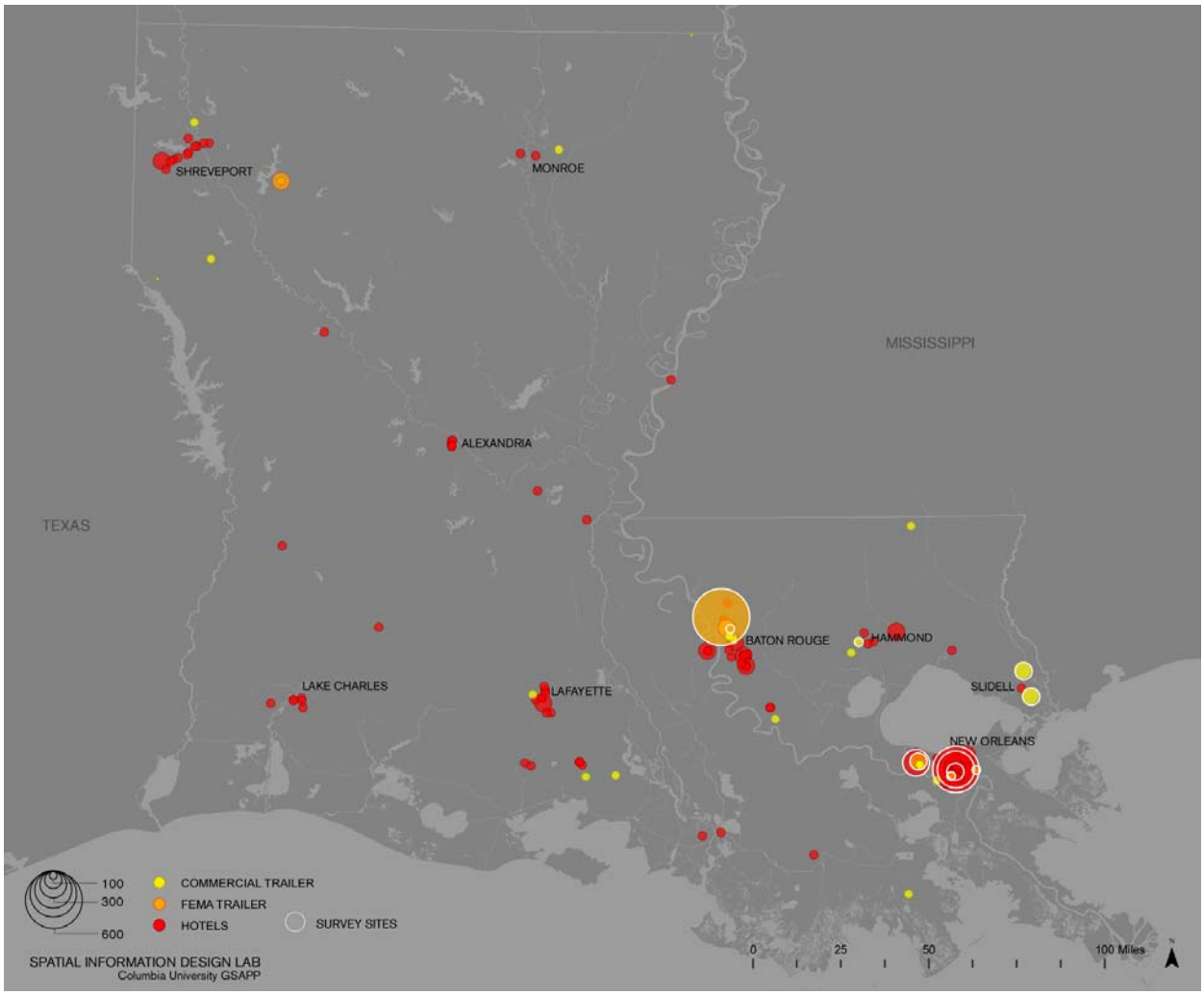

Figure 1. FEMA-subsidized community housing sites, by type (as of 1/31/06)

In the first stage of sampling, the list of congregate sites with FEMA-subsidized housing in Louisiana was stratified by type of site. The listing of sites and occupancy status was current as of January 31, 2006. "*FEMA sites*" were those locations in which FEMA developed new trailer parks and managed them through a subcontractor. "*Private sites*" were either pre-existing trailer parks or mobile home sites developed and managed by private or commercial firms. "*Hotels*" included hotels, motels, and bed-and-breakfasts which had rented rooms to FEMA and the American Red Cross housing program. At all of these sites, the household unit – whether trailer, mobile home, or hotel room – was paid for by FEMA. In the second stage of sample selection, the sample was further stratified by the size of the site based on the number of occupied units (1-25, 26-50, 51-100, 101+ residential units). In order to maximize an efficient fieldwork operation, sites having fewer than 25 occupied units were dropped from the sample frame, but because of the dynamic nature of residential movement and policy changes the actual number of occupied units at the time of fieldwork (two weeks after

the lists had been generated) could have been greater or smaller[4]. Using a random number list, congregate sites were selected within each substratum using a probability proportional to size strategy without replacement. This permitted any given site to be selected more than once, thus allowing oversampling of units at that site. Based on site visits in advance of the field team, a number of sampled sites were deemed ineligible, either because the number of occupied units had dropped below 26 or the site could not be identified. These sites were replaced using pre-selected replacement sites. Because the hotel population was shifting dramatically during the period of fieldwork (see the footnote below), the decision was made to restrict the sample to hotels with greater than 101 occupied units on the sample frame list. Ultimately, a total of fourteen sites were included in the survey: five FEMA trailer sites, five private trailer sites, and four hotel sites[5].

Figure 1 is a map of the state with the location of each FEMA-subsidized congregate housing site, by type of site. The sampled sites are highlighted in white.

Upon arrival at each site, the number of occupied units was enumerated. If a randomly selected unit was vacant or unoccupied at the time of the survey – despite repeat visits, sometimes over multiple days – a replacement unit was identified. In practice, even though the field team was on site for an average of ten hours per site (from approximately 10 am through 8 pm) a number of units were vacant or residents were not at home. In such cases, virtually all occupied units on the site would be included in the sample.

At each household, an eligible adult respondent was sought who (a) lived at that site, and (b) was the "primary caregiver," someone who would know the health issues of all the individuals in the household. Each survey took, on average, between 30-45 minutes to complete. All members of the household were enumerated and selected data were collected on all household members (e.g., age, gender, relationship to respondent, school attendance, chronic health conditions). In addition, a Kish sampling strategy was used to randomly select one child in the household for more detailed questions. Using the survey instrument, trained interviewers collected data on:

- pediatric and adult health status;
- the prevalence of chronic medical conditions among sampled households;

[4] The most notable policy shift was a February 13, 2006 deadline to end the hotel subsidy program. Although the deadline was extended during the study fieldwork, the number of occupied hotel units dropped from 9,658 units to 6,027 units from January 31 to February 17, a 38% decrease. There was an increase of 7,234 travel trailers during this period but it is unknown to the authors how many trailers were developed at congregate sites and how many went to private residences.

[5] Two of the sampled sites were "employer-sponsored" sites, in that all the occupied units at a specific site were employees of a single employer (such as a hospital or a hotel). There were a total of 41 units sampled at these two sites, 21 at a hotel and 20 at a private trailer site. Since they do not reflect "community-based" housing sites we have elected to remove them from the data tables and analyses in which comparisons are made between types of sites, although the respondents are included when the total displaced population is examined.

- access to health care and services, including health insurance coverage;
- primary medical, specialty, and dental care needs among sampled children;
- the prevalence of behavioral conditions and learning disabilities among children;
- household characteristics such as social and economic resources;
- social service needs;
- a brief history of the residents' displacement after the hurricanes; and
- the demographics of the displaced population.

Initially, 1000 household units were randomly sampled. If a sampled household was vacant or no one was at home despite repeated visits during the period of the survey fieldwork, the adjacent household was substituted in its place. Using these decision rules, a total of 601 units were substituted. Among these 1,601 households in the final sampling frame, 820 had an eligible adult present to whom the study was presented. Among these 820 households, 665 completed an interview (an 81% cooperation rate), 111 refused to participate (a 14% refusal rate) and 44 were unavailable to be interviewed. The overall response rate was calculated as 665 divided by 1,601, or 42%[6].

Among the 665 sampled households, 252 (38%) had at least one child present. The total number of individuals in the sampled households was 1,171 adults, 157 children between the ages of newborn and 5 years old, and 331 children between the ages of 6 and 17 years old. Another 61 of residents' children were living elsewhere.

The survey was conducted as a confidential interview, and respondents did not have to provide their names in order to participate. At the end of the interview, respondents were asked if they would agree to be contacted in the future. Voluntary follow-up information was collected from 560 of the 665 households (84%). Over the nine days of interviewing, the research team completed 335 interviews at FEMA trailer communities, 183 interviews at private trailer parks, and 147 interviews at hotel sites.

Key Issues Examined & the Structure of this Report

We highlight several key issues to inform policy-makers, service providers, and advocates as they consider the short-term and long-term needs of those who have been displaced by the storms. The report paints a bleak picture of the lives of displaced families and children struggling to recover. Within families there is an enormous burden of stress, anxiety, and depression that clearly threatens the family's ability to function. Adding to these new burdens are the existing burdens of chronic disease and disability, which already affected these populations before the hurricanes. In addition, many of the "social anchors" in these peoples' lives have been completely torn apart. In some areas, neighborhoods have been decimated, and with them have gone the social fabric of schools, churches, informal networks of friends and family, and health and social service organizations that had sustained them.

[6] Calculations followed the American Association for Public Opinion Research's Standard Definitions: Final Dispositions of Case Codes and Outcome Rates for Surveys (2006).

This report focuses on the following areas:

1. ***A profile of the displaced population*** – who they are, where they're from, their resources, and a brief portrait of their transiency and future plans;

2. ***The key risks and stressors affecting children's welfare***;

3. ***Children's health status***, particularly as compared to pre-Katrina data collected as part of the National Survey of Child Health in 2003;

4. The ***social service needs affecting all households***.

In addition to the data presented in the body of the report, an appendix with more detailed data tables follows at the end of the report.

Profile of the Displaced Population

The majority of households in the study came from the areas hardest hit by Hurricane Katrina, particularly those areas that suffered extensive flooding. The parishes surrounding New Orleans – Jefferson, St. Bernards, Plaquemines, St. Tammany – and Orleans parish itself, constitute 97% of the neighborhoods from which respondents came. A recent report by the Office of the Federal Coordinator for Gulf Coast Rebuilding estimated that of 467,882 housing units in these five parishes, 182,143, or 38.9%, have suffered major or severe damage; in Orleans, Plaquemines, and St. Bernards parishes, over half the housing stock has sustained this catastrophic damage[7]. Figure 2 illustrates the place of origin of respondents who came from New Orleans. The lighter areas of the map represent higher ground (particularly flanking the Mississippi River, which snakes along the bottom portion of the map) and the darker areas represent the lowest elevations, particularly those bordering Lake Ponchetrain to the north. As is evident from the map, most of the respondents came from the Lower Ninth Ward and from New Orleans East.

A majority of respondents reported that they had evacuated before the hurricane made landfall. Overall, as noted in Table 1, 61% of the respondents had evacuated prior, although as Table A2 in Appendix 1 illustrates, respondents at the private trailer sites (76%) and hotels (63%) were more likely to have evacuated prior to landfall than were those we interviewed at the FEMA sites (53%).

The respondents in the study have moved an average of 3.5 times within the five-month period since the storm, ranging from 1 move to 9 moves, often across state

[7] "Current Housing Unit Damage Estimates: Hurricanes Katrina, Rita, and Wilma," Office of The Federal Coordinator for Gulf Coast Rebuilding at the Department of Homeland Security, Feb 12, 2006.

Table 1. Displacement & Relocation

- 61% of the displaced had evacuated BEFORE the hurricane.
- On average, households moved 3.5 times in the five-months since the hurricane, some as many as 9 times through multiple states.
- Among the displaced, 58% hope to return their original neighborhoods, 30% plan to relocate elsewhere, and 11% are unsure of their future plans.

lines and back and forth across the country. As illustrated in Table A2 in the appendix, the average tenure at their current residence is 11.6 weeks, although that did vary by site, with respondents at hotel sites reporting a tenure of 8.6 weeks compared to tenures of 12 weeks at the trailer communities. Over half the respondents indicated that they planned to return to their former neighborhood, and this also varied by type of site, with individuals at hotels – who might be regarded as living in the most temporary or transitional of sites – being the likeliest to report a plan to return to their former community (73%) when compared to residents of FEMA trailer sites (51%) or private trailer sites (57%). Overall, eleven percent are still unsure as to their future plans.

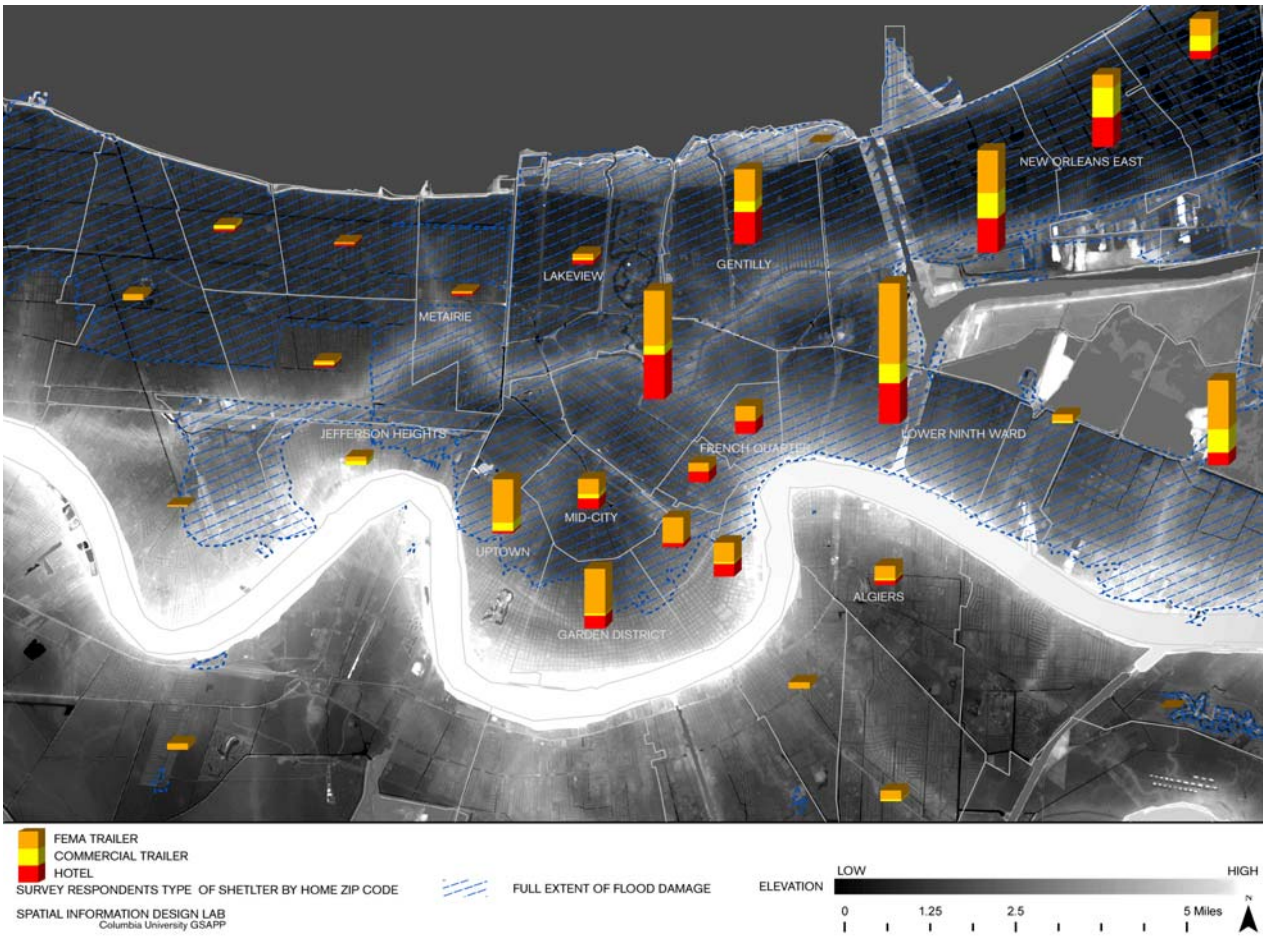

Figure 2. Elevation map of New Orleans with distribution of respondents, by type of site

The average household size ranged from 2.3 in the hotel rooms to 3.6 at the private trailer sites, with the absolute number ranging from 1 to as many 9 people in a single unit. At several sites the study team encountered extended families living in adjacent trailers (at one site, for example, the children were in one mobile home, under the supervision of a 16-year old sibling, while the parents were next door). A variety of

Table 2. Household Composition

- Average household size is 2.7 persons, with 2.5 in the FEMA trailers, 3.6 at the private trailer sites, and 2.3 in the hotel rooms.
- 38% of the sampled households have children under the age of 18 in the house. The private trailer sites are the most likely to have households with children (54%), the hotels the least (28%).
- Among households with children, 38% are headed by both parents, 43% by mother only, 7% by father only, and 11% by grandparents or other relatives.

caregiver types were heading the households with children, and this varied by type of site as well, as illustrated in Table A2a.

Table 3 illustrates two of the sociodemographic characteristics of the respondents, race/ethnicity and annual household income (tables A4 and A5 in the appendix provide more detail). Overall, the respondents are predominantly African-American, although this varies considerably by type of site. The private trailer sites have equal proportions of black and white respondents, whereas the hotel sites are almost exclusively composed of black respondents. Income varies by site as well, with the FEMA trailer communities having the most concentrated pockets of poverty. It is

Table 3. Sociodemographic Characteristics

	FEMA Trailer sites	Private Trailer Sites	Hotels
Number of households	335	163	126
Race/ethnicity of primary respondent			
Black	79%	49%	91%
White	14%	47%	6%
Latino	4%	5%	2%
Other	3%	0%	1%
Annual household income, 2005			
Less than $10,000	48%	34%	27%
$10,000 - $19,999	25%	23%	27%
$20,000 - $34,999	14%	22%	23%
Greater than $35,000	9%	17%	18%
Don't know / refused	4%	4%	5%

worth noting, though, that despite these clusters of economic disadvantage, 56% of the respondents at the FEMA trailer sites reported that their households had income from full-time or part-time salaries prior to the hurricane (Table A5). Overall, as illustrated in Table 4, 65% of households had salaried income before the hurricane, compared to only 45% after the hurricane. This net loss of 20 points was not compensated by a direct public assistance "gain" of 12 points, and even at those sites where the public assistance gain was closer to the net job loss (at hotel sites, a 24 point job loss is nearly compensated by a 21 point public assistance gain) it is unlikely that there is a dollar equivalency between a job wage and public assistance benefits. As illustrated in Table A5 certain income streams, such as Social Security, SSI, and SSDI, did not vary in the periods before and after Katrina, although alimony and child support dropped by nearly half after the hurricanes (overall, however, this income stream constituted less than 6% of all pre-Katrina revenue sources).

Table 4. Income Streams Before and After Katrina

Number of households	665
Employed full/time or part/time in week BEFORE Katrina	65%
Employed full/time or part/time AFTER Katrina	45%
Net employment "loss"	20%
Received public assistance in week BEFORE Katrina	24%
Received public assistance AFTER Katrina	36%
Net public assistance "gain"	12%

Risks and Stressors Affecting Children's Welfare

Particularly within the field of child development, a considerable literature has evolved on the factors associated with outcomes such as academic performance and social behavior. Among the most dominant frameworks is the bio-ecological model, which incorporates elements from a child's environment, his or her family, and factors inherent to the child[8]. According to this model, a child's well-being and social development is dependent upon the interaction of many positive forces, such as a safe

[8] See, in particular, G King et al (2005), Pathways to Children's Academic Performance and Prosocial Behaviour: Roles of physical health status, environmental, family, and child factors, *Int'l Journal of Disability, Development and Education*, 52(4):313-344; E Dubow and J Tisak (1989), The Relation between Stressful Life Events and Adjustment in Elementary School Children: The role of social support and social problem-solving skills, *Child Development*, 60(6):1412-1423; JL Wallander and JW Varni (1998), Effects of Pediatric Chronic Physical Disorders on Child and Family Adjustment, *J Child Psychology*, 39(1):29-46; U Bronfenbrenner and SJ Ceci (1994), Nature-Nurture Reconceptualized in Developmental Perspective: A bioecological model, *Psychological Review*, 101(4): 568-586; N Garmezy, AS Masten, A Tellegen (1984), The Study of Stress and Competence in Children: A building block for developmental psychopathology, *Child Development*, 55(1):97-111.

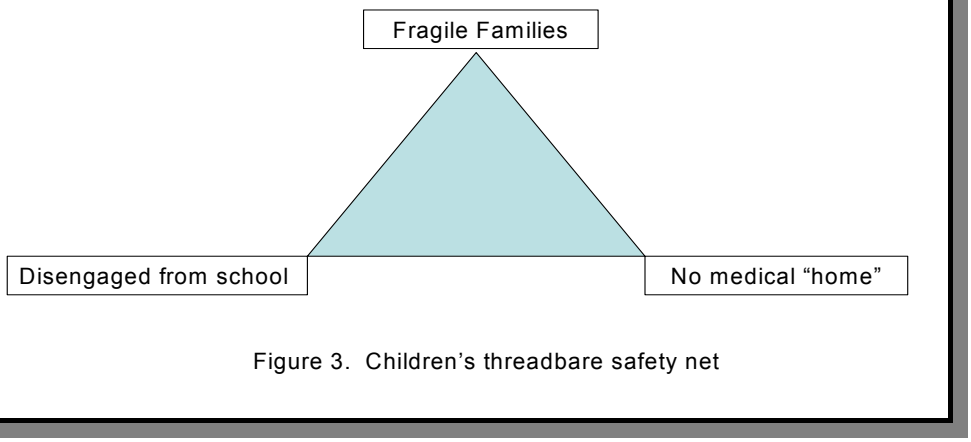

Figure 3. Children's threadbare safety net

and nurturing environment, positive role models, a strong functioning family, and the child's own physical health status and psychological predisposition. Moreover, a number of factors in a child's life can buffer – or protect – the child from a variety of stressful life events. Adapting features of this model, we have considered the support systems in place for the children of Louisiana's displaced population, since these children have experienced a cascading series of stressful and life-altering events within a very short period. In particular, we looked at the three systems that often exist to safeguard a child's welfare – the family, the school, and the presence of a medical "home." These supports within a child's life do not necessarily exert equal weight, and the protectiveness of any given factor is dependent upon the stressor or risk facing the child. Having a medical home, in which a doctor or nurse is familiar with a child's medical history and is regarded as his or her regular medical provider, may often serve a reactive role in response to specific health threats or in helping families manage a child's chronic condition, although the preventive aspects of such medical care should not be overlooked. Ideally, schools, as do medical homes, provide organizational supports to parents, providing tangible supportive services (such as counseling, special education services, after-school activities, and school-based health services) as well as serving a broader surveillance function in which a child's problems may be identified at an early stage and appropriate services mobilized in a timely fashion. Most important in a child's life, though, is a strong and supportive family environment, and this if often clearly dependent upon the health and well-being of the primary caregiver. One major study recently confirmed the finding that children of depressed mothers exhibit high rates of anxiety, disruptive, and depressive disorders, and that adequately treating the mothers has a positive effect on both mothers and children[9].

In order to estimate the strength of these supports, we have looked at particular measures for each domain. Table 5 illustrates several components of the family support system, particularly the physical and mental health status of the primary caregiver. As suggested by these findings, a striking number of families appear quite fragile. Over 37% of caregivers report that their overall health is only "fair" or "poor," compared to 10% of caregivers who were surveyed in urban areas in Louisiana as part of the National Survey of Child Health (NSCH) conducted in 2003 (see Table A7a for further details). Among caregivers, 44% report that they presently do not have medical

[9] MM Weisman et al (2006), Remissions in Maternal Depression and Child Psychopathology, *JAMA* 295(12): 1389-1398.

insurance (a number indicated that they had lost insurance when they lost their jobs subsequent to Katrina), despite the fact that 41% of caregivers report having a chronic condition requiring ongoing medical care. Furthermore, 12% of caregivers report that they are not coping very well with the daily demands of parenting, compared to 2% of pre-Katrina caregivers in the NSCH study. Most alarming, however, are the very low mental health scores reported by caregivers based on a standardized health scale. Nearly two-thirds of caregivers scored low on the mental health scale and nearly half

Table 5. Fragile Families

- Over one-third of caregiver parents report their health as "poor" or "fair," compared to 10% of parents from pre-Katrina urban households in Louisiana surveyed as part of the National Survey of Child Health in 2003.
- When asked how they are coping with daily parenting demands, 12% of the displaced caregivers report "not very well" or "not well at all," compared to 2% of pre-Katrina urban households in Louisiana.
- 65% of caregivers scored low on a standardized mental health score, and nearly half scored at levels consistent with clinical psychiatric symptomatology. There were striking gender differences as well, in that among women 53% scored at these very low levels, in contrast to 31% of the men scored at that very low level.
- 44% of caregivers do not have health insurance, although 41% have a chronic condition warranting ongoing medical care.

scored at levels consistent with clinical psychiatric symptomatology[10]. The mental health scale is scored from 0 - 100, with higher numbers representing better mental health and lower numbers representing mental health disability. Scores below 42.0 are generally associated with moderate mental health disability, and scores below 37.0 (one standard deviation below the population average) are associated with severe mental health disability such as anxiety disorders[11].

As Table 6 illustrates, the proportion of children not presently enrolled in school, 10% of all school-age children, is significantly higher than the 2% reported in the NSCH study of urban Louisiana residents prior to Katrina. When stratified by the age of the school children, it is evident that the secondary school-age children are more likely to be out of school (13%) than the elementary school-age children (5%). As illustrated in Table A10, overall rates of school disengagement are highest among residents of the hotels (14%), in comparison to the FEMA trailer communities (7.1%) and the private trailer sites (12%). Compounding the problem, a large number of school-age children have missed a number of school days in the past month, with the average number of

[10] Standardized mental health scores are based on the Medical Outcome Study's 12-item Short Form, version 2 (SF-12v2™ Health Survey, © 2002 by QualityMetric Inc.).

[11] See K Sanderson, G Andrews, W Jelsma (2001), Disability measurement in the anxiety disorders: comparison of three brief measures, *Journal of Anxiety Disorders*, 15:333-344, and G Andrews, S Henderson, W Hall (2001), Prevalence, comorbidity, disability, and service utilization, *British Journal of Psychiatry*, 178:145-153.

Table 6. School Disengagement

- 10% of school-age children are not in school. Among elementary school-age children, 6 - 11 years old, 5% are not in school. Among secondary school-age children, 12-17 years old, 13% are not in school.
- Among children attending school, the mean number of school days missed in the past month was 3.7, with as many as 22 school days missed.
- 21% of school-age children were either not in school, or had missed 10 or more days of school in the past month.

missed school days at 3.7 days. One measure of school disengagement combines the measures of "not in school" and days missed – 21% of school-age children were either not presently in school, or had missed 10 or more days of school in the past month.

The last of the three dimensions potentially affecting children's welfare is the presence of a regular medical provider, particularly one who knows the child's medical history. Not surprisingly, given the displacement from their former neighborhood and the closing of so many medical practices in the New Orleans metropolitan area, caregivers reported a considerable drop in medical homes. As the next section of this report will illustrate, children in the study were slightly more likely to have chronic medical conditions than were children surveyed in the pre-Katrina NSCH study, and they may have had access to episodic medical care, but the routine structured support of regular medical providers has been significantly compromised in the aftermath of Katrina. Furthermore, the proportion reporting a medical home after Katrina may represent an overestimate – a number of caregivers indicated during the survey that they had a regular medical provider (a medical home) although they have not tried to access this provider since the hurricane, and a number reported that their provider was no longer at their prior location and they had no forwarding address.

Table 7. Loss of Medical Homes

	FEMA Trailer sites	Private Trailer Sites	Hotels
Number of sampled children	118	88	35
Percent with a medical home BEFORE Katrina	73%	82%	74%
Percent with a medical home AFTER Katrina	27%	46%	31%
Net loss of medical homes	46%	36%	43%

All parents in the survey were asked whether any of their children had any emotional or behavioral difficulties that they didn't have before the hurricane, such as being very sad or depressed, feeling very nervous or afraid, having problems sleeping or problems getting along with people. As illustrated in Table A6, 44% of caregivers reported this global measure of emotional distress among their children. In order to test the strength of association between the measures of support suggested in this section

and the emotional distress outcome, we conducted a logistic regression controlling for type of housing site, household income, number of times that the family moved since the hurricane, and the presence of chronic medical conditions among caregivers or children. As illustrated in Table 8, three factors are significantly associated with this measure of emotional distress – living in a hotel, having a child in the household with a chronic medical condition, and having a caregiver who reports a very low mental health

Table 8. Odds of Households Reporting that Children Experienced Emotional or Behavioral Problems that they hadn't Experienced Before the Hurricane (n=206 households)

	Odds Ratio	p-value	95% Confidence Interval
Not in school, or missed 10+ days	1.51	0.341	.648, 3.50
Adults have chronic med cond.	0.94	0.849	.509, 1.74
Kids have chronic med cond.	2.53	0.004	1.34, 4.77
Caregiver has very low MH score	2.51	0.003	1.37, 4.60
Family has moved 5+ times	1.16	0.665	.585, 2.32
Annual income less than $10,000	0.89	0.716	.476, 1.66
Lost medical home after Katrina	1.08	0.814	.577, 2.01
Living in FEMA trailer (reference)	1	–	–
Living in private trailer site	1.13	0.731	.569, 2.32
Living in hotel	2.79	0.029	1.11, 7.03

score. All other factors being equal, households with caregivers reporting very low mental health are 2.5 times as likely to report emotional distress among their children than were households with caregivers with higher mental health scores. Similarly, households with children with chronic medical conditions are 2.5 times as likely to report children with emotional distress, and households living at hotels are 2.8 times as likely as households in FEMA trailer sites to report this emotional distress outcome. While this single test of association does not negate the importance of school engagement or medical homes, it does underscore the potential importance of addressing caregivers' mental health in concert with their children's emotional health.

Children's Health Status

As illustrated in Table 9 and in greater detail in Table A6 in the appendix, when compared with a comparable pre-Katrina population of children living in urban Louisiana in 2003, children living in the FEMA-subsidized congregate settings are more likely to have been diagnosed with asthma, depression or anxiety problems, behavioral or conduct problems, developmental delay or physical impairments, and learning disabilities. Although these chronic conditions likely predate the hurricane, suggesting that the children in the survey were in generally poorer health than the general urban population in Louisiana, the *need* for medications, immediate care, and specialty care is relatively similar across the two time periods. The differences do emerge, though, when it comes to access to services, preventive services, and the sufficiency of service

availability. Among children living in the FEMA settings who needed medication in the past 3 months, 14% did not receive all the medicine they were prescribed, compared to 2% among the pre-Katrina pediatric population. Among the reasons given for not having enough medicine was that parents did not have sufficient money to pay for the medicine or did not have insurance that covered the medicine, they couldn't get to the pharmacies in the area or none were nearby, or their medical records or prescription histories were lost and they couldn't get necessary medication refills. Among children who needed specialized medical equipment (16% in the FEMA settings, compared to 10% in the pre-Katrina population), 61% of the caregivers at the FEMA settings reported that getting the special medical equipment was a "big" or "moderate" problem, compared to only 17% of the pre-Katrina population who reported that. Rates of oral health services for children between the ages of 5 and 17 years old were considerably lower among the populations in FEMA settings than in the pre-Katrina urban populations. Only 61% of the FEMA population reported having seen a dentist within the past year compared to 84% of the pre-Katrina population. Among the FEMA population, 7% reported never having seen a dentist, compared to 2% of the pre-Katrina population. Insurance rates were also lower among the post-Katrina population: 10% of children in the FEMA congregate settings were uninsured (see Table A8) compared to 6% in the pre-Katrina population.

Table 9. Children's Health Status

	Displaced population (2006)	Pre-Katrina Urban Louisiana pop. (2003)
Number of randomly sampled children	252	1,685
Overall health is "poor" or "fair"	11%	4%
Chronic Conditions		
Asthma	18%	14%
Learning Disabilities	18%	10%
Behavioral or Conduct Problems	15%	7%
Developmental Delay or Physical Impairment	9%	4%
Depression or Anxiety	9%	4%
Diabetes	<1%	<1%
Percent of children with ANY chronic condition	33.7	25.7
Percent of children who did not receive all the medication they were prescribed in past 3 months	14%	2%
Among 6-17 year olds, have never seen a dentist	7%	2%
Children who need specialized medical equipment	16%	10%
Among those, percent for whom it was a "big" or "moderate" problem getting the needed equipment	61%	17%

The NSCH also reports on caregivers' perceptions of the safety and security of various environments to which children are exposed. As illustrated in Table A10, there are large differences between the pre- and post-Katrina populations. In the NSCH survey of urban Louisiana in 2003, 21% of caregivers reported that their children are either "never" or only "sometimes" safe in their community, compared to 47% among all the FEMA congregate settings. Within the FEMA settings there is variation as well – caregivers at the trailer communities are more likely to report feeling that their children are not safe (49% - 51%) than are caregivers at the hotels (21%). Caregivers at the FEMA congregate settings also were more likely to report that they felt their children were never or only sometimes safe at school (26%) when compared with the pre-Katrina population (15%), as well as at home (11% among the FEMA congregate settings, compared to 3% among the pre-Katrina population). When asked if they agreed with the statement that there were people in the immediate neighborhood they considered a bad influence on their children, 69% in the FEMA congregate settings either definitely or somewhat agreed, compared to 52% in the pre-Katrina population. These rates were even higher among the private trailer sites, where 82% of caregivers agreed with the statement of concern.

Social Service Needs Among Households

Clearly, as illustrated in Table 10 and in greater detail in Table A12, the needs for social services among the displaced households is great. Over half the households needed help with financial matters, household items or clothing, or food, groceries or meals in the past 3 months. For those critical needs, between half and two-thirds of the respondents indicated that they had received some help. However simply receiving the service was often not sufficient to resolve it – for those households that received

Table 10. Social Service Needs

	Percent who needed help in past 3 months (n)	Among those with need, % received service	Among those with need who did NOT GET service, % for whom problem is worse or no progress	Among those with need who did GET service, % for whom problem is worse or no progress
Number of households	665			
Financial matters	72% (472)	62%	74%	37%
Household items or clothing	60% (389)	55%	63%	23%
Food, groceries, meals	52% (336)	64%	59%	26%
Transportation	43% (278)	37%	77%	30%
Emotional or psychological help	38% (242)	29%	73%	33%
Employment services	31% (200)	24%	71%	24%

Note: The denominator for the first column regarding need is all households (665), whereas subsequent columns refer to the number with a specific need. For example, the denominator for financial matters' service is 472, for service received for household items is 389, etc.

services, between one-quarter and one-third still have an ongoing need for help. Among the households that **didn't** receive the service, the problems are even more entrenched. Approximately three-quarters of the households that didn't receive a service report that the underlying problems are still present or getting worse.

Summary

Rather than recover, children and families who have been displaced by the hurricanes are being pushed further toward the edge. Mounting problems since the evacuation, added to long-standing burdens of disability and ill-health, have made the situation of the displaced families more precarious. The formal systems that had existed "pre-Katrina" to safeguard children's welfare have foundered – doctors have relocated, medical records have been lost, clinics and hospitals have shuttered their doors – and families struggling to maintain their daily lives are unable to reconstitute new systems of care from scratch. A number of children have relocated to new school districts, but these schools are often unprepared or unable to deal with the complex problems brought to them. Moreover, a large number of children are not attending school at all, or are missing much of it.

Some of the consequences of this situation are evident today. They tend to reveal the fault lines of frayed health and social service systems – children hospitalized or sent to the emergency room unnecessarily for acute asthmatic episodes that could have been easily managed with appropriate preventive medications; drops in school performance because special education needs could not be met, or because children's home life was so chaotic; behavioral problems on the rise because children felt isolated or depressed and had no one to turn to.

Like a ticking time bomb, the long-term consequences of this massive displacement cannot be seen yet. It isn't clear how long families will be living in the "transitional" housing of trailer communities, but no matter how functional these temporary settings are in terms of providing reasonable shelter and basic necessities they are hardly self-sustaining communities. Nor can these trailer parks be expected to offer the depth of a city's resources. What will these trailer communities look like in a year, or two or three years? What will life be like in these "gated communities"? Isolation, coupled with despair and lack of opportunity, are the very same factors that led to what social scientists called "social anomie" over forty years ago. In the absence of strong families, strong economic opportunities, and strong systems of care, such social anomie leads to increases in risky behaviors such as unprotected sex and drug use; to increases in crime and the colonization of another generation of young men in prisons rather than jobs; and a rise in chronic health conditions that add further to both the personal and the social burden.

These outcomes are not foretold. They can be avoided, or at the very least, minimized. Saving this generation of children involves saving the families, and saving the families involves investing immediately in coordinated and appropriate systems of care. As the landscape of the Gulf Cost is rebuilt, we must pay similar attention to rebuilding the families of the Gulf Coast and the safety nets that sustain them.

Appendix 1: Data Tables

Table A1. Fieldwork Snapshot and Survey Response Rates

	TOTAL
# sampled household units	1,000
# units substituted because originally sampled unit vacant / not home	601
Total in sampling frame	1,601
# units no contact (vacant / not home / no eligible adult present)	781
# units engaged/invited to participate	820
# units refused	111
# units unavailable	43
# units interviewed	665
Response rate (interviewed / total sampling frame = 665 / 1601)	41%
Cooperation rate (interviewed / engaged = 665 / 820)	81%
Refusal rate (refused / enaged = 111 / 820)	14%

Table A2. Displacement History and Return Plans

	TOTAL	FEMA trailer sites	Private trailer sites	Hotels
Total (n)	665	335	163	126
Average tenure in current residence (# weeks)	11.6	12.2	12.1	8.6
Average # times moved since Katrina	3.5	3.1	4.2	3.7
Evacuated home before the hurricane? (%)	61.1	52.7	76.1	62.1
Current housing type (%)	665	335	183	147
FEMA trailer site	50.4	100	0	0
Private or Commercial trailer site	24.5	0	89.1	0
Hotel	19.0	0	0	85.7
Employer-sponsored site	6.2	0	10.9	14.3
Return/relocation plans (%)	634	327	152	115
Households planning to return to former neighborhood (%)	58.2	51.1	56.6	73.0
Households planning to relocate elsewhere (%)	30.3	36.9	30.9	19.1
Households unsure of future plans (%)	11.2	12.7	12.5	7.8

Figure A1. Survey Respondents by Zip Code of Origin and by Current Housing Type

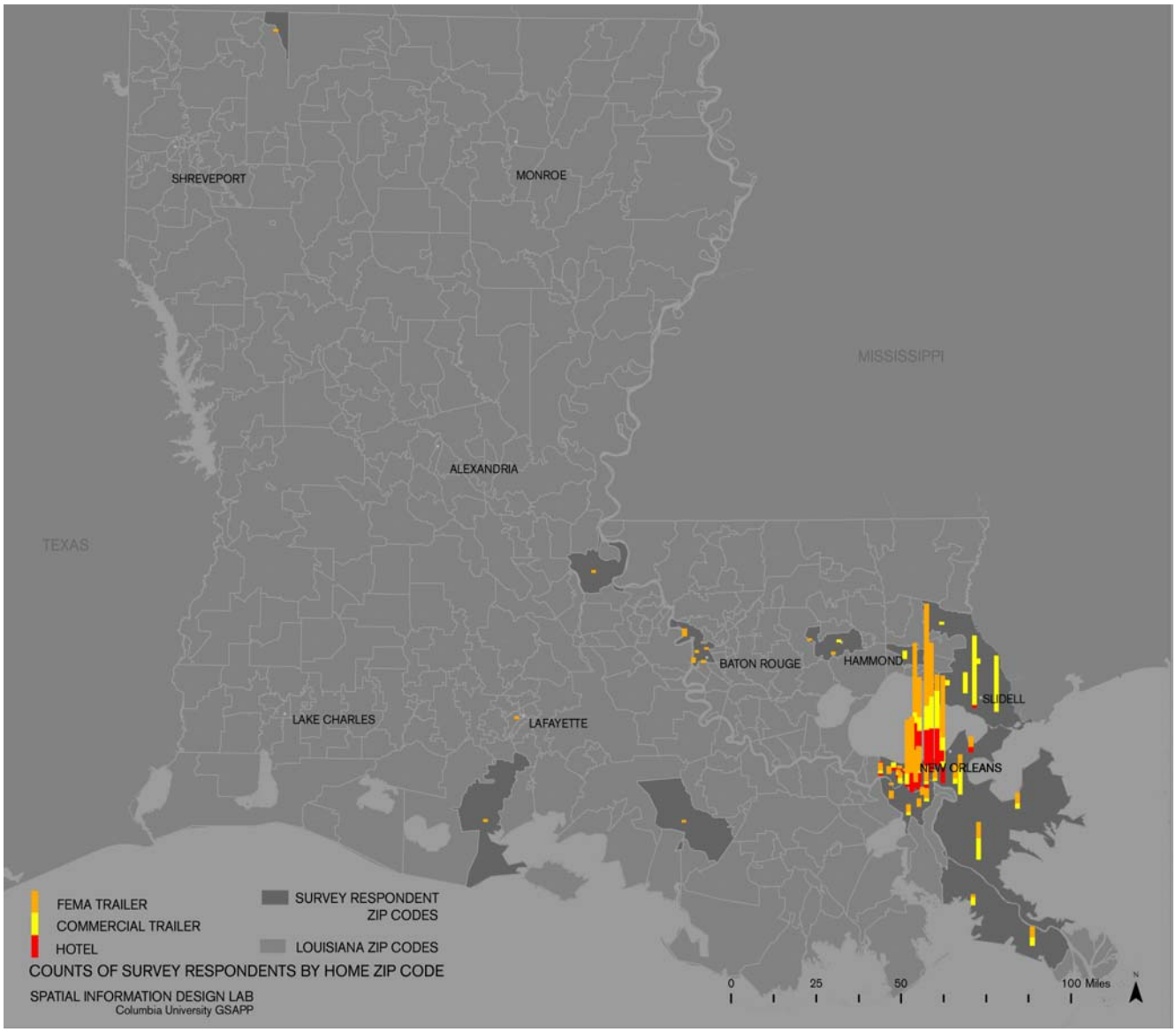

Table A2a. Household Composition

	TOTAL	FEMA trailer sites	Private trailer sites	Hotels
Total households (n)	665	335	163	126
Total number of adults 18 years of age or older	1171	557	335	205
Total number of children 0-5 years old	157	74	63	20
Total number of children 6-17 years old	331	143	124	49
Total number of children living elsewhere	61	26	13	22
Average household size	2.7	2.5	3.6	2.3
Mean number of adults >=18 yo in household	1.8	1.7	2.1	1.6
Mean number of children in household, 0-5 years old	0.2	0.2	0.4	0.2
Mean number of children 6 - 17 years old	0.7	0.6	1.1	0.5
Households with children (%)	37.6 %	34.6 %	54.0 %	27.8 %
Mean number of children in household, 0-5 years old	0.6	0.6	0.8	0.6
Mean number of children 6 - 17 years old	1.3	1.2	1.4	1.4
Caregiver composition in households with children (n)	308	140	105	46
Mother & father (or two parents) present (%)	38.3%	33.6%	44.8%	32.6%
Mother only (%)	43.2%	47.9%	32.4%	58.7%
Father only (%)	7.1%	10.7%	5.7%	0.0%
Grandparents only (%)	4.9%	5.7%	5.7%	2.2%
Other family members (%)	6.5%	2.1%	11.4%	6.5%

Table A3. Place of Origin of Adult Respondent

	TOTAL	FEMA trailer sites	Private trailer sites	Hotels
Total (n)	665	335	163	126
Parish Pre-Katrina				
Orleans	64.9	69.5	29.7	89.5
Saint Bernard	11.2	12.7	15.5	4.0
Saint Tammany	10.1	0.0	40.7	0.8
Jefferson	7.1	9.2	4.5	5.7
Plaquemines	4.1	3.8	9.0	0.0
Other	2.6	4.8	0.6	0.0
Born in Louisiana (%)	86.0	85.2	81.8	94.2
Born elsewhere in US (%)	12.9	13.9	17.6	5.0
Foreign-born (%)	1.1	0.9	0.6	0.8

Table A4. Sociodemographics of Household Respondent

	TOTAL	FEMA trailer sites	Private trailer sites	Hotels
TOTAL (n)	665	335	163	126
Gender				
Female (%)	59.7	57.3	66.9	56.4
Male (%)	40.3	42.7	33.1	43.7
Race/Ethnicity				
Black / African-American (%)	74.9	79.0	48.6	90.8
White (%)	19.3	13.6	46.5	5.9
Latino (%)	3.5	3.7	4.9	1.7
Other (%)	2.2	3.7	0.0	1.7
Legal marital status				
Married (%)	26.3	24.0	32.7	20.7
Single (%)	40.4	43.6	31.4	44.6
Separated (%)	3.8	2.8	4.5	6.6
Divorced (%)	21.3	21.4	18.6	24.0
Widowed (%)	8.2	8.1	12.8	4.1

	TOTAL	FEMA trailer sites	Private trailer sites	Hotels
Annual Household Income				
Less than $10,000 (%)	37.7	47.5	33.8	27.0
$10,000 - $19,999 (%)	25.3	24.8	23.4	27.0
$20,000 - $34,999 (%)	18.2	14.0	22.1	22.6
$35,000 - $49,999 (%)	9.8	5.6	9.7	15.7
Greater than $50,000 (%)	4.1	3.1	7.1	2.6
Don't know / refused	4.9	5.0	3.9	5.2

Table A5. Household Income Sources, Pre & Post Katrina

	TOTAL	FEMA trailer sites	Private trailer sites	Hotels
TOTAL (n)	665	335	163	126
Salary / wages from F/T or P/T job				
Before Katrina (%)	64.5	55.6	66.7	74.4
After Katrina (%)	45.3	36.3	49.1	49.6
Occasional work / day labor				
Before Katrina (%)	21.7	22.4	19.5	23.9
After Katrina (%)	15.4	11.1	24.7	15.7
Public assistance (WIC, TANF)				
Before Katrina (%)	24.4	26.6	28.8	18.5
After Katrina (%)	36.8	36.8	40.5	40.0
Alimony or child support				
Before Katrina (%)	5.9	4.3	10.2	5.8
After Katrina (%)	3.6	2.8	6.5	2.5
Social Security, SSI, SSDI				
Before Katrina (%)	35.7	35.8	45.6	26.9
After Katrina (%)	34.8	35.0	44.9	25.6
FEMA, Red Cross or other				
After Katrina (%)	94.3	94.9	94.4	91.8

Table A6. Children's Health

	TOTAL	FEMA trailer sites	Private trailer sites	Hotels	Urban Louisiana (2003) [1]
TOTAL randomly sampled children (n)	252	118	88	35	1,685
Medical homes *(personal MD or RN who knows your child and his/her medical history)*					83.1
Lost a medical home since Katrina	45.2	50.0	38.9	45.7	
Maintained medical home since Katrina	31.2	22.8	42.9	28.6	
Gained a medical home since Katrina	3.0	2.6	3.9	2.9	
Didn't have med. home pre- or post-Katrina	20.7	24.6	14.3	22.9	
Prevalence of diagnosed chronic conditions					
ASTHMA (%)	18.3	12.7	22.9	23.5	14.1
DIABETES (%)	0.8	0.9	1.2	0.0	0.2
DEPRESSION or ANXIETY problem (%)	8.8	5.9	12.6	5.9	4.4
BEHAVIORAL or CONDUCT problem (%)	15.3	12.7	17.4	17.7	6.9
AUTISM (%)	0.4	0.0	1.2	0.0	0.5
DEVELOPMENTAL DELAY or PHYSICAL IMPAIRMENT (%)	9.3	6.8	14.0	9.4	4.1
LEARNING DISABILITIES (%)	17.5	17.4	20.9	14.7	10.3
Children with ANY chronic condition (%)	33.7	26.3	38.6	42.9	25.7
Children who currently need or use medicine (%)	30.4	18.8	43.2	32.4	25.9
Children who, since the hurricane, needed immediate care for illness or injury (%)	23.1	14.7	28.7	39.4	29.3 [2]
Place service received *(N=57)* *ER* (%)	8.8	5.9	8.0	15.4	
hospital or clinic (%)	52.6	47.1	52.0	53.9	
shelter (%)	8.8	5.9	12.0	7.7	
mobile unit (%)	3.5	5.9	0.0	7.7	
Private MD (%)	14.0	17.7	16.0	7.7	
other (%)	3.5	5.9	4.0	0.0	
No service received (%)	8.8	11.8	8.0	7.7	
Among children who needed medications in past 3 months, percent who DID NOT receive all their prescribed medicine (%)	14.4	9.5	17.2	20.0	1.5 [2]
Children's Overall Health Status					
Excellent (%)	37.1	42.4	31.0	37.1	57.7
Very Good (%)	25.9	22.9	32.2	22.9	25.5
Good (%)	25.9	23.7	25.3	28.6	13.0
Fair (%)	8.0	7.6	8.1	8.6	3.0
Poor (%)	3.2	3.4	3.5	2.9	0.7

	TOTAL	FEMA trailer sites	Private trailer sites	Hotels	Urban Louisiana (2003) [1]
Percent of children who needed to see a specialist in the past 12 months	24.1	19.1	34.5	17.1	24.0
Percent of children who were seen by a specialist in past 12 months	19.2	68.4	88.5	100.0	
Among those, percent seen BEFORE Katrina	74.2	77.8	70.6	80.0	
Among those, percent seen AFTER Katrina	25.8	22.2	29.4	20.0	
Dental services for children 5 - 17 yo (n)	176	85	56	24	1,011
Saw a dentist within last year(%)	60.8	60.0	57.1	66.7	83.8
Saw a dentist last year(%)	22.2	23.5	23.2	25.0	7.2
Last saw a dentist over 2 years ago(%)	9.7	8.2	12.5	4.2	4.3
Has never seen a dentist (%)	7.4	8.2	7.1	4.2	2.3
Children who need specialized medical equipment (%)	16.0	11.2	22.0	17.1	9.7
Among those, percent for whom it was a "big" or "moderate" problem to get equipment	61.1	66.7	50.0	80.0	17.3
Percent of households with children in which ANY child had emotional or behavioral difficulties he or she didn't have before the hurricane	43.7	36.1	45.0	63.6	

Notes

1 Data in this column are drawn from the National Survey of Children's Health (2003), a joint effort of the Health Resources and Services Administration and the Centers for Disease Control and Prevention. For purposes of comparison, the data are illustrated for children living in urban areas of Louisiana (metropolitan statistical areas), who would theoretically be more comparable to the displaced urban population interviewed for this study.

2 In NSCH question wording is "During the past 12 months..." Because the potential time frame for reported need is longer than L-CAFH time frame of 3 months, a reader would expect to see greater potential need expressed over a year rather than 3 months.

Table A7. Adult Respondent Health by Housing Type

	TOTAL	FEMA trailer	Private trailer	Hotels
TOTAL (n)	665	335	163	126
Caregivers' Overall Health Status	652	333	159	119
Excellent (%)	10.6	9.9	9.4	14.3
Very Good (%)	15.8	15.6	13.8	17.7
Good (%)	28.7	28.5	22.6	31.9
Fair (%)	31.6	30.9	35.9	31.1
Poor (%)	13.3	15.0	18.2	5.0
How well coping with daily parenting demands	248	117	89	44
Somewhat or very well (%)	87.1	87.2	92.9	73.0
Not very well or not at all (%)	12.1	12.0	7.1	24.3
Don't know / refused (%)	0.8	0.9	0.0	2.7
Mean mental health summary score				
Low mental health sores, below mcs 42.0 (%)	62.0	58.4	63.1	70.5
Very low mental health sores, below mcs 37.0 (%)	44.0	39.5	45.6	54.1
Mean score (US population mean = 50)	38.4	39.0	38.8	36.2
Mean physical health summary score				
Very low physical health sores, below pcs 45.0 (%)	42.3	44.7	50.0	32.8
Mean score (US population mean = 50)	45.4	45.0	42.3	49.0
Health conditions				
Heart disease (%)	13.1	14.1	14.7	9.4
Hypertension (%)	42.0	43.4	42.1	40.3
Diabetes (%)	17.2	16.4	21.4	12.7
Asthma or lung disease (%)	21.0	22.0	22.9	17.7
Cancer (%)	4.8	5.8	5.1	2.5
Physical disability (%)	26.1	29.8	32.0	12.9
Percent with ANY chronic health condition	62.5	63.4	67.1	55.4
Health care source prior to Katrina				
Clinic in health center or hospital (%)	50.6	57.0	42.8	46.6
Private doctor (%)	33.1	25.4	39.6	40.7
Emergency Room (%)	8.3	8.7	8.8	7.6
Other (%)	6.9	8.1	7.6	4.2
None (%)	1.3	0.9	1.3	0.9
Seen by doctor since Katrina (%)	68.8	70.8	72.6	62.0

Table A7a. Adult Respondent Health by Caregiver Status

	All Caregiver	Women Caregiver	Male Caregiver
TOTAL (n)	250	202	48
Caregivers' Overall Health Status			
Excellent (%)	13.4	12.1	18.8
Very Good (%)	21.5	21.7	20.8
Good (%)	27.6	28.3	25.0
Fair (%)	27.6	28.8	27.1
Poor (%)	9.8	10.1	8.3
Percent with ANY chronic condition	54.3	55.3	50.0
How well coping with daily parenting demands			
Somewhat or very well (%)	87.9	86.7	93.0
Not very well or not at all (%)	11.7	13.3	4.7
Don't know / refused (%)	0.4	0.0	2.3
Mean mental health summary score			
Low mental health scores, below mcs 42.0 (%)	64.8	67.8	52.0
Very low mental health scores, below mcs 37.0 (%)	49.0	53.3	31.3
Mean score (US population mean = 50)	37.1	36.5	39.7
Mean physical health summary score			
Very low physical health scores, below pcs 45.0 (%)	35.6	37.2	27.2
Mean score (US population mean = 50)	47.5	47.2	48.8
Caregiver health conditions			
Heart disease (%)	7.4	7.6	6.3
Hypertension (%)	29.8	30.0	29.2
Diabetes (%)	11.5	12.9	5.9
Asthma or lung disease (%)	19.5	20.7	14.6
Cancer (%)	4.1	5.1	0.0
Physical disability (%)	19.1	19.1	18.9
Health care source prior to Katrina			
Clinic in health center or hospital (%)	45.1	44.7	46.8
Private doctor (%)	36.1	37.1	31.9
Emergency Room (%)	11.5	12.2	8.5
Other (%)	6.6	5.1	12.8
None (%)	0.8	1.0	0.0
Seen by doctor since Katrina (%)	63.7	64.5	60.4

Table A8. Insurance Status

	TOTAL	FEMA trailer	Private trailer	Hotels	Urban Louisiana
Caregivers' Insurance Status					
TOTAL (n)	665	335	163	126	
Uninsured (%)	43.9	48.7	39.3	46.0	
Medicaid or CHIP (%)	20.6	26.9	19.0	11.9	
Medicare (%)	8.3	7.8	11.0	8.7	
Private (%)	15.0	9.3	16.6	15.1	
Other (%)	7.2	4.2	9.2	7.9	
Don't know / refused (%)	5.0	3.3	4.9	10.3	
Children's Insurance Status					
TOTAL (n)	252	118	88	35	1,685
Uninsured (%)	9.9	11.9	4.6	17.1	6.3
Medicaid or CHIP (%)	72.2	74.6	69.3	80.0	
Private (%)	9.1	7.6	11.4	0.0	
Other (%)	5.9	1.7	11.4	2.9	
Don't know / refused (%)	3.2	4.2	3.4	0.0	

Table A9. Adult Health *(among ALL adults in household)*

	TOTAL	FEMA trailer	Private trailer	Hotels
TOTAL (n)	665	335	163	126
% of adults with chronic conditions	53.4	53.5	58.8	46.3
Prevalence of diagnosed chronic conditions				
ASTHMA (%)	8.8	10.2	7.8	7.8
DIABETES (%)	14.7	17.3	14.6	9.3
CARDIAC / HYPERTENSION (%)	19.5	17.9	22.4	17.6
ARTHRITIS / RHEUMATISM (%)	5.0	5.5	5.4	3.9
CANCER (%)	1.1	1.5	0.5	0.0
STROKE / DEMENTIA (%)	1.1	1.3	0.6	1.5
PSYCHIATRIC (%)	3.9	3.6	6.3	1.5

Table A10. Stability and Security

	TOTAL	FEMA trailer	Private trailer	Hotels	Urban Louisiana
School-related issues (n)	319	135	120	49	1,209
Average # months children 5-17 yo out of school post- Katrina	1.2	1.0	1.2	1.7	
Children 5-17 yo not currently in school (%)	9.5	7.1	11.6	14.3	1.6
Mean number of school days missed in past month(among school attendees)	3.7	4.2	3.5	2.7	
Mean number of school days missed in past month (all children)	5.2	5.5	4.9	5.4	
Safety and security					
(Caregiver only, N=)	272	125	91	45	1,685
% of caregivers who definitely or somewhat agree that there are people in their neighborhood who would be a bad influence on their children	69.0	70.7	81.7	43.3	51.7
% of caregivers who believe their children are never or only sometimes safe in their community	46.7	49.0	51.2	34.4	20.8
% of caregivers who believe their children are never or only sometimes safe in school	25.8	37.8	8.8	25.9	14.5
% of caregivers who believe their children are never or only sometimes safe at home	10.5	10.8	9.3	16.1	3.0
(all adults, N=)	621	311	154	116	
Adults afraid to walk around neighborhood at night (%)	52.9	51.5	57.6	50.4	

Table A10A. School related issue by child's age group

		TOTAL	6-11 years	12-17 years
School-related issues (n)		319	131	188
Average # months children out of school post- Katrina		1.2	1.0	1.3
The month of returned school (%)	*September 2005*	57.4	56.8	57.8
	October 2005	24.4	25.6	23.5
	November 2005	6.5	6.4	6.6
	December 2005	4.1	4.0	4.2
	January 2006	5.2	5.6	4.8
	February 2006	2.4	1.6	3.0
Children 5-17 yo not currently in school (%)		9.5	5.2	12.5
Mean number of school days missed in past month (among school attendees)		3.7	3.0	4.2
Mean number of school days missed in past month (all children)		5.2	3.7	6.2
Not in school OR missed 10+ days in past month (%)		22.5	14.5	27.9

Table A11. Employment Status & Economic Resources of Respondent

	TOTAL	FEMA trailer	Private trailer	Hotels
TOTAL (n)	635	329	155	110
Was caregiver/adult respondent...				
Employed prior to Katrina, still employed (%)	16.1	8.5	14.8	22.7
Employed prior to Katrina, presently unemployed (%)	44.3	48.0	40.0	43.6
Homemaker (%)	3.2	3.0	3.9	2.7
Unemployed prior to Katrina, looking for work (%)	5.0	7.3	2.6	3.6
Unemployed prior to Katrina, not looking for work (%)	1.9	2.7	1.3	0.0
Disabled prior to Katrina, unable to work (%)	15.9	15.5	23.9	11.8
Student (%)	1.4	0.6	1.3	4.6
Retired (%)	8.0	8.5	9.0	8.2
Other (%)	4.3	5.8	3.2	2.7
Adults with access to savings or checking account (%)	67.8	62.2	71.8	70.0
Adults with access to useable credit card (%)	24.7	23.2	25.2	26.5

Table A12. Service Needs

AREA	Percent who needed help or assistance in [AREA] in past 3 mo (n)	Among those WITH NEED, percent who received services in [AREA] in past 3 mo	Among those WITH NEED, percent for whom no progress in [AREA] has been made or the problems have gotten worse	
			among who received services	among who didn't receive services
Financial matters	72.4 (472)	62.2	37.4	74.0
Household items or clothing	59.9 (389)	54.7	23.2	62.8
Food, groceries, or meals	52.0 (336)	64.0	26.0	59.3
Transportation	43.0 (278)	37.3	29.9	76.5
Emotional or psychological difficulties	37.6 (242)	28.9	33.3	72.5
Employment, including job training	30.8 (200)	23.6	24.4	71.2
Legal matters	22.2 (144)	17.0	41.7	88.4
Education or school services	20.3 (131)	23.7	10.0	69.1
Child care	12.9 (81)	17.5	28.6	72.1
Problems with alcohol or drugs	2.6 (17)	18.8	0.0	69.2

Note: The denominator for the first column regarding need is all households (665), whereas subsequent columns refer to the number with a specific need. For example, the denominator for financial matters' service is 472, for service received for household items is 389, etc.