

Mossville Residential Needs Assessment

Louisiana Department of Health & Hospitals
Office of Public Health
Section of Environmental Epidemiology & Toxicology

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**MOSSVILLE RESIDENTIAL NEEDS ASSESSMENT
LOUISIANA DEPARTMENT OF HEALTH & HOSPITALS
OFFICE OF PUBLIC HEALTH**

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I. INTRODUCTION

As part of ongoing efforts to assess and respond to environmental health concerns in Calcasieu Parish, the Louisiana Department of Health and Hospitals (LDHH) conducted a Residential Needs Assessment in the Mossville community. During June 2000, LDHH personnel administered the Needs Assessment questionnaire both in Mossville and via telephone interviews. This document contains summary data regarding the community's responses and preliminary recommendations.

Mossville is a small, unincorporated community in Calcasieu Parish, Louisiana, near Lake Charles. Residents have expressed health and quality of life concerns related to industrial activity in the area. An exposure investigation of blood dioxin levels in 28 Mossville residents, conducted by the Agency for Toxic Substances and Disease Registry in 1998, detected elevated dioxin levels in some residents.¹ Dioxins are a highly toxic family of chemicals, formed as byproducts of various human activities involving chlorinated organic compounds. The likelihood of dioxin-related health effects at the levels found in the Mossville sample is uncertain.²

Given this uncertainty, public concerns about dioxins and other chemical pollutants in the Mossville/Lake Charles area warrant thoughtful public health response. The Mossville Residential Needs Assessment, a survey of community demographics, healthcare utilization, health status, and potential routes of chemical exposure, is an important component of such a response.

II. METHODS

To encourage participation in the Residential Needs Assessment, LDHH solicited current and past Mossville residents by radio, television and newspaper advertisement, direct mailing and posting of fliers in the community. On June 27, 2000, residents and LDHH personnel congregated at the Rigmaiden Center in Mossville. Data were collected with a 48-item questionnaire (Appendix). Questionnaires consisted of four sections, eliciting general demographic information, medical and healthcare information, information about possible routes of environmental chemical exposure, and information about media preferences. One questionnaire was administered per household. Heads of households answered questions pertaining to themselves, and by proxy for other household members. Respondents filled out the questionnaires, with LDHH representatives on hand to assist as needed. All responses were voluntary, and participants were assured that sensitive information would be kept in strict confidence. Two hundred twenty-three questionnaires were completed at the Rigmaiden Center. Some community members did not arrive in time to complete questionnaires. For those who wished to participate, LDHH personnel took down their names, and subsequently administered questionnaires by telephone interview. An additional fifty questionnaires were completed in this fashion. The 282 completed questionnaires were screened for current or past residence in Mossville, then tallied and analyzed. A total of 273 questionnaires met screening criteria, and were included.

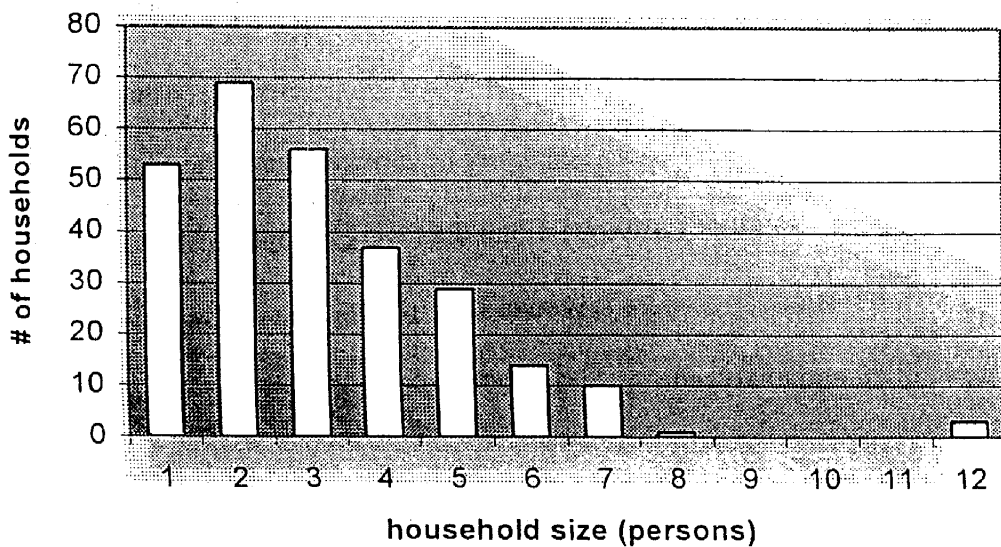
III. RESULTS

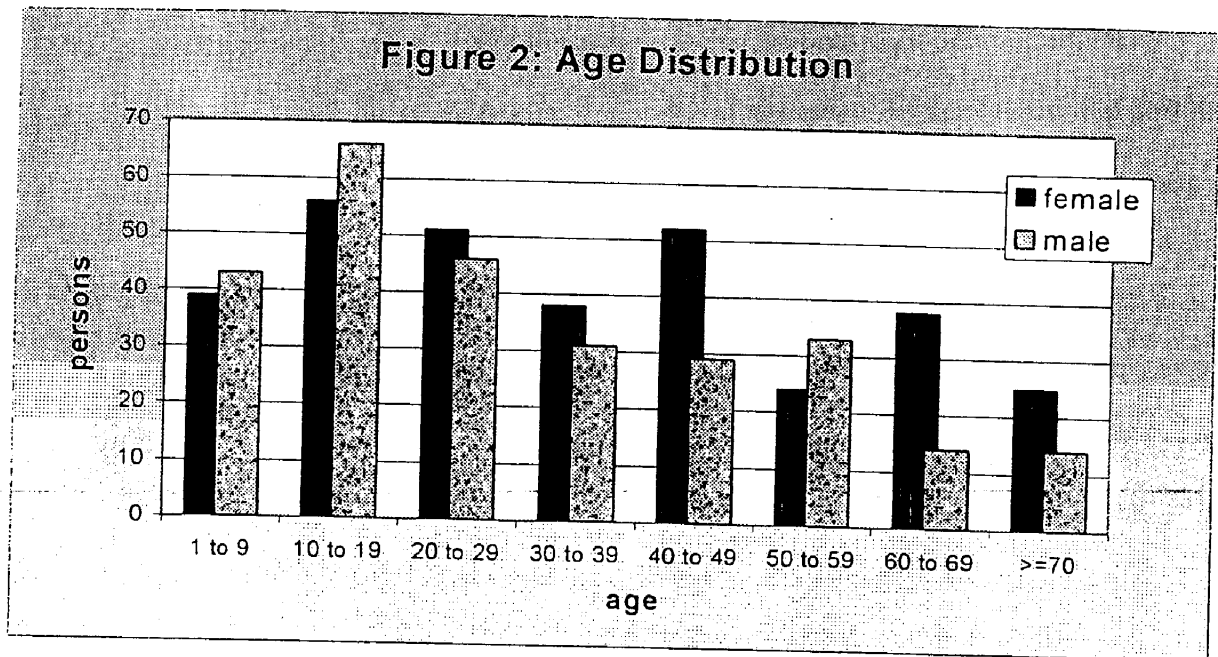
A. General Information

Of the 273 responding households that had ever lived in Mossville, 120 (44%) currently reside in zip code 70669, 61 (22%) in zip code 70663, 31 (11%) in zip code 70601, and 23 (8%) in zip code 70607. The remaining 48 households (15%) reported other zip codes, some outside of Louisiana.

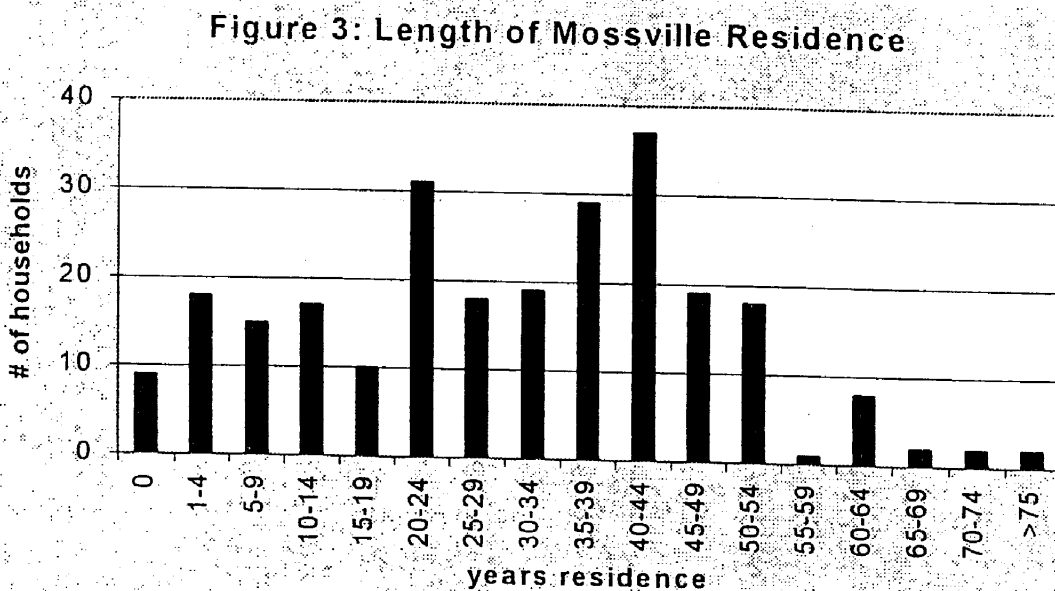
The 273 households comprise 858 individuals, an average household size of 3.1 persons, with a range of 1 to 12 persons. Figure 1 shows distribution of household sizes. Age information was available for 614 of the 858 individuals. Ages ranged from 1 to 89 years, with an average age of 32.9 years. Figure 2 shows the age distribution of this population. Gender information was available for 770 of 858 individuals. Of these, 53% were female and 47% were male.

Figure 1: Household Size





Of responding households, the average reported length of residence in Mossville is 30.8 years, with a range of 1 to 81 years. (Figure 3) The average length of residence in Calcasieu Parish is 39.1 years, with a range of 1 to 82 years. Sixty percent of responding households reported that relatives had moved away from Mossville in the last decade.



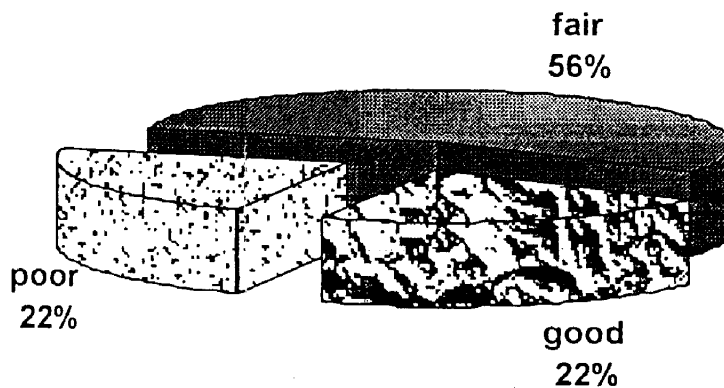
Of 251 households providing information about their access to transportation, 89% reported owning at least one automobile. Six percent had access to an automobile by other means, and six percent had no access to a car.

Two items in the questionnaire asked about current and past employment. Partly due to typographical errors in the questionnaire, responses to these questions were often absent or contradictory, and yielded no meaningful data.

B. Health and Medical Information

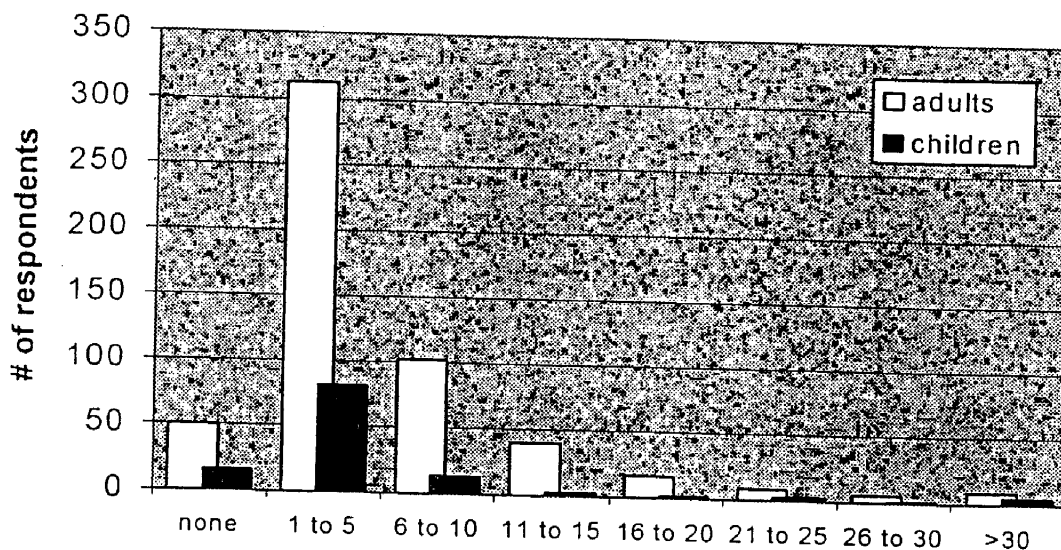
Respondents were asked to rate household members' health status as "good", "fair" or "poor". Of the 823 responses, 56% reported "fair" health status, 23% reported "good" health status, and 22% reported "poor" health status. (Figure 4)

Figure 4: Subjective Health Status



Heads of household reported the number of visits to a physician during the past year for each member of their household. For adults the average annual number of physician visits was 6.3, with a range from 0 to 100 visits. For children, the average annual number of physician visits was 5.7, ranging from 0 to 90 visits. (Figure 5) Sixty-three percent of responding households reported that a family member had sought emergency care in the preceding year.

Figure 5: Doctor Visits in Past Year



Respondents were asked to list one or more physicians, hospitals and clinics that they patronize. Moss Regional, Bayou Comprehensive, Children's Clinic and Family Medical are the clinic sites most frequently used by respondents. Of 220 households responding, the hospitals most commonly attended are Moss Regional (43% of respondents), Memorial (26%), St. Patrick's (25%), and West Calcasieu-Cameron (14%). Drs. Kane, Richert, Jones and Darby were the physicians most often listed. (Table 1)

Table 1: Most Frequent Healthcare Sources

Hospitals	Number of Respondents	Physicians
Moss Regional	96	Dr. Kane
St Patricks	54	Dr. Richert
Memorial	57	Dr. Jones
West Calcasieu-Cameron	30	Dr. Darby
Womens & Childrens	9	Dr. Seep
Sulphur	4	Dr. White
Lake Charles Charity	4	Dr. Young
Other	25	Dr. Grimball

Heads of household were asked to list chronic ailments of each household member. Of 794 individuals for whom responses were given, 115 (14.5%) had no health complaints. Respiratory complaints, including allergies, sinus congestion, asthma and other breathing difficulty, were the most common ailments (60% of respondents). Neurologic problems--primarily headaches, dizziness, anxiety and cognitive difficulties--were the second most prevalent type of complaint, reported for 315 individuals (40% of respondents). Circulatory problems, including high blood pressure and heart disease were the next most common, reported for 253 individuals (32%). Digestive ailments affected 133 individuals (17% of respondents). A total of 131 respondents suffered musculoskeletal problems (e.g., arthritis, aches). Dermatological conditions (rashes) were the next most common complaint (16% of respondents). Table 2 shows the prevalence of health complaints by organ system.

Table 2: Health Complaints by Organ System

Organ System	Number of Responses	Percentage of Respondents
respiratory	474	60%
neurologic	315	40%
circulatory	253	32%
digestive	133	17%
musculoskeletal	131	17%
dermatologic	125	16%
eye	67	8%
endocrine	65	8%
genitourinary	47	6%
throat	30	4%
reproductive	28	4%
ear	26	3%
metabolic	22	3%
nose	15	2%
cancer/tumors	14	2%
dental	10	1%
hematologic	9	1%
other	21	3%
none	115	15%

Respondents were asked to list medications that household members take.

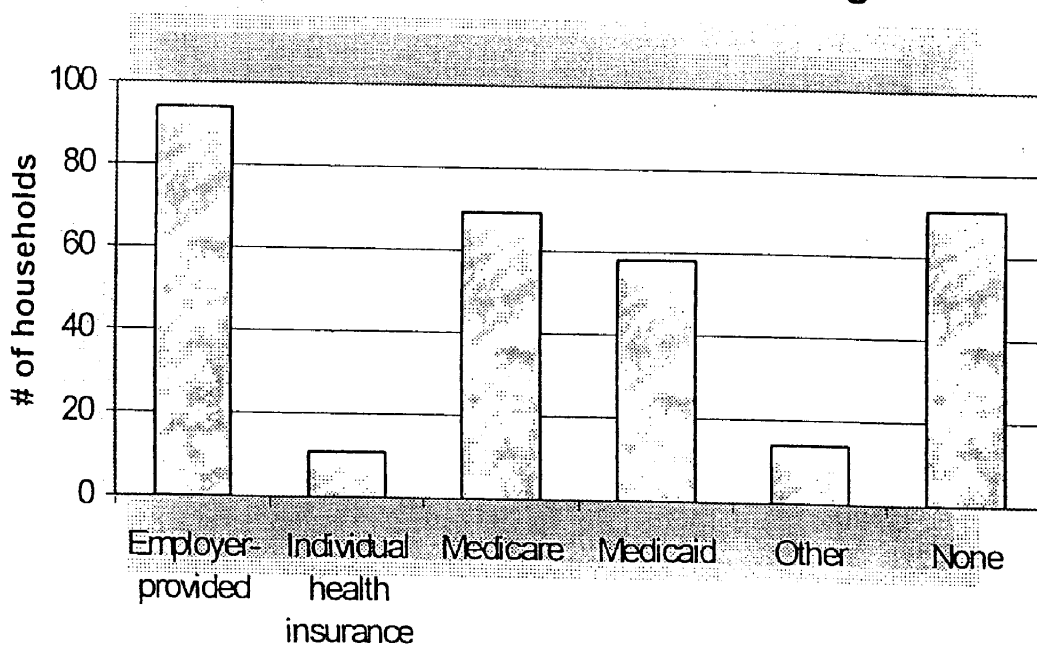
Responses were given for 627 individuals. Of these, 105 (17%) reported taking no medications. Analgesics, both prescription and over-the-counter, were the most common class of medications, used by 235 individuals (37.5% of respondents). Allergy medications were the next most prevalent category, taken by 146 respondents (23%); followed by blood pressure medications, taken by 101 respondents (16%). Table 3 shows complete summary data for medications.

Table 3: Medication Summary

Medication Type	Number of Responses	Percentage of Respondents
analgesic	235	38%
allergy	146	23%
antihypertensives	101	16%
bronchodilators	49	8%
antibiotics	39	6%
antacids	38	6%
psychiatric	36	6%
diuretics	30	5%
cardiac	28	5%
glycemic	24	4%
topical	20	3%
lipid-lowering	20	3%
unspecified digestive	19	3%
thyroid replacement	13	2%
anti-emetic/nausea	13	2%
anticonvulsants	10	2%
anticoagulants	6	1%
laxatives	5	1%
gastric motility agents	4	1%
none	105	17%

Households were queried about their health insurance coverage. A total of 258 households responded. Of these, 71 (28%) reported having no health insurance whatsoever. Ninety-four households (36%) had one or more members with employer-provided health insurance. Sixty-nine households (27%) had members with Medicare coverage. Fifty-eight households (22%) had members with Medicaid coverage. Eleven households (4%) had members with individual health insurance. Fourteen households (5%) reported other types of health insurance coverage. (Figure 6) Many households reported more than one type of health insurance coverage. Forty-eight percent of households responded that one or more members have health insurance coverage for prescription drugs.

Figure 6: Health Insurance Coverage



Because tobacco use is an important determinant of health status, respondents were asked to provide tobacco history for themselves and other household members. Of 520 responses, 68% reported no tobacco use, 26% smoke or have smoked cigarettes, 4% reported unspecified tobacco use, 1% reported smoking cigars, 1% use smokeless tobacco, 0.4% reported use of more than one type of tobacco product, and 0.2% have smoked a pipe. (Table 4)

Table 4: Tobacco Use

Type of Tobacco	Number of Responses	Percentage of Respondents
cigarettes	137	26%
cigars	4	1%
smokeless tobacco	4	1%
pipe	1	0.2%
unspecified type	20	4%
>1 type	2	0.4%
none	352	68%

Finally, households were asked to list additional health concerns. A total of 102 households (37%) responded to this question.

C. Sources and Pathways of Environmental Exposure

For purposes of exposure assessment, households were asked to identify members who had been tested for chemical exposure. Only 24 of 264 responding households (9%) reported any chemical exposure testing. Of those who had been tested, chemicals reported included dioxin, lead, ethylene dichloride (EDC), vinyl chloride, ammonia and asbestos. Some respondents indicated that they had been tested, but had not yet received the results.

Households were asked what ailments they attribute to environmental pollution. A total of 198 households responded. Health conditions most frequently linked to pollution were: respiratory problems, including allergies, sinus conditions, asthma and breathing difficulty by 162 respondents (82%); neurologic disorders, including headache and dizziness, by 79 respondents (40%); rashes and other skin disease by 45 respondents (23%); digestive problems, including nausea, vomiting, diarrhea and ulcers by 44 respondents (22%); eye irritation and vision problems by 26 respondents (13%); and heart problems by 20 respondents (10%). Eighteen households (9%) attributed all their ailments to environmental pollution. (See Table 5 for complete list)

Table 5: Ailments Associated with Pollution

Ailment	Number	Percent
respiratory	162	82%
neurologic	79	40%
skin	45	23%
digestive	44	22%
eye	26	13%
cardiovascular	20	10%
musculoskeletal	13	7%
cancer	13	7%
cognitive/affective	7	4%
infectious	6	3%
dental	6	3%
constitutional	5	3%
renal	4	2%
diabetes	4	2%
reproductive	3	2%
other abdominal	3	2%
other/miscellaneous	4	2%
all illnesses	18	9%
no illnesses	7	4%

The Needs Assessment questionnaire also asked about common pathways of environmental chemical exposure. Of 266 responding households, 167 (63%) stated that they live within 100 feet of a highway or railroad tracks. Fifty-eight of 268 respondents (22%) reported open burning of trash and/or yard waste near their home. Sixty-one of 258 respondents (24%) believed there was a waste incinerator within 1 mile of their home. Of 262 responding households, 172 (66%) cited one or more industrial plants with flares and/or smokestacks within a mile of their home. The most commonly reported industrial plants were Condea Vista, Conoco, PPG and Olin. Only 3 of 264 respondents (1%) reported burning of sugar cane or rice chaff within a mile of their home.

The questionnaire assessed use of water resources in Mossville. Many households reported more than one source of drinking water. The most common was the public water supply, used by 198 of 272 responding households (73%). One hundred thirty-one households (48%) drink bottled water, and sixty-three of them use this source exclusively. Thirty-one households drink water from a private well or cistern at least some of the time. Five households obtain drinking water exclusively from these sources. (Figure 7) Of 272 responding households, 105 (38%) reported secondary water sources for uses other than drinking.