

Impact of Hurricane Katrina on Vital Statistics and NCHS Surveys



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National Vital Statistics System

- 57 reporting areas
- Decentralized
- US historical development-self-governing States
- Nothing on registration in US Constitution
- Responsibility based in state law
- Responsibility with provider of services

Federal Role Defined by the Public Health Service Act – *Sec 306 (h) (1)*

- Annual collection of data from the records of births, deaths, marriages, and divorces
- Satisfactory data in necessary detail and form
- Detailed data on ethnic and racial populations
- Each State or registration area shall be paid by the Secretary the Federal share of its reasonable costs

National Vital Statistics System

Individual Record Data:

- Births
- Deaths
- Fetal Deaths

Counts:

- Marriages
- Divorces

Immediate Aftermath of Katrina

- Most urgent concerns: Keeping families together; safety; adequate housing and food
- People took few possessions; these included birth records
- Recognition of need to document identity and legal status
- New awareness of importance of basic legal documents long taken for granted

Offers of Assistance

- Right after Katrina hit in late August, NCHS offered technical assistance to LA and MS vital records offices
- NAPHSIS and state colleagues also offered assistance
- NCHS offered assistance to LA focusing on mortality coding
- But sadly, Louisiana did not have the resources to accept any assistance until recently

Ongoing Issues

- LA central vital statistics offices located in New Orleans; building not destroyed, but not accessible
- LA offices at first temporarily relocated to Baton Rouge
- Less than one-half of pre-Katrina LA staff is on board (two new staff hired)
- LA offices relocated to Metairie, LA

Specific Challenges

- LA electronic birth registration system about to restart soon
- Data entry manually in state office and transmitted electronically to NCHS
- Estimated 35,000 of annual total of about 65,000 birth records have been transmitted to NCHS...no estimate of final number for 2005
- Anticipate about 1,600 births Aug-Dec in New Orleans area in a typical year; no information yet for 2005

Specific Challenges, cont.

- LA still has no nosologists (to code cause of death); the two previously on staff relocated to Texas and Georgia
- 80% of LA's physical records including historical files are in usable condition, but
- Document restoration underway for 20% of the records

Specific Challenges, cont.

- Lack of nosologists in LA and inexperience in LA and other states with this level of natural catastrophe: challenges for documenting the facts
- NCHS developed training materials to provide instructions for coding cause of death for storm-related deaths

Current Status

- LA has transmitted photocopies of 1/3 of their 2005 death certificates to NCHS for coding
- LA now relying on NCHS to code death records, both the demographic and cause of death sections
- NCHS is accessing the LA web to code into the LA system and then re-transmitting the LA data to NCHS

Ongoing issues, cont.

- NCHS medical coding expert assessment:
We won't ever see all the death records for LA
- Tragically, many bodies not identifiable because of decomposition; no DNA available, and
- Confirming status of many missing people may not be possible

Progress

- LA vital statistics offices now able to provide certified copies of vital records – problems remain for New Orleans events
- Mississippi and Alabama vital statistics offices functioning

Impact on vital statistics

Births:

- Impacts huge for LA: Birth certificates filed for about 47,000 LA residents in 2005, compared with 65,400 in 2004
- TX reports 400+ births to LA residents for 2005 (most in September); usually about 80
- FL, GA, AR, and TN each reported 40-50 births to LA residents in 2005; usually only a handful in each state

Impact on vital statistics

Deaths:

- Impact huge for LA: To date 28,300 death certificates filed for 2005 compared with 42,200 in 2004
- TX reports almost 700 deaths to LA residents for 2005 (most occurred in Sept and Oct); typical annual total is < 300
- AL, FL, GA, AR, and TN each reported 40-60 deaths to LA residents in 2005, double the usual numbers

Potential impacts on key public health measures

- Fertility and mortality rates for all affected states and especially for Katrina-impacted parishes in LA
- Low birthweight
- Preterm birth
- Infant mortality
- Cause of death statistics

Estimates of affected MIH population

- Affected parishes and counties in LA, MS, and AL account for about 75,000 live births annually
- Estimate about 130,000 pregnant women and infants potentially impacted by Katrina
- Typically, preterm, LBW, and infant mortality rates significantly higher in Katrina-impacted areas than elsewhere

Other consequences of Katrina

- Inability to accurately track impacts by geography even though vital records are available at the unit level
- Tracking impacts likely to be especially challenging for New Orleans-area
- Less impact for other geographic areas because of wide dispersion of the affected population
- Trend analysis complicated by changes in size, composition of population

What could mitigate effects on vital statistics?

- No existing mechanism for addressing Katrina or similar events
- Patient IDs or other linking systems would help; do not exist now
- Develop emergency registration systems

Next steps for vital statistics

- Continued monitoring
- Ongoing: measuring key maternal and infant health and mortality measures
- Continued outreach to colleagues in LA and neighboring states

The Impact of Recent Hurricanes on Three NCHS Survey Programs...

- **The National Health Interview Survey (NHIS)**
- **The National Immunization Survey (NIS)**
- **The State and Local Area Integrated Telephone Survey (SLAITS)**

National Health Interview Survey (NHIS)

- In-person survey of the civilian, non-institutionalized population
- Data collection by the Census Bureau
- Nationally representative, independent weekly samples

National Health Interview Survey (NHIS)

- 2005 sample target of 40,000 households from 358 PSUs
- Long-time HIS procedures: Uninhabitable units given a specific outcome code which does not count as nonresponse
- Displaced persons in households not specifically identified or probed

National Health Interview Survey (NHIS)

- Interviewing resumed in all areas
- Closeout of weekly samples limits time to capture each unit
- Lost 435 household interviews in 3 states thru year end
- Adjustments unlikely

The National Immunization Survey (NIS)

- Random Digit Dialing survey of households with children 19-35 months
- Annual estimates of up-to-date status for 78 areas—50 states, DC, and 27 urban areas
- Over 1 million households screened annually for eligible children

The National Immunization Survey (NIS)

- Four hurricanes interrupted interviewing
- Hurricane Katrina had longest impact
 - **TN off for 11 days**
 - **AL off 55 days**
 - **Northern LA and MS off for 59 days**
 - **Southern LA and MS off for 93 days**
 - **New Orleans closed for duration of 2005**

The National Immunization Survey (NIS)

- Deactivation is driven by news reports and NOAA and FEMA data
- Resumed dialing in all areas

The National Immunization Survey (NIS)

- Need to consider affects on data quality and reliability
- Impact of limited data collection period and reduced number of completes on annual immunization coverage estimates for the New Orleans area, Louisiana, and the entire U.S.
 - **no adequate population controls**
 - **loss of immunization provider records**
 - **state and local immunization registries**
 - **missing data models for the affected areas**

The State and Local Area Integrated Telephone Survey (SLAITS)

- Uses NIS sampling frame
- Designed to provide in-depth state and local area data for program and policy needs
- 2005-2006 National Survey of Children with Special Health Care Needs
- Does not share same demands as NIS for annual estimates in local areas

SLAITS

National Survey of Children with Special Health Care Needs

- 850 completed interviews in each state and DC over 2 years
- Florida was temporarily suspended in Q3
- Mississippi and Louisiana suspended for Q3 and Q4
- Compress MS and LA interviewing into 2006

SLAITS

National Survey of Children with Special Health Care Needs

- Add questions in Q1 2006 on impact for displaced persons
 - Self identify thru current screener—residence status for past 2 months
 - receive new Katrina specific questions on impact

SLAITS

National Survey of Children with Special Health Care Needs

- Left home ≥ 1 night due to Katrina
- Special arrangements due to health conditions
- Trouble finding shelter due to health conditions
- Currently in short term or temp housing
- Move back
- Number of nights away
- While away, need and get health care/med equip
- Get all health care needed and where

Challenges for Data Release for Vital Statistics and Affected Surveys

Several questions to consider:

- Changes in size and composition of population of affected areas
- Lack of adequate population controls: Are we sure we are fully capturing affected populations?
- Impact on *trends* for these areas if population composition has changed
- Consider breaking data releases into pre- and post-Katrina data issuances?

More Information

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