

Evaluation of Progress in 2008 Strategic Health Plan 2004 – 2010

STRATEGIC PRIORITIES (2004-2010)

- PRIORITY #1: PUBLIC AWARENESS**
- PRIORITY #2: ACCESS TO CARE / HEALTH DISPARITIES**
- PRIORITY #3: BUSINESS IMPROVEMENT**
- PRIORITY #4: HEALTHCARE FINANCING**
- PRIORITY #5: MANAGEMENT OF CHRONIC CONDITIONS**
- PRIORITY #6: ENVIRONMENTAL HEALTH IMPROVEMENTS**
- PRIORITY #7: SENIOR HEALTH IMPROVEMENT**
- PRIORITY #8: PREVENTION BY IMMUNIZATION**

In 2003 the Galveston County Health District embarked on a comprehensive set of public health priorities endorsed by the public and stakeholders in Galveston County. Over the past five years, staff has tracked progress toward each goal and objective by priority. In addition, significant 2008 accomplishments are highlighted in text boxes. The original goals and the objectives of the 2004 plan can be found at www.gchd.org/admin/strattoc.htm.

Priority 1, Public Awareness

There are six Strategic Health Plan goals in this priority and all have been completed and are being maintained.

Increase public awareness regarding wellness and the prevention of chronic conditions including but not limited to high blood pressure, diabetes, asthma, depression, heart disease and obesity.

This goal is met. In 2008, the District's Women Infants and Children Program (WIC) was awarded a \$10,000 grant, "Staying Young at Heart", to inform the public about good nutrition and WIC services. National Nutrition Month was celebrated with presentations on obesity prevention, physical activity and preparing nutritious food. Also this year, the District received \$100,000 to establish "The Healthy Weigh" program for children two to twelve years of age who are overweight or obese. Finally, the Health District supported the National Health and Nutrition Examination Survey (NHANE), conducted by the National Center for Health Statistics and the Centers for Disease Control, which obtains national health data to influence public health policy and identify risk factors for chronic diseases. Although wellness and the prevention of chronic diseases are crucial, another problem is

2008 Press Highlights

- Hurricane Ike Advisories
- Animal seizures & dog bites
- Free Mammograms
- Excellent food service awards
- Immunization Campaigns
- Prevent child lead poisoning
- Promote new facilities for 4C's
Clinic and Animal Shelter
- Meningococcal and Salmonella
concerns
- Water quality issues

effectively managing the care of uninsured persons already ill, to prevent long-term serious consequences. Local and state partners continue to seek new solutions to decrease the barriers to health care access. Future local news releases on these deliberations may afford an opportunity to educate the public about the importance of wellness and preventing chronic conditions. The Health District website has public news releases archived since 2003.

Priority 2, Access to Care and Health Disparities

There are five Strategic Health Plan goals in this priority and two have been met and are being maintained.

Improve access to 4C's Clinics' ambulatory healthcare services and operate at maximum capacity has been partially met.

This goal has been met for medical services, but not yet for dental services. In 2008, Medical productivity increased yet again. National comparison data show 4C's to be one of the most productive federally-funded clinics in the country. The dental clinics showed a small increase in productivity this year, but comparison to other health centers shows that dental is still below average. During 2008, dental reengineering efforts have made many changes to increase access and these efforts continue in 2009. For additional information, see *Access to Care – 4C's Healthcare Report* on page 28.

Identify and eliminate barriers in the system of referring 4C's patients for specialty evaluations, hospitalizations and other types of referrals.

This goal was partially met until the complete loss of access to UTMB specialty and hospital care after Hurricane Ike. After UTMB closed due to hurricane losses, uninsured

2008 Access to Care Highlights

Uninsured Health Care Crisis
Boards' Joint Resolution to seek health care funding for uninsured specialty care
Increased Medical Productivity
Collaboration with MH-MR
Collection increases
Dental Clinic Improvements
Title V Funding

patients lost the ability to access specialty appointments completely. In 2008 4C's and UTMB staff worked to reconcile data and analyze barriers to completion of referrals, finding that the rates of completed referrals varied from 21 -25%. Multiple reasons were identified including inability to contact patients, lost referrals and patients who failed to comply with financial screening and UTMB financial restrictions. Post-Ike, the re-opened UTMB specialty clinics no longer accept unsponsored patients. 4C's staff has worked to develop resource lists of private specialists in the region who are able to take

some County Indigent and cash paying patients. Staff has also collected many incidents of patients needing specialty care who are unable to access consultations, medications, diagnostic services and surgery. This crisis in healthcare access has been discussed in meetings of the Board of Health and the 4C's Governing Board, resulting in a joint Boards' resolution to support a plan to include tax solutions for financing healthcare for the uninsured. For more information see *Access to Care* page 28.

Access to Mental Health services provided by the Gulf Coast Center MHMR remains difficult with extended waiting periods of over a year for the uninsured. Inpatient services have been disrupted by the loss of beds at UTMB and mental health

patients are hospitalized now at St. Joseph's Hospital in Harris County and the Austin State Hospital. In collaboration with Gulf Coast, 4C's uninsured patients continue to receive priority access to Gulf Coast Center appointments. Of 90 4C's patients referred for psychiatric care at Gulf Coast Center in 2008, 7 have received an appointment to begin the intake process; 6 are on a waiting list; 20 have seen a psychiatrist; 15 refused services; 33 were not reachable (bad contact information or moved from the area); and 3 did not meet criteria for services; 6 were referred to other resources. (Children's services/VA). In 2008, the 4C's counselor received 50 referrals for counseling from MHMR psychiatrists and of those, 24 received counseling.

Improve fiscal management and healthcare financing of the 4C's Clinic.

This goal is likewise partially met due to issues with healthcare financing that may only be resolved at the national, state and county levels. The current healthcare environment produces a clinic patient population that is 84% uninsured, a small revenue base for Medicare and Medicaid which supports the cost of indigent and uninsured healthcare. Medicaid and Medicare opportunities remain low as the number of pediatric and prenatal patients decrease as private providers in the community compete for these patients.

Fiscal management improvements were sought in a number of ways including more aggressive grant writing and improving collections. During 2008, staff successfully completed a state grant continuation application for **Title V services for children**, which was awarded in the amount of \$66,600 to begin September 1, 2008. A grant to provide **children's obesity prevention and management program** was awarded on October 1, 2008 and works to improve fitness and healthy eating among overweight and obese children. Additionally, a contract with the Aids Coalition of Coastal Texas October 24th provides **medical services to HIV/AIDS patients** on a fee for service basis. The strategy to improve fiscal management through collection efforts has resulted in an increase in self-pay collection of 9% 2008 with the goal of reaching the federal benchmark level of 14%. See Priority #4 below, and for a more complete evaluation of fiscal collection rates compared with state averages, see *2008 4C's Clinic Utilization Report with 2007 state/national averages* on page 29.

Priority 3, Business Improvement

There are six Strategic Health Plan goals in this priority and all have been met and are being maintained annually.

To improve the Health District's preparedness and capacity to respond to public health disasters and emergencies with the objective of fulfilling CDC objectives in the bioterrorism grant.

This goal, extensively tested during Hurricane Ike, is met. The Health District response to Hurricane Ike was swift, appropriate, and commended by community leaders. See full report on Hurricane Ike of page 39.

2008 Business Improvement Highlights

- New TCDRS retirement plan
- Engaged new employee health insurance
- Annual Awards Program
- Employee recognition and exceptional performance
- Employee compensation for disaster work
- Ike Hero Awards
- New Integrated Phone System tested
- IT systems Implementation

Priority 4, Healthcare Financing

There are nine Strategic Health Plan goals in this priority and two have been met and are being maintained.

Increase the proportion of clinic patients who have third party reimbursement.

This goal has not been reached. The proportion of sponsored clinic patients has remained basically unchanged at approximately 88-84% for several years despite efforts to enroll patients in public funding programs. Case Managers assisted patients to apply for the Women's Health Program (WHP) and the Children's Health Insurance Program (CHIP) Perinatal; however these efforts have not helped to reach the goal above, nor to dramatically increase revenue. Only about one-half of the women that apply and are eligible for the WHP receive the services at the 4C's Clinic. The number of pediatric patients, representing most of the Medicaid funded patients seen in the clinic, has decreased in 2008 compared to 2007. The number of prenatal patients that stay with 4C's for the course of prenatal care up to transition for delivery is low. Competition from private providers for these patients is part of the current healthcare environment. In 2008, the clinic began enrolling children on fee-for-service Title V program for medical and dental services. There were a total of 334 children enrolled in the Title V program with 847 visits to 4C's.

Implement a Perpetual Pharmacy Inventory System as a fiscal monitoring tool.

2008 Healthcare Financing Highlights

Contract for HIV/AIDS clients
Improved Self-pay Collections
Assisting patients to apply for public programs
Limited Lab formulary
Medication Samples Guideline
Coding Reviews

This goal has not been met. The current pharmacy contractor that provides staff for the clinic pharmacies does not have computer software that is compatible with a Perpetual Inventory System. The Perpetual Inventory System is considered to be an industry standard and is an important internal control that would provide a calculation of the amount and value of pharmaceuticals on a monthly basis. A perpetual system will be sought in a future pharmacy RFP targeted for the Texas City clinics relocation, pending renovation to county-purchased former Wal-

Mart building on FM 1764 in Texas City.

Assure that all patients potentially eligible for third party coverage are provided the opportunity to apply.

This goal is partially met. Electronically monitoring potential eligible clients is limited in the current 4C's clinic management system. A new clinic management system is expected in 2009 with greater ease of identifying potential eligible's and better tracking clients to assure timely completion of relevant applications. Currently, registration manually refers patients to the case management department for those who may be eligible for Medicaid or other services. A case manager will assist eligible women to apply for the WHP and CHIP Perinatal by contacting the individual with information and offer of assistance. Registration also identifies patients eligible for Title V services for

children and assists them in completing the application. Because patients are not required to apply for such funding in order to be seen, many are not motivated to complete the process. A new clinic management system will give an opportunity to review and improve the process.

Increase collection of fees charged to self pay patients so they meet national standards set by the Centers for Medicare and Medicaid Services.

This goal is partially met and improvement continues. In 2008, self pay collections remained at 9% of gross self-pay charges as compared to the national average of 14%. Staff training during 2008 emphasized collecting co-pays, informing patients of their outstanding balances at the time of service and appointment clerks conducting reminder calls also reminds persons to bring clinic fees. In 2008, a Request For Proposal for a new clinic management system went out and three vendors submitted products. These will be evaluated in early 2009. A new clinic management system will make charges available to the patient at the end of the visit.

Assure coding accurately reflects the services provided and diagnoses made.

This goal is substantially met. During 2008, quarterly chart reviews with feedback to providers were completed as well as quarterly immunization and x-ray reviews to ensure all charges are captured. The billing manager reviews chart notes with medical providers. Certified medical coders review each encounter daily. The medical ICD9 “one-pager” for providers was revised to include common diagnoses and the medical encounter form is in the process of being revised for improved coding accuracy. Ultimately, implementation of Electronic Medical Records in medical and dental will offer advanced tools for assuring coding accuracy and for quality assurance monitoring.

Work with community partners and the Legislature to develop a funding method that would support indigent care.

In 2008, dramatic events such as the downsizing of the University of Texas Medical Branch after Hurricane Ike have focused public attention on health care financing in Galveston County. Discussions among elected leaders have highlighted the need for improved funding and many proposals have been put forward. One possibility is the formation of a Hospital District to finance secondary and tertiary care. Funding for such a district could be supplied by property taxes, sales taxes or other funds. National attention has also focused on the need for increased funding for Federally Qualified Health Centers and improvements in Medicaid and CHIP funding. For more discussion, see Access to Care on page 28.

Review and assure that the pharmacy formulary and laboratory authorized tests are consistent with the clinics practice guidelines.

This goal is substantially met. The pharmacy formulary was reviewed by the Medical and Dental Directors and the Clinic Leadership Team during 2007. A guideline was developed in 2008 that will enable providers to have access to medication samples for drugs not on the formulary. The lab formulary, reviewed and revised in 2008, has been

approved by the Governing Board and reviewed with providers. New lab tests to accommodate HIV patients seen under a new contract have been added.

Priority 5, Management of Chronic Conditions

There are three Strategic Health Plan goals in this priority and two have been met and are being maintained.

2008 Chronic Condition Highlights

The Healthy Weigh Program Targets
Childhood Obesity
Tracking 4C's Diabetes Measures
Coumadin Guidelines
Sample Medications

Develop and implement clinic practice guidelines for chronic conditions such as high blood pressure, heart disease, asthma and depression.

This goal is partially met. 4C's Clinic has developed several guidelines; however, development is still needed for depression and heart disease. Those guidelines will be

adopted in 2009. In addition, new dental clinical guidelines will be developed between the dental and medical services for cross referrals of various patients including those with chronic conditions.

Priority 6, Environmental Health Improvements

There are eight Strategic Health Plan goals in this priority and five goals have been met and are being maintained.

Increase collaboration between Health District staff and their counterparts in local political jurisdictions for routine and emergency communication.

This goal has been met. Staff routinely communicates with personnel in the cities in which they work. Staff conducting **Waste Water Treatment Plant inspections** meets and discusses the inspection and results with their counterparts. During the meetings of the Galveston County **Storm Water Collaborative**, District staff met on a routine basis with city, county and state counterparts to discuss the storm water permitting program and processes. Regarding **childhood lead poisoning** activities, progress in the area of collaboration for childhood lead poisoning environmental assessment (GCHD) and abatement (City of Galveston) activities was realized in 2008. In June, the Health District received a Kempner foundation award of \$30,000 to purchase state of the art lead testing equipment known as an X-ray

2008 Environmental Highlights

Stormwater Permit and Public Notice
Lab NELAC Certification
Animal Shelter Donations
Trash Bash
Environmental Summit
High Island Sewer Project
Hurricane Ike Response
Animal Disaster Planning

Fluorescence Detector to speed up identification of lead in paint and soil. The grant also provided for training and certification of two employees as certified lead risk assessors. The Office of Environmental Health Programs agreed to assist the City of Galveston with testing of playground equipment and surrounding soils for the presence of lead.

Increase awareness among elected officials regarding environmental services and concerns.

This goal is complete. See *Environmental Services by Jurisdiction*. Appendix F, page 80.

Assure systems are in place to collect accurate and available data.

This goal is partially met. Decade, a new software system, is in the process of being implemented. When final, the program will furnish a comprehensive data management system that will capture environmental data and publish restaurant inspections scores on the internet for public access. Testing of the new system has begun and the estimated date of completion is early 2009.

Ensure consistency in inspection and enforcement procedures. This goal has been partially met. In 2007 the Consumer Health Program developed a field review tool to assess and ensure consistency in the inspection process. The tool uses federal standards as benchmarks and is conducted by a senior manager who accompanies inspectors in the field. By the end of 2008, six of ten inspectors have been reviewed. Additionally, a senior manager also reviews all written inspection reports for inconsistencies, linking the findings to periodic staff training.

Priority 7, Senior Health Improvement

There are five Strategic Health Plan goals in this priority and four have been completed and are being maintained.

Increase access to the 4C’s Clinic for underserved seniors.

This goal has been partially met. 4C’s Case Managers have helped more than 280 seniors and their families to apply for public funding programs such as Medicare Parts B and D and QMB, helped with Advance Directives and worked with Adult Protective Services in 2008. They also helped more than 350 seniors access appointments for hospital follow up and mental health counseling. Case Management staff attended 3 outreach events for seniors to inform them on 4C’s services and Medicare Part D.

2008 Senior Health Highlights
New senior outreach site: Lake Haven Senior Residence
46 presentations to senior community groups
G-ROPES formed as 501(c)3
United Way Funds G-ROPES
Senior Health Survey

Clinic system improvements have increased access to patients of all ages, including seniors. However, there are many community choices for medical care for seniors with Medicare Part B or other insurance in Galveston County. In 2008, the number of senior clinic patients decreased from 1014 to 985.

Priority 8, Prevention by Immunization

There are five Strategic Health Plan goals in this priority and four have been completed and are being maintained.

Improve availability and accuracy of local data to enhance tracking assessment and feedback.

The Texas immunization registry, Imm Trac, continues to be under/in correctly utilized and thus inaccurate for assessing community-wide immunizations compliance. Participation by immunization providers that received state vaccine is mandatory, yet reporting is not enforced by the State of Texas. In addition, parents must give consent and opt into the registry as well. Immunization outreach staff continues to work to increase the number of immunizations entered into Imm Trac. The outreach clerks enrolled providers, schools and individuals for the purpose of increasing participation in the registry.

2008 Immunization Highlights

Over 15,000 Vaccines given post-Hurricane Ike to prevent tetanus, flu & hepatitis
State Award ImmTrac Registry Improvements
Immunization Advisory Council
Improved Clinic Compliance Rates

The Healthy People 2010 and Health District goal for children being up-to-date on immunizations is 90% of children District-wide. While the statewide registry of children remains in developmental stages, there is no accurate data of Galveston-county wide immunization rates for all its

children. Rates are available on subsets of the population in a sample of clinics and from a review of records of daycares selected by DSHS. The selected daycares are those with the lowest rates from the preceding year.

Another source of immunization rates is provided by the immunization telephone survey conducted by the Centers for Disease Control. This survey, the National Estimated Vaccine Coverage, provides data for compliance with the 4-3-1-3-3-1 (4 Dtap, 3 polio, 1 MMR, 3 HepB, 3 HIB and 1 pneumococcal) immunization schedule on a national, state and regional basis. Galveston County is reported as part of the data available for the Metropolitan area covering Harris and Galveston Counties. The rates for 2007, the most recent data available, were 77.4% for the U.S., 77.3% for Texas and 73% for the Houston metropolitan area.

Annually, the DSHS does an assessment of childhood immunization rates in five clinic sites operated by the Health District. The sites are: three public health clinics in Texas City, Dickinson and Galveston, and two 4C's Clinics in Texas City and Galveston. Childhood immunization rates are also assessed in private clinics that are TVFC providers. In 2006, DSHS changed the methodology for determining immunization compliance making it statistically impossible to accurately compare data from previous years. Also, changes in the types of vaccines assessed on a yearly basis make comparisons questionable. The following 2008 data is compared to the 2007 baseline set in the various clinics using the current state methodology.

In 2008, the state survey of estimated childhood immunization compliance rates (percent of children seen at various clinic sites that were compliant with the immunization requirements that were assessed) was as follows: Texas City 74% (70% in 2007); Dickinson 76% (72% in 2007); Galveston 75% (64% in 2007); 4C's Clinic (Texas City) 92% (88% in 2007); 4C's Clinic (Galveston) 88% (73% in 2007); and 11 private clinics using TVFC had rates that ranged from 57% to 100%. Overall, all public clinics overseen by the Health District has increases in compliance in 2008 compared with 2007.

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2007 Galveston County Public Health Reports

Health of Galveston County – Epidemiology Summary

Galveston County is one of the 254 counties in Texas, located on the upper Texas Gulf Coast, approximately 50 miles south of Houston. The county's primary industries include petrochemical manufacturing and refining, insurance, government, health care and tourism.

Demographics

Based on 2007 US Census data, Galveston County has an estimated population of approximately 283,987 people. The racial and ethnic distributions consist of the following percentages: 60% white; 21% Hispanic; 15% black; 3% Asian, 1% other. The median age of the residents is 35.9 years with 25.9% falling below eighteen years of age and 10.8% as sixty-five years or older.

In Galveston County, 12.4% of the people live below poverty compared to Texas at 16.3% and to the nation at 13%. Over eighty percent (84.9%) of the residents 25 years and older are high school graduates compared to Texas at 78.6 % and the nation at 84%. The median household income in Galveston County is \$52,392 compared to Texas at \$47,563 and the nation at \$50,740 (2007 US Census).

Galveston County Seniors

Based on 2007 US Census, approximately 10.8% of Galveston County residents are aged 65 years or older. According to Department of State Health Services (DSHS), cardiovascular disease is the leading cause of death among those aged 65+ years in the state. The Galveston County Coordinated Community Clinics (4C's) provides ambulatory healthcare to seniors. In 2008, a total 985 persons 65+ were seen in the 4C's clinic for medical and/or dental services. The top 3 conditions seen in persons 65+ at the 4C's were hypertension, diabetes and hyperlipidemia, which are major risk factors to cardiovascular disease.

Births & Pregnancies

Available data from 2004 shows 7,914 live births in Galveston County, of which 52 % were male and 48% were female. Mothers 17 years of age and younger delivered 2.3% of the live births in the county and the state. The race and ethnicity of the teen mothers in Galveston County was as follows: 42% (77) Hispanic; 30% (54) black, and 28 % (52) white. Ten percent of Galveston County mothers with live births received late or no prenatal care, compared with the state average of 18.2%. In 2008, the 4C's clinics provided services to 71 prenatal patients. Of the 71 prenatal patients, 24% (17) were teenagers with ages ranging from 14 years to 19 years. In 2008, 6,466 total births occurred in Galveston County compared to 7,142 in 2007. This decrease may be attributed to residents evacuating from Hurricane Ike and UTMB closure of facilities and downsizing.

Causes of Death

According to Centers of Disease Control and Prevention (CDC), during the 20th century, the leading causes of death in the United States shifted from infectious to chronic diseases. Chronic diseases (e.g., cardiovascular disease, cancer, and diabetes) are now among the most prevalent, costly, and preventable of all health problems. Department of State Health Services (DSHS) reports cancer and heart disease accounts for 3 out of 4 deaths in Texas and the United States. In 2005, death rates due to cardiovascular disease and cancer in Galveston County residents were 243.0 and 218.9 compared to the state rate at 219.3 and 179.4, respectively. Through death records, the rate of reported cancer and cardiovascular disease related deaths in Galveston County exceeds the state average.

In 2008, the Galveston County recorded a total of 2,009 deaths. This data includes all deaths that occur in Galveston County regardless of a person's county of residence. Therefore, some discrepancies may exist when for example, patients residing in outside counties die while incurring treatment at a Galveston County healthcare facility. Moreover, UTMB files all of its death data with Galveston County, although some deaths may have occurred at satellite sites outside county lines.

Galveston County Communicable Diseases

Reported communicable diseases occurred in all parts of Galveston County. The top 3 notifiable disease/conditions in the county were Chlamydia, Gonorrhea and Hepatitis C (See *Galveston County Morbidity Report 2004-2008* on page 24). With a total of 1,008 cases reported, Chlamydia, ranked as the most reported disease in 2008, consisting of 83% females and 17% males. The residents' race and ethnicity include 11% Asian, 45% black, 20% Hispanic and 34% white. Gonorrhea followed by 413 reported cases, comprised of 51% males and 49% females. Regarding their race and ethnicity, 65% were black, 14% were Hispanic and 20% were white. The ages for chlamydia and gonorrhea cases ranged from 0 to 4 years up to 65 years and older. The vast majority of cases with chlamydia (89%) and gonorrhea (77%) appeared within the 15 years to 34 years of age categories.

Childhood Lead Poisoning on Galveston Island

Lead is a common environmental contaminant found in all areas of the US. Water, air, food, dust and soil may contain lead along with several products including: paint, batteries, chemicals, pottery, tile and pipes. People can swallow lead-containing items or breathe in dust contaminated with lead. Children exposed to lead absorb a greater amount than adults and may experience negative outcomes, such as impaired cognitive, motor, behavioral, and physical abilities.

Considering the risks associated with lead, several preventative actions must be taken, especially in regards to children. Blood testing can reveal lead exposure. An elevated blood lead level (EBLL) indicates an accumulation of lead in the body. Two methods of blood testing are utilized: a capillary blood lead test and a confirmatory venous blood lead test. In 1991, Centers for the Disease Control and Prevention (CDC) designated that the blood lead level (BLL) that should prompt public health actions as 10 micrograms per deciliter (μdL).

GCHD efforts to prevent or reduce lead poisoning consist of receiving and monitoring EBLL reports for individuals, educating families impacted by child lead poisoning, and performing environmental assessments to determine source(s) of lead. GCHD routinely performs an environmental assessment when a patient has an EBLL of 20 µ/dL or greater. Environmental assessments also occur when a patient has a persistent EBLL of 15 µ/dL or greater, lasting for more than 3 months. Moreover, GCHD compiles lead reports and tests and sorts it via gender, race/ethnicity, age, EBLs, zip codes, and reporting entity in order to better utilize and assess the data.

During the recent years of 2007 and 2008 there were respectively 957 and 869 venous blood lead samples reported to GCHD for BLLs of Galveston County residents. Of the 957 samples tested in 2007, 20 had EBLs, with 16 being first-time elevation samples and the remaining 4 being follow-up tests. In 2008, 718 of the 869 total venous samples came from children ages six and below. Twenty-six (26) of the samples indicated EBLs, with 25 cases including first-time EBL patients, and 1 case appearing from a follow-up test.

In 2008, GCHD received 869 venous blood lead results. Seven hundred and eighteen (718) samples came from children aged six and below. Twenty-six (26) of the samples indicated EBLs, with 25 cases including first-time EBL patients, and 1 case appearing from a follow-up test.

The following demographic data further aids in analyzing the EBL cases. By gender, a total of 11 females and 15 males had EBLs. In respect to age, the vast majority of cases, 23 of the 26, occurred in residents ages 6 and younger. The ethnicity and races of the cases reported, catalogs 16 Hispanic cases, 6 black cases, 3 White cases and 1 unknown. The majority of the 2008 cases appear in male Hispanic children. In terms of geography, most cases, 69% (18 cases), occurred in the city of Galveston with zip codes 77550 and 77551. Texas City had the next largest amount of cases: 15% (4 cases) in zip codes 77590 and 77591. La Marque followed with 12% of the cases (3 cases) in zip code 77568. League City had the least amount of cases, with only 1 case, or 4%, in zip code 77573. All patients with a reported EBL were referred to a community health nurse for further education and assistance. Three cases were referred for environmental assessments due to EBL above 20 µ/dL or reoccurring cases (3 months apart) above 15 µ/dL. By the end of 2008, GCHD performed two environmental assessments. Moreover, one adult patient, who worked as a contractor/painter, went to the ER due to an excessive EBL.

A Childhood Lead Poisoning Prevention Taskforce was formed January 2008 www.gchd.org/councils/leadforceindex.htm resulting in the formation of 5 focus areas for subcommittee work: (1) Public Awareness; (2) Screening, Reporting and Case Management; (3) Environmental Assessment; and (4) Eliminating Lead from the Environment and (5) Advocacy. The intent of the taskforce is to develop a coordinated program for preventing childhood lead poisoning and for eliminating lead from the environment.

Accomplishments of the taskforce since its inception include: a document that identifies key roles and responsibilities of various agencies and outlines resources needed for a model Childhood Lead Poisoning Prevention Program; submission of applications for

lead grants to National Institute of Environmental Health Sciences Center, Kempner Foundation, Housing Urban Development, Environmental Protection Agency and Centers for Disease Control and Prevention. The Kempner Foundation awarded the Health District \$30,000 to purchase a state-of-the-art environmental Lead Paint Analyzer. The analyzer will be used to quickly assess City of Galveston Parks and homes of children diagnosis with lead poisoning at a level of 20 ug/dl or higher.

The taskforce meetings also resulted in the increased reporting of all lead cases from reporting entities including UTMB, Mainland Medical Center, DSHS and reference laboratories. A draft MOU to City of Galveston and Galveston Housing Authority has been created with the intent to share information, as allowed by law, to better identify any landlords on the housing voucher program (section 8) linked to reported cases of childhood lead poisoning. The draft MOU is currently under legal review by the City and the Housing Authority pending execution.

Collaborations with HUD (Lead Programs Enforcement Division) for investigation and enforcement of the federal lead disclosure laws. Over the past three years, some 17 homes in Galveston were identified with lead hazards linked to a child reported with poisoning. Once notified, owners of property are required to disclose the hazard to tenants or prospective home buyers of that property. The investigation has been delayed due to response and recovery efforts of Hurricane Ike.

Media Inquiries and reports consisted of: A Channel 11 News joint interview with the Health District and City's public information officers regarding an informational Lead flyer that is being distributed throughout Galveston; ABC Channel 13 conducted an interview with Dr. Mark Guidry and City of Galveston Assistant City Manager Lloyd Rinderer on May 13th. In the interview each discussed the challenge posed by lead poisoning in Galveston and what efforts are taking place to address the issue; Channel 13 News Reporter Cynthia Cisneros also interviewed two local residents living in pre-1978 homes that possess the greatest risk of containing lead; a June 2nd article the *Houston Chronicle* summarized activities of the community task force to date www.gchd.org/press/2008/06-06-08Alexis-Grant-lead-story.htm; and a June 6th story in the *Galveston Daily News* reported on activities with a focus on the data being collected and efforts being made to insure that all numbers are reported to the district's epidemiologist www.gchd.org/press/2008/06-06-08leigh-jones-lead-story.htm.

Summary of 2008 Public Health Threats & Responses

Many of the public health threats posed to the Galveston County community are related to its geography and its economy. The residents of the county must deal with the impending threat of chemical exposure or explosions, a hurricane prone coastal environment, an active port and cruise ship industry and common communicable diseases. In the year 2008, Galveston County Health District responded to a range of communicable diseases and environmental public health threats. Such threats ranged from responding to 4 hurricanes (Dolly, Gustav, Eduard and Ike; with Ike being the most severe), environmental issues, and infectious diseases. Threats were handled through

communication with partners and residents as well as through investigations and public health interventions.

Health Alerts & Advisories within Galveston County

Communication and response between public health partners, the medical community and the public is an immense part of Public Health Preparedness. Health alerts are handled largely via distribution through the Public Health Information Network (PHIN). In 2008, a total of 7 advisories were distributed through the PHIN. The purpose of the advisories were to alert and/or advise health professionals on identification, prevention, and treatment of potential threats to the community. PHIN advisories were distributed regarding: Rabies, Salmonella Saint Paul Outbreak, Lead in Artificial Turf, Whooping Cough, Lead Testing and Reporting, Tetanus, and Galveston County Obesity Study.

Meningococcal Disease in Texas A&M University-Galveston Student

The Health District responded to 1 case of meningococcal meningitis in a Texas A&M University Galveston student. Epidemiology Services responded with a thorough investigation, identified all close contacts of the case for preventive antibiotics, and educated the school about appropriate preventive measures. Meningococcal meningitis is a bacterial infection of the fluid of a person's spinal cord and covering that surrounds the brain. A health advisory was sent out to medical professionals requesting them to consider meningococcal disease in the differential diagnosis of patients presenting with sudden onset of fever, intense headache, nausea, and stiff neck. There was one case of meningococcal disease reported for 2007. In the past recent years, the District has 0 to 4 cases reported annually, typically during winter months. Information about meningococcal disease and a vaccine can be found at www.cdc.gov/mmwr/PDF/rr/rr5407.pdf.

Dengue Fever in Friendswood Resident – In January 2008, the Health District investigated a case of dengue fever in a 39 year old female residing in Friendswood. Investigation revealed that the patient had traveled to an area in Mexico where dengue is endemic. Dengue Fever is a mosquito transmitted viral illness characterized by sudden onset of fever, severe headaches, muscle and joint pains. There were 2 cases of dengue fever in 2007; both were imported into the United States. Dengue Fever is not transmitted person-to-person. For more information on dengue fever, see www.cdc.gov/ncidod/dvbid/dengue/index.htm.

Gastrointestinal Outbreak - Texas City

An assisted living facility in Texas City reported (January 2008) an outbreak of vomiting and diarrhea in residents and staff. Epidemiology and Environmental and Consumer Health Services investigated the complaint. A total of 52 residents and staff were affected by the illness. Thirty-nine (49%) were residents and 13 (33%) were staff members. The Health District provided information to the facility on hygiene, hand washing, and disinfection of premises. Evaluation of medical charts revealed a total of 3 residents were hospitalized. Laboratory tests revealed no apparent cause of illness. The Health District sanitarian's inspection of kitchen and food areas were unremarkable. Likely causes of gastro-intestinal illness include Norwalk-like virus, salmonella, or parasitic, such as cryptosporidiosis or giardia. Public information about gastrointestinal outbreaks can be found at www.cdc.gov/ncidod/dvrd/revb/gastro/faq.htm.

Gastrointestinal Outbreak - County Jail

The Health District received a report (July 2008) of a possible food borne illness outbreak affecting inmates at the Galveston County Jail. The jail nurse reported that 800 of the 1100 inmates had been evaluated for a gastrointestinal illness (vomiting, diarrhea, and stomach cramps) that lasted for 3 to 4 days. A line list was generated of inmates that were stricken with the illness. Food Safety Investigators with the Consumer Health Services program assisted in the investigation by collecting food samples and inspecting the kitchen, during which they identified some minor maintenance and training issues. The testing of stool specimens were negative for common viral (Norovirus), and bacterial organisms (*Salmonella*, *Shigella*, *E. coli*, and *Campylobacter*) and parasitic agents (*Cryptosporidium* and *Cyclospora*) and all food samples were negative for staph endotoxin. The investigation of the outbreak did not identify the cause of the illness. This is the 3rd outbreak of gastrointestinal illness in the Galveston County Jail in the past 5 years. *Houston Chronicle* stories covering the outbreak are posted at www.gchd.org/press/2008/071008-jail-illness-chron1.htm, www.gchd.org/press/2008/071108jail-illness-chron2.htm and www.gchd.org/press/2008/071708Foodpoisoning3rd.htm. *Galveston County Daily News* coverage is online at www.gchd.org/press/2008/071108Jail-ill-GDN.htm.

Whooping Cough in Galveston County -For the year 2008, GCHD received a total of 11 confirmed pertussis cases in Galveston County residents. Cases resided throughout the county (Santa Fe, La Marque, League City and Galveston). Epidemiological investigations were conducted on all cases to determine immunization status, identify close and household contacts to receive chemoprophylaxis. In addition, contacts were educated on transmission, prevention and treatment of disease. Four of the eleven cases were epi linked to an index case and attended primary schools in Galveston. A total of 21 close contacts were identified to receive post-exposure medication. The Health District provided a letter and fact sheet to the case's school administration for distribution to parents on transmission, prevention, treatment of disease, and Health District contacts for additional information inquires. Pertussis is a vaccine preventable disease that is an acute bacterial infection of the respiratory tract.

Hepatitis A in Galveston County – For the year 2008, GCHD received a total of 8 confirmed Hepatitis A cases in Galveston County residents. Cases resided in League City, Texas City, Hitchcock, Friendswood, Santa Fe and Dickinson. Epidemiological investigation was conducted on all cases. Investigation revealed no case worked or volunteered in a day care setting or as a food handler. Contacts were identified to receive Hepatitis A vaccine and immune globulin. The case and all close contacts were educated on transmission, prevention and hygienic practices. Hepatitis A is a viral infection that is transmitted fecal oral with a discreet onset of symptoms (abdominal cramping and jaundice). Galveston County averages 7 to 9 cases per year.

Salmonella Saintpaul Outbreak – The Health District received reports of a total of 6 cases associated with multi-state Salmonella Saintpaul outbreak that occurred between April and August of 2008. Over 1400 cases were associated with the nationwide investigation. Jalapeño peppers and serrano peppers grown in Mexico were thought to be associated with the *Salmonella* Saintpaul outbreak.

Influenza – Flu season is occurs during the months of October – May. Local influenza surveillance efforts remain the only way to collect data that enable health agencies to prepare for new vaccines, assess the severity of the annual epidemic, and detect new strains of the virus before a pandemic influenza strain can emerge. Although flu is not reportable, GCHD collects information about flu activity (lab confirmed cases or influenza like illness (ILI) –fever over 100°F and cough and/or sore throat and report it the DSHS which in turns report it to CDC. The viral cultures submitted to the state in combination with the state's reported flu activity level and the flu-like illness surveillance will provide important information to CDC for tracking and typing circulating flu. For 2007 -2008 flu season, Galveston County received 203 reports of confirmed flu cases. There were no outbreaks in institutions or schools associated with reported cases. The full report for on 2008 flu surveillance available at: www.dshs.state.tx.us/idcu/disease/influenza/surveillance/2008.

GCHD Response to Hurricane Season

GCHD responded to several weather related incidents throughout the 2008 Hurricane season. During the months of July, August and September, the district prepared for the land fall of Hurricane Dolly, Tropical Storm Edouard, Hurricanes Gustav and Ike. While monitoring Tropical Storm Edouard and Hurricanes Gustav and Ike, the district activated emergency response plans, assigned roles in accordance with the National Incident Management System (NIMS) and collaborated with local, regional, and state agencies in planning. Some of the steps taken to prepare for the storm included backing-up key databases, preparing public health messages, assigning EMS crews for medical evacuations, and testing back-up power and communication systems. Throughout the time of the threats, management and staff were provided regular updates regarding the storm and local and state actions to prepare. For additional information in GCHD's response post Hurricane Ike, see Hurricane Ike Report on page 39.

Prepared by Dana Beckham, Chief Epidemiologist, and reviewed by Harlan "Mark" Guidry, MD, MPH, District Health Authority

Galveston County Morbidity Report 2004-2008

	2004	2005	2006	2007	2008	2008 GCHD Incidence Proportion ¥	2006- 2008 GCHD Incidence Rate ¥	2006 Texas Incidence Proportion	2006 US Incidence Proportion
AIDS	44	36	56	12	44	15.49	13.25	*	*
Asbestosis	0	27	0	0	0	0.00	0.00	*	*
Campylobacteriosis	18	10	14	10	12	4.23	4.26	*	*
<i>Chlamydia trachomatis</i>	942	813	909	1092	969	341.21	351.44	330.46	347.80
Creutzfeldt-Jakob Disease	0	0	0	1	0	0.00	0.12	*	*
Cryptosporidiosis	2	1	2	0	3	1.06	0.59	1.19	2.05
Dengue Fever	0	0	0	2	0	0.00	0.24	*	*
Elevated Blood Lead	38	22	20	16	26	9.16	7.34	*	*
Encephalitis	0	3	0	0	0	0.00	0.00	*	*
E. Coli 0157:H7	0	0	1	1	0	0.00	0.24	0.92	1.50
Gonorrhea	355	439	496	562	404	142.26	173.00	133.20	120.90
<i>H. Influenzae</i> type b infection	0	0	0	1	0	0.00	0.12	*	*
Hepatitis, type A	3	9	7	10	8	2.82	2.96	1.44	1.21
Hepatitis, type B (acute)	2	6	8	16	27	9.51	6.03	3.64	1.59
Hepatitis, type C	713	435	437	476	359	126.41	150.51	0.24	0.26
HIV infection	38	29	51	31	48	16.90	15.38	*	*
Influenza isolate	4	45	9	2	0	0.00	1.30	*	*
Legionellosis	1	1	1	1	1	0.35	0.35	0.30	0.96
Listeriosis	1	0	0	0	1	0.35	0.12	0.18	0.30
Lyme Disease	2	1	0	3	2	0.70	0.59	0.13	6.72
Malaria	0	4	1	0	0	0.00	0.12	0.46	0.50
Meningitis, aseptic/viral	59	47	34	28	26	9.16	10.41	*	*
Meningococcal infection	0	3	1	1	1	0.35	0.35	*	*
Mumps	0	0	0	0	1	0.35	0.12	0.25	2.22
Pertussis	20	11	9	1	11	3.87	2.48	4.17	5.27
Rocky Mountain Spotted Fever	0	0	1	0	0	0.00	0.12	0.17	0.77
Salmonellosis	61	42	44	52	54	19.01	17.75	13.39	15.45
Shigellosis	28	29	18	57	32	11.27	12.66	9.03	5.23
Strep.infection, invasive group A	6	3	4	2	4	1.41	1.18	1.32	1.82
Strep.infection, invasive group B	9	0	11	4	5	1.76	2.37	*	*

Strep.infection, invasive pneumo.	14	9	19	18	27	9.51	7.57	0.00	1.12
Syphilis	29	28	39	50	72	25.35	19.05	21.68	12.46
Tetanus	0	0	0	0	1	0.35	0.12	0.00	0.01
Tuberculosis	16	20	17	18	23	8.10	6.86	6.93	4.65
Typhoid Fever	2	0	0	0	1	0.35	0.12	0.07	0.12
Varicella (Chickenpox)	26	88	133	135	119	41.90	45.79	51.48	16.34
Vibrio infection	2	2	2	1	3	1.06	0.71	*	0.00
West Nile Virus Infection	0	0	3	1	0	0.00	0.47	1.55	1.44
Food-borne illness complaints	241	56	58	48	61	21.48	19.76	*	*
Rabies in animals	0	1	6	2	5	1.76	1.54	3.89	2.01

- † Rates determined per 100,000
- * Indicates no data available
- Population data for the 2008 incidence proportion section for Galveston County is 283,987
- Texas population data used in the 2006 TX incidence proportion section is 22,860,000
- Total U.S. population for the 2006 US incidence proportion section is 296,410,000
- The average population for Galveston County from 2006-2008 is 281,700 as utilized in the 2006-2008 incidence rate section
- Source for state and national data: *Morbidity and Mortality Weekly Report (MMWR) Summary of Notifiable Diseases-United States 2006* found at: www.cdc.gov/mmwr/PDF/wk/mm5553.pdf

Public Health Preparedness Status Report on Capacity

The Galveston County Health District personnel have taken many steps to increase our capacity to respond to variety of public health threats such as hurricanes, infectious disease outbreaks, and terrorist events. Throughout 2008 the public health preparedness staff worked with other local health departments, schools, hospitals, emergency management agencies and social service organizations to develop plans, conduct training, purchase supplies and test our ability to respond to a variety of public health emergencies. As a result, we are better prepared to address future challenges.

Preparedness Update:

- ❖ **Joint Information Center Training** - Hosted Joint Information Center (JIC) Training at the Walter Hall Pavilion in League City. The course reviewed and tested participants on communication procedures for working as a group to collect, prepare and release critical information regarding an emergency via a Joint Information Center.
- ❖ **Emergency Preparedness Exercise at Clear Creek High School** - Participated in a demonstration at the Clear Creek High School Ninth Grade Campus regarding the response to an anthrax scenario. About 325 students and faculty participated, as well as the League City Police, EMS, Fire Department, Houston HAZMAT and Emergency Management.
- ❖ **Point of Dispensing Exercise in League City** - Participated in a Regional Point of Dispensing (POD) exercise conducted at Clear Creek High School in League City on Saturday, March 29th. Additional response entities included Brazoria County Health Department, Liberty County, DSHS HRS Region 6/5 South and CDC. The exercise tested GCHD's ability to dispense antibiotics to a large population in response to an anthrax threat. There were a total of 80 volunteers and Health District staff who participated in the POD exercise.
- ❖ **Texas Inventory Management (TIMS)** - Trained for Texas Inventory Management (TIMS). The training was designed to familiarize staff with DSHS standard computerized inventory method of purchasing, shipping, receiving and identifying medicines and/or medical supply during a public health outbreak or emergency.
- ❖ **Annual Disease in Nature Conference** - Assisted in the planning of the 58th annual Diseases in Nature Conference held on April 22-24, 2008, at the Moody Gardens Hotel, Galveston, Texas. The conference focuses on zoonoses of interest to health professionals in the southwestern United States that could be used as a bioterrorism agent
- ❖ **DSHS statewide "Ready or Not" Campaign** - Participated in the State Health Department "Ready or Not" Campaign for Public Health Preparedness at the League City and Galveston HEB Pantry (May 18 and 19). Ready or Not stresses three critical areas, Family, Essentials and Information. Over 850 participants received information and/or equipment related to preparing for public health emergency events. Items distributed consisted of waterproof document bags that also had a checklist in English and Spanish of items people should have in their emergency kits; hurricane and pandemic flu wheels; 211 cards, emergency kits and hand washing brochures.

- ❖ **Medical Special Needs Cache** - Received a cache for medical special needs from Department of State Health Services (DSHS) funding project. The supplies are to be used for shelter operations in Galveston County. This initiative is a result of a regional Department of State Health Services funding project that assist local health departments to prepare for sheltering residents with special needs.
- ❖ **Geographic Information System (GIS)** – Trained select staff on geographic mapping utilizing the GIS software. GIS allows one to view, understand, question, interpret, and visualize data in many ways that reveal relationships, patterns, and trends in the form of maps, globes, reports, and charts.
- ❖ **Online Training Software** – Received software from DSHS to conduct online training for Medical Reserve Corp volunteers.
- ❖ **Lester Pill Counter** - Received a pill counter from Department of State Health Services (DSHS) funding project. The pill counter is to enable the quick break down of bulk medication for first responders into units of use bags during an outbreak
- ❖ **All Hazards’ Plan** - updated the District’s All Hazards’ Plan to include FEMA reimbursement for salary and exempt employees.
- ❖ **Public Education** - Provided public education regarding personal preparedness at senior health centers, food fairs, rotary clubs, faith based organizations and health fairs.
- ❖ **Galveston County Emergency Response Collaborative** - facilitated monthly meetings of the Galveston County Emergency Response Collaborative (GCERC). The GCERC is composed of a group of Galveston County first responders whose mission is to ensure an effective and comprehensive response to community health emergencies through collaboration among member institutions.
- ❖ **Progress Toward Animal Disaster Plans** - facilitated meetings of the animal issues committee to develop plans and address problems with animals before, during, and after an emergency.
- ❖ **Personal Protective Equipment (PPE) Fit Testing** –Conducted PPE fit testing on district employees that could be potentially exposed to infectious respiratory agents.
- ❖ **National Incident Management System Requirements** - based on levels of responsibilities, GCHD staff received incident command training in accordance with National Incident Management System requirements.

While much progress has been made in 2008 to make Galveston County better prepared for a public health emergency, more remains to be done. The list below outlines some of the future plans for 2009:

- ❖ Recruit and train an additional 1,100 volunteers to fill vital roles in a public health emergency.
- ❖ Finalize agreements with Animal Rescue Organizations and plans for handling animals in a disaster.
- ❖ Coordinate with other Local Health Departments in the development of mass fatality plans.
- ❖ Continue to meet new State and CDC contract guidelines.

Prepared by Jack Ellison, Public Health Planner and Dana Beckham, Director of Diseases and Disaster and reviewed by Harlan “Mark” Guidry, MD, MPH, District Health Authority

Access to Care

4C's Healthcare Report on Indigent & Uninsured

Since Hurricane Ike, access to specialty care has been significantly impacted for the indigent and uninsured. Prior to Ike, county indigent clients at 21% poverty received specialty care at UTMB under contract with the County. After Ike, county indigent clients could no longer access care at UTMB; their care was discontinued, and required much effort to secure alternative providers of care (still ongoing). For the uninsured above 21% of poverty, the situation is even bleaker. The uninsured no longer can be referred to UTMB or obtain care there. Few if any local options exist for their specialty care. When 4C's determines these patients need specialty care, we face a crisis in having no local or affordable options for them. Some have even resorted to moving to Harris County in order to access their hospital district specialty services. Others see no option and eventually their condition will worsen to the point of an emergency and will seek more costly emergency care, given the absence of more affordable and preventive specialty care.

In a backdrop of national economic and healthcare problems, local and state elected leaders are grappling with the severe economic impact of the hurricane in Galveston County, as well as faced with considering a tax district solution to financing specialty care for the uninsured up to 100% of poverty. In Galveston County, it is estimated that approximately 27.8% of the population, or almost 80,000 people, are uninsured. Furthermore, it is estimated that 10,346 of the uninsured residents are at 100% of poverty or less. If a hospital district was established to finance specialty care, it is estimated that 3600 specialty referrals will be made annually by 4C's providers with an estimated cost of \$12 – 15 million dollars (with appropriate cost controls).

Primary Healthcare for Galveston County Residents

- The 4C's Clinic is a federally-qualified community health clinic (FQHC) that delivers primary healthcare to any county resident. In 2008, patients seen in the 4C's Clinic were comprised of the county indigent at 21% poverty (2% of clinic patient population), the uninsured (88% of the clinic population), and sponsored patients (10%). The following are key points about the 4C's Clinic:
- **4C's medical clinics are operating at full capacity, maximum efficiency, and maximum medical productivity.** 4C's medical productivity exceeds state and national averages for FQHCs. Additionally, 4C's CY 2008 cost/per medical visit is \$91- well below state (\$111) and national (\$123) averages for FQHC's in 2007.
- **The county indigent program pays for the secondary and tertiary care of eligible residents at or below 21% poverty (since April 2002); 4C's Clinic is funded by county to provide primary care.** In 2004, there were 1,200 participants, some of whom apparently exceeded the 21% policy due to lack of asset testing. Since asset testing, eligible participants were 315 (2005), 416 (2006) and 470 (2007) and 368 (2008).
- **Crisis in insured access to specialty care.** Until the temporary closure and later downsizing of the University of Texas Medical Branch after Hurricane Ike, the majority of uninsured patients were referred there for secondary and tertiary care. Since Ike, no referrals are being made to UTMB and clinic staff has worked, with

limited success, to find community specialists to accept referrals for the uninsured and for those on the County Indigent Program. It is expected that lack of specialty care will result in an increase in more costly emergency visits.

- **An increased payor mix of Medicaid & Medicare offers opportunity.** On average, a FQHC typically has 30% of its population covered by Medicaid and Medicare. The 4C's has less than 13 %. FQHC's are paid an increased rate for Medicare/Medicaid visits. If the 4C's could increase its payer mix to 20% Medicaid/Medicare, the resulting revenue would help to expand the clinic's capacity to hire additional providers and support staff. However, the County has given funds for several more clinic providers and currently the positions have not been filled.
- **Cultural and environmental factors have an impact on health access and effectiveness.** Many 4C's patients experience the demands and challenges of complex social issues and the competing needs for food, water, shelter, finances, transportation, etc. These factors impact health-seeking behaviors, by fostering an environment that promotes sick-care rather than wellness-care, thus raising public expectation for affordable acute care (walk-in) services, and highlights the need for resources coordinators to assist patients with social needs that impact their physical and mental health condition.
- **Uninsured Barriers to Mental Healthcare**
Mental Health services provided by the Gulf Coast Center MHMR remain difficult to access with extended waiting periods of over a year for the uninsured. Inpatient services have been disrupted by the loss of beds at UTMB and transportation to nearest facilities out of the county is a growing concern. Of 90 4C's patients referred for psychiatric care at Gulf Coast Center in 2008, 7 have received an appointment to begin the intake process; 6 are on a waiting list; 20 have seen a psychiatrist; 15 refused services; 33 were not reachable (bad contact information or moved from the area); and 3 did not meet criteria for services; 6 were referred to other resources. (Children's services/VA). In 2008, the 4C's counselor received 50 referrals for counseling from MHMR psychiatrists and of those, 24 received counseling.

4C's Clinics Compared with Other FQHC's

The following paragraphs summarize key points and supporting statistics. While 2008 data is available for 4C's clinics, 2008 state and national comparative data are not available at the time of this publication. Thus, for illustrative purposes, comparison data mentioned below reflects state and national averages of all CHC's in 2007 – which presumably has less year-to-year variation than data from a single source clinic. See *2008 4C's Clinic Utilization Report with 2007 state/national averages* on page 76.

Self Pay Collection Rates - Below State and National Averages

Self pay collections remained below state and national levels; however increased from 7% in 2006 to 9% in 2007 and remained at 9% in 2008. The federal FQHC benchmark is 14%. Cashiers notify patients of their current balance when the patient checks in for a visit by writing the balance on a card, thus providing privacy and information. In 2008, a Request for Proposals was developed for a new clinic management system that would allow for the implementation of a standardized fee and/or the ability to present all charges

to the patient at the end of the visit. Three vendor products will be tested in early 2009. The system will integrate with an electronic medical record as well.

Medical Productivity Exceeds State and National Averages Need UDS

In 2007, medical team productivity continued to exceed state and national averages for federally qualified community health centers (Medical team productivity was 6,541; State was 4,599 and National was 4,247). Medical providers are operating at maximum capacity at this time. Any future gains are dependent up improved data systems and a new facility for the Texas City clinic with improved clinic design and additional exam rooms. Since the last half of 2004, provider productivity increased from 2.2 to an average of 3.2 patients per hour. The 4C's medical clinic has an average of 20 minute patient visits. Medical walk in visits account for over 45% of all visits.

Dental Productivity Below State and National Averages

In 2007, dental productivity was below state and national averages for federally qualified community health centers (Dentist productivity was 2,215, state was 2,540, national was 2,669). While dental productivity remains below state and national averages for FQHC's, 2008 saw slight increase from 2215 to 2217. The goal for dentists is to see 2 patients per hour. In 2008, dentists average 1.4 patients per hour. To reach dental goals, clinic management performed a dental review in 2007 and in 2008; many following recommendations were implemented, including the hiring of a dental controller to assure patient satisfaction and optimal clinic flow by directing dental assistants and basic operations.

For 2009 the dental clinic will focus on:

- Increase recruitment and retention of qualified dental staff
- Development of clinical dental guidelines including referrals to and from the medical clinic
- Implementation of a revised scheduling template to help increase productivity
- Preparation for dental electronic records
- Improve peer review activities based on clinical guidelines
- Meeting productivity goal of 2 patients per hour.

Opportunities and Threats to Uninsured Healthcare

On September 13, 2008, Hurricane Ike struck the Texas Gulf Coast and changed the environment of much of Galveston County. For a full report on Hurricane Ike and its impact on Galveston County health system, see page 39.

4C's Uninsured Healthcare – A Dangerous Trend?

The proportion of uninsured clinic visits in the 4C's in 2006 and 2007 was at 88% of clinic population. In 2008, as a result of transitioning some uninsured patients to agency contracts and Title V this rate dropped to 84%. Even though there was a slight decrease in uninsured clinic visits from 88% to 84%, the concern is the small percent of revenue collected from sponsored patients will eventually impact access to care for the larger numbers of uninsured seeking care at 4C's. In 2008, uninsured medical visits were 27,009 (84%) of total medical visits of 32,153. Medicare, Medicaid and private

insurance make up a small percent of visits; however, they comprise of 39% of total patient revenue collected in 2008. In 2008, only 8% of 4C's patients had Medicaid coverage. 2007 comparison data shows a state average of 25% Medicaid for community health clinics and a national average of 35% Medicaid. 4C's Medicare visits also fall below state and national averages. Bad debt was \$2.5million dollars in 2008 about \$400,000 less than 2007, however total charges were down by \$1.M and collections were down by \$427,000. While the overall collection rate (% of billings actually collected) decreased by 2% to 13% overall in 2007, the 4C's collection rate still falls well below state and national averages in 2007 (44% and 60% respectively). The collection rate among the uninsured (self pay) is similarly below state and national averages.

Data Systems Limitations

The 4C's currently does not have an electronic medical record. Paper medical records create management and tracking challenges, as records are needed by multiple staff for many different reasons, simultaneously. Also, the current system is difficult to use for reporting purposes, it does not allow the import or export of data into other programs and there are virtually no checks on entering data so it is easy to enter incorrect data. An integrated EMR and clinic management system would improve coding, improve communications with patients about the need for preventive exams and follow up of chronic conditions, make the record available to multiple people simultaneously, and would enhance collections by being able to inform the patient of the actual cost at the end of the visit. Steps forward in obtaining a new system are dependent on the progress and timing of the Texas City renovation project. In 2009 the clinic plans to purchase a new practice management system that will integrate with the EMR for both medical and dental visits. An RFP for the full clinic management system and electronic medical record was released in late 2008. Three vendors responded and in February 2009, staff will begin testing and analyzing the products. When chosen and purchased, the clinic will deploy the system in two phases, beginning with the clinic management system and integrating the EMR with the re-location of the Texas City clinic.

Clinic Image & Community Perceptions

In order to optimize capacity, renovation of the Texas City Clinic must be completed. Historically, the 4C's has been perceived as a "free clinic", with poor customer service, poor quality of care, and only serving the poor and uninsured. In order to appeal to many types of patients, including those with insurance, these perceptions must be changed. Currently at the Texas City site, we have a stable long term lease with a community partner, in a medically underserved area, co-located with other health and human service agencies. Problems include long hallways, front entrance congestion, lack of security barriers, poor signage and multiple ways in and out. The renovation proposal would allow us to increase access and see as many patients as possible, eliminate structural barriers, increase efficiency, ensure compliance with risk and safety requirements, create a smoother flow for patients and most importantly, continue our trend of improving customer satisfaction, necessary to improve public perceptions and to attract/retain sponsored patients.

Texas City Relocation Plans

The Commissioner's Court set the GCHD facilities as a priority and county officials have been negotiating the purchase of property at a new location which would put District staff currently in three locations into one county-owned location. In November, Galveston

residents voted to fund the facility with a bond. The property has been purchased and plans are underway to renovate the building for the clinic, Health District offices and County Department offices.

Texas 2008 Women's Health Program – Opportunity & Limitations

The State-funded Women's Health Program (WHP) began in January 2007 and has the potential for increasing access to care for women by funding family planning services, a gynecological exam and health screening. During the year, the program was expanded to include three annual visits. A Case Manager worked to help women apply for this and other funding programs, and to access appointments at the clinic. Women who are deemed eligible for the program may use the coverage for any Medicaid provider and only about half of those who were found to be eligible actually had a well woman visit at the 4C's Clinic. In the two years that the program has existed, the clinic has received only about \$15,000 for their services to women on the WHP.

Title V and Other Funding Opportunities

A Department of State Health Services' grant, Title V, was granted in the fall of 2007. Title V funds children's well and sick care and dental care. Children below 185% of the federal poverty level who do not qualify for Medicaid or other assistance are eligible, including the undocumented. In January 2008, the clinic began enrolling children on the program for medical and dental services and the number has grown throughout the year with a total of 334 children seen for 847 visits in 2008.

Contract between 4C's Clinic and the Aids Coalition of Coastal Texas

In November 2008 administrators from the Aids Coalition of Coastal Texas (ACCT) approached District executives with a proposal to contract for primary health care services for AIDS patients in the area. This was prompted by the relocation of UTMB's Virology Clinic to the mainland. In December, clinic providers began to see ACCT patients under the contract. Providers have learned the standards of care for AIDS patients and the lab formulary has been expanded to ensure adequate quality of care. The funds from this contract will augment grants and self-pay collections in the 4C's budget. ACCT patients have expressed great satisfaction with 4C's services so far.

Other 4C's Highlights in 2008

- Donations of medications, supplies and equipment including a mobile clinic that was used in Galveston for one week to give medical services to patients right after Hurricane Ike.
- In February 2008 a team of experts from the Health Resources and Services Administration (HRSA) Office of Performance Review visited the clinics, leading a review to focus efforts on quality measures in specified areas: immunization compliance rates for children, the percentage of dental patients that complete a treatment plan in a year, the number of unduplicated patients seen in the clinics and the current ratio (assets to liabilities). Data on each measure was analyzed, restricting and contributing factors that affect success were identified and performance improvement opportunities were discussed. The clinic staff later submitted an action plan to improve each of these focal areas through improvement activities.

- The County of Galveston included \$261,040 additional funds in its FY09 budget for clinic operations. The funds are to be used to fund an additional full-time midlevel medical provider, one-half full time equivalent physician, and 0.4 full time equivalent dentist.
- The Governing Board approved clinic participation in a research project to develop a Hurricane Ike Registry to study the long-term effect of evacuation and sheltering on the residents. The project, sponsored by USA Center for Rural Public Health Preparedness (USA Center) at the Texas A & M Health Science Center School of Rural Public Health was allowed to set up inside the clinics to talk to patients about voluntary participation in the registry.
- A state-funded public health grant to hire a dietician and health educator was awarded. The resulting program, The Healthy Weigh, is co-located in the Texas City 4C's Clinic and is focused on serving children aged two to twelve who are obese or at-risk for obesity. The service is available to 4C's patients and others.
- New equipment was purchased for medical and dental clinics. Texas City Clinic received new colorful coat of paint.

Prepared by Pam Jahnke, RN, Strategic Plan Evaluator, Jay Holland, Chief Operating Officer, and Harlan "Mark" Guidry, MD, MPH, CEO

Status Report on Emergency Medical Services

Galveston Area Ambulance Authority

The Galveston County Health District (GCHD), doing business as Galveston Area Ambulance Authority (GAAA), has operated ambulance service for Galveston Island since 1975. In 2006, GAAA signed contracts to begin 911 operations in portions of mainland Galveston County. GAAA also operates the Non-Emergency Transfers (NET) for Galveston Island and the Mainland areas of Texas City, La Marque, Dickinson, Hitchcock, Bayou Vista and Tiki Island. Total number of calls for 911 and NET services was 17,924 in 2008. This represents a decrease of 636 calls compared with 2007.

Hurricane Ike Impacts

Hurricane Ike has had many unexpected impacts on EMS operations. For a full report, see Hurricane Ike on page 39.

Galveston Island 911 Operations

In 2008, GAAA responded to 11,026 emergency calls on Galveston Island, compared with 10,579 calls in 2007. The new operating agreement with the City of Galveston also outlined a process to complete much needed repairs and renovations at two locations, 2602 Avenue Q and 5001 Avenue Q-1/2, which are used by GAAA, but owned by the City of Galveston. These renovations were completed by summer 2008. In addition, the new contract called for the formation of a City of Galveston EMS Advisory Committee. The new committee is chaired by City Councilman Danny Weber, Sr., and includes Brian Zachariah, MD as a UTMB representative, and Michael Warren, MD, Rory Prue, and Abdul Amin as citizen members. The group first met on February 18, 2008, monthly meetings were held for several months to orient members to the issues of EMS. EMS Director Michael Carr and EMS Medical Director Kevin Rittger, MD are ex-officio members of the committee. The committee suspended meetings in September 2008, but resumed meetings in February, 2009.

Mainland 911 Operations

Pursuant to agreements signed in January 2006, GAAA began operations in the unincorporated communities of Bacliff, San Leon, and east Highway Six, the City of Hitchcock, City of Bayou Vista and the Village of Tiki Island. These operations were part of a cooperative interlocal agreement with the GCHD, the County of Galveston and the aforementioned Cities. In 2008 the total number of emergency responses was 1,263. This number represents a decrease of 325 calls from 2007, most of which can be traced to after effects of Ike including residential damage and relocation of some residents to other areas.

Non Emergency Transport (NET) Operations

Under interlocal agreement and city exclusivity ordinances, non-emergency transports are provided by the GCHD for the Galveston Island and the Mainland areas of Texas City, La Marque, Dickinson, Hitchcock, Bayou Vista and Tiki Island. There are no taxpayer dollars supporting this operation. All revenues for the 2,492 transports that occurred on Galveston Island in 2008 were used to offset costs for 911 operations within that City pursuant to the interlocal agreement with the City of Galveston. All revenues for the 3,143 transports that occurred on the Mainland were used for budgeted operations and

equipment. The net surplus each year is distributed based on a formula contained in the Medic One interlocal agreement. In calendar year 2006 the surplus distributed to the County of Galveston and participating Cities was \$25,787.49. In calendar year 2007, the surplus was \$239,224.37. In calendar year 2008, due to Hurricane Ike impacts, there was a deficit in the operations which resulted in the billing of the County and participating Cities \$127,654.00.

A lack of accurate response figures in the original planning resulted in unexpected demand. Based on input from member Cities, other stakeholders and a pilot study to identify specific demands, the initial operating capacity was increased, and additional crews and a dedicated dispatcher was placed in service during high demand periods. On line scheduling has been developed to streamline the process of requesting a transfer. The online process is now being used for the majority of transfer requests. Memorandums of Understanding have been signed with outside providers to address peak demand periods and currently being monitored.

Port Bolivar First Responder Operations

In March 2008, Galveston County Judge James Yarbrough and Commissioner Patrick Doyle approached GAAA to fulfill a request of the peninsula EMS providers to place professional First Responders on the peninsula to assist the volunteers at times when their response complement of volunteers was lowest. GAAA staff met with representatives from the four peninsula volunteer EMS groups and developed a plan to place first responders on the peninsula around the clock on weekdays.

GAAA staff and Volunteer providers entered into a Memorandum of Understanding (MOU) that describes the duties of first responders as they relate to operations of peninsula EMS organizations, including record keeping, medical control, supply issues, stationing, and oversight. The MOU was signed in the summer and GAAA hired EMT-Intermediate medics to provide the role of first responder on the peninsula. The County of Galveston has provided funding to cover the costs of the program in the amount of \$103,000 for the remainder of FY08 and a commitment for FY09 full funding.

Since November 2008, GAAA has participated in staffing an ambulance on the peninsula to support the decimated EMS resources there. There are ongoing discussions with county officials about future EMS operations on the peninsula and how GAAA can best assist EMS efforts there

EMS Billing Services

GCHD provides billing service for all GAAA operations, both 911 and NET. In 2008 Billing Services processed 16,246 bills for all operations including 10,607 for 911 responses, 2,494 non-emergency transfers for Galveston Island, and 3,145 for non-emergency transfers on the Mainland. GAAA billing collected \$3,757,648 of which \$2,190,674 was for 911 services and \$1,566,974 was for NET.

Billing Medicaid (both traditional and HMO) patients from some facilities continue to be a problem as a pre-authorization is required prior to transport and only the facility can obtain these authorization numbers. When the facility fails to do so, then collection of fees is a problem. In addition, payment for non-covered Medicare/Medicaid transports is delayed by the responsible nursing facilities. One facility has made contractual

arrangements for the ineligible transports but has refused to honor the agreement. Therefore, those calls have been turned over to collections. Payment continues to be slow from another facility in which contractual arrangements have been made.

In 2008 a non emergency dispatcher was added to the billing area to obtain necessary patient medical and billing information and scheduling the transport during normal business hours. The EMS supervisor was responsible most of the year for the non emergency dispatching in the evenings, on weekends and holidays. One of the transfer crews took over these responsibilities in the latter part of 2008. This improved the data entry productivity in billing and this helped with bills being generated much quicker.

The NET Director and Billing Manager are working together to provide training to non-emergency transfer crews on proper run sheet documentation and its impact on the billing process. Missing run sheets are being reported monthly by the Billing Manager, research by GAAA staff, accountability established, and the appropriate filed personnel are completing run data documentation. See "Billing Software," for a discussion of field and billing software.

Medic One System

In March 2006, an interlocal agreement created the Medic One system to provide system coordination of the EMS systems operated by 4 local governments - City of Dickinson, City of La Marque, City of Texas City and the Galveston County Health District (GCHD). The agreement established an EMS Administrator's Advisory Committee (Medic One Committee) to the Galveston County United Board of Health and member governments. Under contract, GCHD provides system coordination, which contemplated unified Medical Direction, Uniform Treatment Protocols, coordinated Quality Assurance and coordination of training efforts. In 2007 a disagreement over the role of medical direction resulted in the City of Texas City withdrawing from cooperative medical direction portion of the program. Soon after, the city of La Marque and the City of Dickinson also withdrew from the medical direction portion.

In April of 2008, governmental representatives of the Medic 1 participants met to discuss the future of the advisory committee. The groups decided the Medic 1 EMS Administrator's Advisory Committee was not needed, and agreed to discontinue the specific interlocal agreement outlining system coordination; thus, disbanding the formal group as of June 2008. Participants remain in informal contact and provide mutual assistance, especially in times of emergency. This action had no effect on the inter-local mutual aid agreement or other inter-local agreements that remain in effect.

Staffing

In January 2008 there were 21 vacant full-time paramedic, intermediate, and basic positions. At the end of the 2008 there were 20 open full-time positions, one of which is subject to a hiring freeze. Throughout the year recruiting efforts included posting positions on the District website as well as monster.com and various other websites, recruiting at the Texas EMS Conference and the Galveston Oceans of Opportunities job fair, and contacting local schools with EMS training programs. These efforts are meeting with some success.

In order to help attract and retain qualified personnel, in October 2008 the salary scale was adjusted as the expected first phase of a three phase program to adjust salaries to regionally competitive levels. This program, in addition to changes made last year to recognize outside EMS experience, have resulted in a more qualified and experienced group of staff members.

The industry remains in stress with an increase in Texas EMS providers from 750 to more than 1200 between 2005 and 2008. In that same period there had been no significant increase in the number of certified EMS professionals.

New Field Service Software

Run data and billing software used by GAAA continues to be a source of issues from both field personnel who enter run data and billing staff who must deal with the process of incorporating this data to the billing software. Staff members were asked about the problems and weaknesses in the current software product and these issues were used to develop a list of items needed for efficient operations. This list was used to review existing software and a determination was made that a different field data software program, which is compatible with our existing billing software, would be the most cost efficient solution to the problems encountered. In the first quarter of 2008 the BOH was asked to consider a budget amendment to purchase new field data software. The Board approved as did the City of Galveston who amended their budget to cover their portion of the expense. Though derailed by Hurricane Ike, the rollout process is again on track with an April 2009 "Go Live" date.

Accomplishments in 2008:

- ❖ Third year of fleet modernization has retired another vehicle with more than 150,000 miles.
- ❖ Recruitment efforts have yielded more experienced Medics now working in system.
- ❖ Certification level of staff members is higher than in previous years.
- ❖ Completed TDSHS Local Projects grant for upgrading six EKG monitors used on 911 ambulances to capture 12 lead EKGs grant money received was \$26,414 from DSHS, \$20,000 from UTMB local funds were \$25,000.
- ❖ Received another TDSHS Local Projects grant to purchase a transport vehicle for off road and high density special events in the amount of \$19,000.
- ❖ Providing dedicated dispatching for NET during peak hours and better coordinated after-hours coverage.
- ❖ Completed, pursuant to 2008 interlocal agreement, renovations at two City of Galveston owned facilities used by EMS.
- ❖ Signed Memoranda of Understanding with private ambulance providers to supplement NET operations
- ❖ Instituted a state of the art online non-emergency ambulance request.

Issues for 2009 and beyond:

- Determine scope of NET Operations within Texas City by the end of 2009
- Continue to participate in the City of Galveston EMS Advisory Committee and assist City in exploring solutions to funding and options for a city 911 service

- Complete implementation of cost effective software solution to run sheet data collection
- System-wide emergency planning, coordination and assessment
- Continued recruitment and retention of qualified workforce
- Complete training for compliance with the National Incident Management System guidelines
- Develop standard quality assurance and monthly educational program under leadership of Medical Director
- Continue to work on improved communications between supervisors, hospital staff, other first responders, dispatch facilities and the community
- Monitor reimbursement revenue to fully realize potential
- Continue fleet replacement schedule to remove the last unreliable high mileage vehicles from fleet
- Seek funding for special event operations
- Work with the County of Galveston to determine/develop the scope of 911 services on Bolivar Peninsula.

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Hurricane Ike

GCHD Ready and Responsive

The Galveston County Health District (Health District), overseen by a policy-making board and responsible for public health and health care services for fourteen (14) local jurisdictions, faced numerous public health challenges during evacuation and immediately after Hurricane Ike. Coastal historical experience and on-going preparedness planning were put into action as a result of Hurricane Ike.

On September 13, Hurricane Ike made landfall in Galveston County with a storm surge of 15 to 20 feet. The storm that changed projected paths several times since it was first identified, resulted in estimated damages of 25 billion dollars, 20 confirmed deaths to date, 30 missing persons as of February 9, 2009, extensive flooding, and significant loss of public health and medical infrastructure. Officially, county appraisers' preliminary results show that Galveston County has lost at least 4,000 homes and \$300 million of its tax base. Areas of greatest impact include Bolivar Peninsula, Galveston Island, San Leon, Bacliff, Kemah, Clear Lake Shores, and the Freddiesville neighborhood of Hitchcock. *(For an interactive panoramic view of damages, see www.hawkeyemedia.com/BOLIVAR*

Mandatory evacuation orders were issued by county elected officials on September 11, 2008. By this time, the Galveston County Emergency Operations Center (EOC) had been fully activated. The Health District had two staff members man the County EOC building (24/7) and communicate with emergency staff regarding status of the hurricane and its immediate consequences. 120 buses were staged in Texas City; ferry operations ceased; and tide gates in Texas City were closed. Health District ambulances, with state assistance, evacuated persons with medical special needs, nursing homes, and the University of Texas Medical Branch (UTMB) Neonatal Intensive Care Unit. High risk medical patients were flown to hospitals in Texas and Oklahoma, and the Coast Guard began rescuing people stranded by high water on Bolivar Peninsula.

Health District Responsibilities

The Health District played a number of critical roles, immediately and in the first several weeks following the hurricane. While our overall responsibility was to lead health and medical responses in 14 jurisdictions, actions included the following: continuous ambulance services; environmental inspections (e.g., food, water, septic systems, sanitation, etc.); public vaccinations; animal rescues; public information & health advisories; active surveillance of hurricane-related injuries and diseases; primary care; and providing health and medical support of a Galveston Island shelter.

Loss of Public Health and Medical Infrastructure

Most significant of all challenges were the loss of public health infrastructure in several jurisdictions and the loss of medical care, especially on Galveston Island. The City of Galveston, with a population of about 57,000 prior to the storm, remained closed to residents until September 24th, due to various critical infrastructure losses and known public health threats as an immediate consequence of the storm. Furthermore, most private clinics were damaged and closed. UTMB, the referral hospital for the State of

Texas and the Island's largest employer and hospital system, was closed due to flooding and significant damage with little hope for a speedy recovery. Also, the financial constraints of UTMB, known prior to the hurricane, threatened immediately with impending changes that could severely limit its long-term ability to provide care to the indigent and uninsured.

While the future range of UTMB services and resources remain unclear, it is clear that indigent and uninsured persons in Galveston County no longer have access to specialty care and hospital care. Pending a feasible solution, an uninsured health care crisis, with a significant economic impact, is imminent.

Public Health Advisories

When the City of Galveston allowed residents to return to the Island on September 24, the Galveston County Health District issued a public health advisory: www.HealthDistrict.org/press/2008/Public-Health-Advisory-For-Galveston%20Island-0908.pdf.

Residents hoping to return to the Island were clearly and repeatedly advised that there were no hospital services, no emergency department, and limited primary care clinics on the Island. Furthermore, there was severely limited electrical power, no safe public drinking water, and non-functional sewage systems - creating additional health and safety risks beyond the obvious destruction. Thus, the advisory recommended that certain persons not return to the island until the public health and medical care infrastructure was restored.

The public was further informed on how to be prepared for a return to the Island. Residents were advised to bring supplies that would offer protection against a variety of injuries and public health threats. The advisory also specifically addressed drinking water safety, boil water advisories, tetanus vaccination recommendations, food safety, disinfection and decontamination. Additional hazards addressed included risks of fires/explosions, electrical hazards, debris injuries, carbon monoxide poisoning, stray and wild animal bites, rodent control, toxic odors, mold safety, fallen trees & chain saw safety, automobile safety without traffic lights and with roadway debris, mosquito precautions, and cell phone limitations. Finally, the public was advised to stay calm and alert in what was sure to be a very emotional experience to see their property and community the first time after the hurricane.

Other Public Health Threats and Concerns

There were many other challenges identified and addressed throughout the County jurisdiction. Over 15,000 residents and first responders were vaccinated. There was one confirmed case of tetanus in an unvaccinated resident who sustained a nail puncture injury. Community assessments identified that traditional sources of public information (TV and newspaper) were unavailable and/or limited, decreasing their effective reach of citizens. Therefore, the Health District established a phone bank that received thousands of calls and subsequently developed jurisdiction-specific fliers that were distributed door-to-door and handed out at point of Distribution (POD) sites. There were a variety of primary care needs addressed by the Health District's federally qualified health centers. Needs varied from medication refills, assistance to displaced UTMB patients with a variety of specialty health concerns; injuries/wound care, respiratory infections, and hurricane-related mental health conditions. Island EMS ambulances were impacted by the

lack of a local emergency department which often resulted in long transports to the nearest trauma center in Houston.

Another initial challenge was access to Bolivar Peninsula which was flooded and impossible to reach by ferry or land. There were reports of snakes, wild animals, alligators, and potential looters. Hurricane survivors and first responders on Bolivar needed vaccinations and a variety of supplies. A public health team, accompanied by local law enforcement, reached the peninsula by boat to assess the environment, collect soil and water samples for testing, and to assess the needs of any survivors and first responders. A follow-up trip, by helicopter, allowed the team to vaccinate first responders, deliver supplies, and perform an aerial assessment of damages.

Galveston Island Shelter

The last challenge was managing the health and medical needs of the Red Cross shelter on Galveston Island, quickly formed by the City of Galveston for a growing number of displaced residents. The Health District worked with Red Cross staff to survey residents daily for medical conditions and symptoms of potential communicable diseases. Most challenging were shelter residents with medical special needs returning from other locations in the state to an Island with a severely limited medical infrastructure and to a shelter not equipped for such care. The Health District, along with state nurses and case workers, worked long and courageously to find them alternative housing; however, many refused the limited options available to them. These residents did not want to be separated from their family members and needed to be close to their homes in order to begin putting their lives back together (e.g. work with Federal Emergency Management Agency (FEMA), Housing and Urban Development (HUD), landlords, insurance companies, etc). With time and effort, many were assisted. A smaller shelter population relocated to the Island airport pending further work to secure short-term or long-term housing for those displaced.

Community Assessments for Public Health Emergency and Response (CASPER)

GCHD teamed up with State and Federal agencies to perform a community assessment of Galveston Island after Hurricane Ike on September 22, 2008. The results of the assessment had many findings which included: Almost half of the population at the time of the survey did not have electricity or regular garbage collection; 68% of the households using a charcoal grill or stove were using them inappropriately (e.g., indoors or near an open window or door); TV alone is not enough to deliver public health information to all the community; etc. As a follow up action from the assessment a community information flyer was created and distributed throughout the City of Galveston. The flyer consisted of quick reference information (which included contact numbers) such as, medical care, vaccination sites, boil water notices; mosquito prevention, garbage collection schedule; mold, mental health and utilities (gas/electricity).

Longer-term Impacts on EMS Services

Hurricane Ike has had many unexpected impacts on EMS operations. Almost all of these impacts have been negative in nature. Facilities were negatively impacted, but with the exception of the rented station facility in Bacliff, all buildings survived. Most damage has been repaired and all of the surviving buildings are in use. The Bacliff crew is currently housed in the main station of the Bacliff Volunteer Fire Department. That

arrangement will continue until County, Health District and Bacliff VFD officials can agree on a more permanent solution.

The financial resource of persons using EMS services has changed significantly. Prior to the storm the majority of persons utilizing services in Galveston had some form of health insurance and those who were self pay was 42 percent. The percentage of persons who are self pay, or have no insurance benefits is now 71 percent. The result is lower collections and less revenue across the board. The Galveston 911 and Transfer Service had a combined net operating loss in the amount of \$295,156 for the period ending 9/30/08, while the Mainland Transfer Service also reported a calendar year loss of \$127,654 for the period ending 12/31/08. As a result of these deficits, Galveston and Texas City leaders are exploring solutions including tax districts or new service delivery models. Wide spread damage to Galveston has resulted in a lower population and a lower volume of emergency calls. Staffing adjustments made in late September have minimized the impact of reduced responses.

The closure of UTMB's hospital and emergency facilities has created a significant crisis in Galveston, including the EMS operation. The Level One Trauma Center, which was recently recognized as the best in the country has been shuttered since the storm. Transport to this facility is not possible. Therefore patients suffering from significant trauma are being flown off the Island via regional aero-medical helicopters. Helicopter evacuation which prior to the storm averaged less than one occurrence per month is now a daily occurrence and increase of approximately 3000 percent. With the closure of the hospital, non-emergency transport of patients out has come to a standstill. Additionally, Galveston nursing homes have not returned their residents to the Island due, in part, to the non-existent hospital facilities. These non-emergency transport operations have historically provided a large share of the operating money for GAAA, Galveston operations, up to 28 percent of the operating revenue.

With no local transport location for patients needing further care, these patients are being transported to other hospitals in the region. Mainland Medical Center Hospital which is approximately 18 miles and 29 minutes transport time is the primary transport destination. Clear Lake Regional Hospital approximately 31 miles and 39 minutes transport time, and Christus St. John's Hospital 33 miles and 43 minutes transport time are secondary transport locations. As these facilities are being stressed to the capacity, transport has also been made to Memorial Hermann Hospital, Southeast which has travel distance of 38 miles and time of 50 minutes. This is compared to Pre-Ike transport times that averaged 4 miles and 8 minutes.

These increased distances in transport have resulted in a change of average transport time from 6 minutes Pre- Ike to an average transport time of 34 minutes or a 567 percent increase. Returns to service times have increased as well. Return to service is the time from dispatch, through transport, arrival at hospital until the unit returns to the response district and is ready for another call. Pre-Ike this time averaged 39 minutes. Post Ike the average is above 117 minutes, an increase of 300 percent. This means that units post Ike are unavailable to make other calls for three times as long a period.

Animal Services Disaster Response

The Animal Services Division along with the help of willing volunteers from Best Friends, the Humane Society of the United States and PetsMart Corporation rescued and sheltered over 600 animals following the landfall of Hurricane Ike. The number of incoming animals quickly filled our shelter forcing the construction of temporary shelters. Volunteers along with licensed veterinarians met the needs of animals in these temporary shelters. Staff along with professional animal rescue workers worked diligently to locate and rescue animals in the hardest hit areas of Galveston County. Seventy-five (75) animals were reunited with their owners. Volunteers worked an estimated 3600 hours caring for all of the rescued animals and arranged for the safe transport of 428 animals to several areas around the United States.

BCCS/D'FEET: Prior to Hurricane Ike, UTMB provided radiographic screening services through their in-house radiology department and through the Oleander Van, a mobile unit which provided screening mammograms on site at community centers and churches. Many patients were seen by the surgeons at UTMB once they were diagnosed with cancer; and patients who did not qualify for Medicaid were seen through Cancer Stop, a UTMB funded program which could help some women who do not meet state guidelines for Medicaid. After Hurricane Ike, UTMB was unable to service our BCCS and D'FEET patients, requiring us to seek services from other agencies. Cancer patients who were being treated by UTMB physicians under the Cancer Stop program were transferred to other services. One patient, on recommendation of the Patients Advocates service, moved out of county to Harris County in order to establish residency there and be eligible for services. Through a contract with Victory Breast Imaging and Diagnostics, GCHD was able to provide clinical breast exams, screening mammograms and follow up care, for all eligible patients, including some patients previously seen at UTMB. Also, the Health District has contracted with The Rose, a Harris County Breast Health Agency, to use their mobile van for mammography screenings and provide follow up diagnostic and treatment when appropriate. The Health District also began negotiations with Mainland Medical Center and its departments to do Breast Care and with Dr. Basseem Maximos who will be providing cervical diagnostics and treatment in their facility. The contract with Dr. Beverly Lewis to provide breast diagnostic services and treatment remains in effect.

Immunizations: Immunization Services, Community Health Nursing, and Nurses provided by the Department of State Health Services did significant outreach immediately after Hurricane Ike, providing Flu, Tetanus and Hepatitis vaccines. Immediately after the storm, at the request of City of Galveston Officials, GCHD spent four days providing vaccines to the first responders from all over the United States who were serving our community; 6 days were devoted to the community of the Bolivar Peninsula, giving vaccine to those returning to evaluate their homes for the first time after the storm; and in addition to Health District immunization clinics in Galveston, Texas City and Dickinson, other locations such as medical clinics, pharmacies, city halls and the Red Cross Shelter were used as sites to provide needed vaccine to our community and those assisting in its recovery.

Women Infants and Children: WIC lost the use of the University Hospital Clinics Site due to the damage to UTMB facilities. All clients were transferred to Galveston Island Community Center WIC office, and WIC staff were dispersed between the other three

clinics. Once clinics resumed work, they were able to help several clients who were displaced including out of county residents.

STD/HIV Surveillance: Several citizens exposed to sexually transmitted diseases were difficult to contact due to being displaced. Patients requiring care were sent to other health departments in the area for treatment until 4C's was reopened. Staff continues to have difficulty locating some contacts and this information has been submitted to the Regional DSHS office so other local departments can attempt to make contact.

Tuberculosis Elimination: Due to close follow up by the state, all patients were accounted for after to the storm. There was one TB case that was initially difficult to find but was later located in a hospital in the area.

Senior Services: Due to the devastation to Galveston Island the City of Galveston's senior center was lost. One week following the storm, the Senior Health Coordinator was able to present a brief topic on Healthy Communities/Post Hurricane Information which included FEMA, Red Cross, Food Stamps, housing and other resource information. A total of 118 seniors were reached at Carbide Park.

4C's Clinic Services and Galveston County Healthcare System

After the hurricane, initial primary health care needs were addressed and met by the 4C's Clinic, which was able to re-start its clinical operations quickly. The Texas City Clinic reopened on September 18. The Galveston clinic opened on September 22 through the loan of a mobile unit donated by AmeriCares, a relief organization, parked in the parking lot of the existing clinic. The Galveston Clinic itself reopened on September 29. Since re-opening, staff reports many patients at both sites calling and walking in asking for assistance in obtaining specialty care. Patients previously treated at UTMB have been unable to find their providers for scheduled chemotherapy, AIDS follow up, resumption of diagnostic testing, or even surgery. Until January 5, 2009, UTMB had no general hospital beds, no operating room capacity, limited/reduced emergency room services, no specialty clinics operating on the Island and no specialty clinics for the uninsured at all. Presently the UTMB hospital has re-opened with 200 beds, operating room capacity and limited emergency room capacity. UTMB specialty clinics have relocated to mainland sites. No UTMB specialty clinic is accepting uninsured patients. Emergency treatment and hospital admissions are being handled, to the greatest extent, by the local Mainland Center Hospital and other regional hospitals to the north, putting a strain on the regional health care system.

Currently, it is not possible to foresee the future of UTMB, or the health care system, in Galveston County in the near future. Members of the state legislature have indicated that Galveston residents should consider the formation of a hospital district to help fund secondary and tertiary health care needs of its citizens. The Galveston County Board of Health and the Governing Board of the 4C's Clinic issued a joint resolution calling for a plan to deal with the impending health care crises which would include consideration of feasible taxing plans and the formation of special districts. This is supported by the County Commissioners Court which is currently researching and analyzing various proposals including a hospital district funded by property taxes/and or sales taxes.

GCHD Damages

The District's facilities suffered relatively minor damage from wind, rain and flooding associated with Hurricane Ike and because the District does not own any of the facilities where services are provided and it was the responsibility of the facility owners to repair any damage the fiscal impact on the District's budget was minimal. The major losses that occurred were in the 4C's Clinic and GAAA. Areas of the District impacted included the following:

- **General Operations and Public Health**
 - 1205 & 1207 Oak street – minor roof leaks from wind-blown rain, tree limbs down and the satellite dish damaged – facility repairs done by county maintenance and debris removal by lawn contractor – total estimate cost \$3,000
 - Public Health offices in Galveston – minor roof leak – repaired by facility owner
 - Immunization Clinics in Galveston, Texas City and Dickinson – minor roof leaks – repaired by facility owner or county maintenance.
 - Animal shelter – sustained some roof damage with minor leaks and sewerage backup – roof repaired by county maintenance – total cost estimated \$1,500
- **4C's Clinic Operations**
 - The clinic in Texas City had minor roof damage/leaks – repaired by facility owner. The power was out for a significant period of time with subsequent loss of medications, lab reagents and developer and some dental products that required controlled temperature. Total estimate cost - \$27,000.
 - The clinic in Galveston had roof damage and lost a portion of the front wall, however it did not flood from rising water. The facility owner repaired all damage. The power was out for a significant period of time with subsequent loss of medications, lab reagents and developer and some dental products that required controlled temperature. Total estimate cost - \$30,000.
- **GAAA Operations**
 - The Bacliff station (trailer) was totally destroyed with all contents. The crews are living at the Bacliff fire station until a new facility is built by the Bacliff fire department. Estimated loss to contents \$3,400.
 - The Hitchcock Station received minor roof damage and was repaired by county maintenance – no other damage
 - The Jamaica Beach station received some roof damage, sheetrock damage from leaks and damage to the station door. Repairs done by facility owner. There minor damage to the contents with estimated loss of \$1,000.
 - The station at 50th & Q1/2, Galveston suffered roof damage, damage to the AC Units, and loss of contents. Estimated total loss \$9,000.
 - The station at 2602 Ave Q, Galveston suffered minor roof damage that the city has repaired and equipment estimated at \$2,500.
 - GAAA had four (4) 911 units and one (1) NET unit damaged due to flooding for an estimate loss of \$435,000.

GCHD Hurricane Ike Lessons

ANIMAL ISSUES	
What went wrong?	Solutions
Due to loss of power and no backup generator, animal shelter manager had to cut the chain on the electric gate opener to gain access to the facility.	Animal Svc Manager to seek funding thru donations or budget to purchase a generator for the shelter.
Due to water pressure issues the Animal Shelter went without water at the shelter for 48 hours.	Animal Svc Manager to secure potable water storage containers for animals and staff.
Tracking animal information at the shelter and in the field post hurricane was difficult due to intake of large volume of animals and number of volunteers working at shelter.	Animal Svc Manager will obtain new animal tracking software system to track all animal information during disaster events.
Animal control officers did not follow directions was working in jurisdiction without following chain of command.	Animal Svc Manager or designee will communicate expectations, roles and jurisdiction with staff on a daily basis or often as needed.
COMMUNICATION	
Inaccurate information in newspaper and on television caused confusion amongst staff and the community.	PIO will verify and confirm all information; Post facts/truth on website; Issue corrections to media; will correct inaccurate information and update resource lists on a real time basis for staff to share with the community.
Environmental Director was unable to contact staff utilizing the mega Hertz radios post hurricane.	Public Health Planner will conduct annual radio trainings to employees (including reference cards on how and when to use radios and common terminology).
Cell phones were not reliable for communications, due to overload/downed cell towers and loss of electricity throughout Galveston County.	Each Service Manager will ensure employees have redundancy in communication (i.e. issue radios, cell phone car chargers and extra batteries; utilize HAM operators and text messaging.
It was difficult to reach emergency contacts because not all emergency contact numbers were not programmed into Black Berry.	IT Manager will ensure information is in the global listing for Black Berry access and ensure training of all Executive Staff on how to access contact numbers.
Some employees did not know when to report back to work because message on Inclement Weather Line did not clearly state who and when to return to work and employees did not communicate directly with their supervisors.	<ol style="list-style-type: none"> 1. PIO will update Inclement Weather Line with date and time of update and clear instruction of who and when to report to work in addition to sharing the information with 740 AM Radio. 2. Executive Managers, Service Managers and Supervisors are to instruct employees to

	<p>immediately contact them post disaster incident for update on who and when to return to work.</p> <ol style="list-style-type: none"> All employees are responsible for calling Incident Weather Line, listening to 740 AM Radio and communicating with their supervisor for return to work status. PHP will review Emergency Personnel Policy with staff pre hurricane
<p>Black Berry service was not consistently available throughout the Galveston County OEM building and the direct number to the Health and Medical desk in OEM was not available to all GCHD Executive Staff.</p>	<ol style="list-style-type: none"> Executive Assistant will include OEM Health and Medical desk number on emergency contact list. IT Manager will research possibility of adding Health & Medical desk phone number to global listing.
COMMUNITY HEALTH SERVICES	
What went wrong?	
<p>Immunization staff were late for an outreach clinic and did not have all supplies needed for a clinic site.</p>	<p style="text-align: center;">Solutions</p> <ol style="list-style-type: none"> Executive Manager/Supervisor will communicate clearly to all staff to arrive 1 hour prior to scheduled start time at designated location. Immunization Supervisor will create a check list and assign a staff member responsible for assuring all supplies are accounted for prior to departure.
<p>TB patients ran out of medicine (2 weeks worth of TB meds were provided to patients).</p>	<ol style="list-style-type: none"> Give at least 4 weeks worth of TB medicine to patients evacuating during emergency events. Director of Community Health Services will coordinate with DSHS for additional medication to Galveston County residents that have evacuated to other areas in the state.
ENVIRONMENTAL	
<p>Late sampling of ambient water ways caused loss data that could have been useful in providing water quality information to the public (bacteriological testing and fecal contamination).</p>	<p>Director of Environmental Health will assure staff to start sampling as soon as it is safe to do so.</p>
<p>Due to all air and water complaints not being captured in one log book, it was difficult to locate all sticky notes to assure all complaints were being</p>	<p>Director of Environmental Health will assign a staff member in charge of logging in all complaints in a disaster</p>

logged properly for follow up and that accurate information was being communicated to Executive Officers.	log book.
Environmental staff members concerned that daily activities and important information was not always communicated from management to staff.	Director of Environmental Health will assure that each Program Manager is holding a daily briefing to keep employees updated on what is happening or what to be prepared for the following day.
EQUIPMENT	
Inexpensive equipment purchased for environmental staff did not work when needed (i.e. flashlights).	Program Managers will be more specific about quality of products needed and will inform Purchasing Manager in addition to completing required purchase request forms.
FISCAL IMPACTS	
Forms used to track time worked before, during, and after hurricane did not include enough information to complete in a standardized manner to accurately record time for processing.	<ol style="list-style-type: none"> 1. CEO or designee will indicate start and end dates of the emergency response for the emergency period. 2. For salaried employees the ICS tracking form will be modified in order to be able to standardize information collected. 3. The All Hazards Emergency Management Plan was modified so salaried employees were compensated for time worked during a disaster would qualify as a reimbursable expenditure through FEMA 4. Supervisors will distribute required tracking forms to all employees pre-evacuation to record actual hours worked during disaster.
Galveston 4C's timecards remained on the island prior to evacuation making it difficult to process payroll accurately.	Supervisors will be responsible for collecting all timecards prior to evacuation and send all information to the Accounting Manager.
EMS staff discarded equipment, mattresses and other damaged items without notifying the Risk and Safety Coordinator, therefore documentation could not be made for possible FEMA/Insurance reimbursement.	<ol style="list-style-type: none"> 1. Executive Managers will be responsible for obtaining a list and photos of all damaged equipment and items to report to Risk and Safety Coordinator. 2. New employees during orientation will be informed of procedures on handling damaged items after a disaster.

<p>Loss of power in 4C's clinics and HQ resulted in loss of vaccine, reagents, media, and x-ray processor chemicals (\$65,000).</p>	<p>3. Supervisor during pre hurricane season meeting will inform employees of proper documentation of damaged items.</p> <p>4. Risk & Safety officer will send out reminder of documentation needed for possible FEMA reimbursement pre and post disaster.</p> <ol style="list-style-type: none"> 1. Supervisors with products requiring refrigeration will identify one staff to transport all items to GCHD headquarters building. 2. Public Health Planner will assure that Headquarter generator is working properly prior to evacuation. 3. Purchasing and Public Health Lab supervisor will be responsible for checking generator once it's safe to return to Headquarters.
HEALTH CARE ISSUES	
Solutions	
<p>Difficult for people to get specialty care, copies of medical records, and medications that were previously procured from UTMB (such as HIV meds) which was closed due to hurricane.</p> <p>STD/HIV programs didn't have the resources to refer HIV clients for treatment and medication due to UTMB closure.</p>	<p>GCHD Executive Officers to work with county, city and OEM to assess the issues in long term.</p> <ol style="list-style-type: none"> 1. Director of Community Health Services will coordinate with DSHS to provide treatment and medication to Galveston County residents that are affected by the disaster. 2. GCHD now has contract with ACCT to provide HIV meds.
IT	
<p>Due to loss of power at the Island Community Center, HIV/STD Services were unable to connect to STDMS41 or HARS computer system from outside locations current computer systems are linked to one computer</p>	<p>As of January 2009, the STDMS41/HARS will be web accessible thus will be able to access the system from anywhere possible.</p>

system on the Island. Due to loss of power Vital Statistic's in Galveston could not process applications due to server location.	The Vital Statistic's server was relocated to GCHD Headquarters where it would remain permanently because of backup power at the building.
LOCAL, STATE, and FEDERAL COLLABORATIONS	
Solutions	
Environmental Consumer Health (ECH) sanitarians felt there was a lack of communication between them and DSHS sanitarians. DSHS sanitarians were visiting restaurant owners on the Island and did not notify GCHD of their presence and providing written information that contradicted HD information resulting in confusion.	ECH supervisor will communicate with DSHS supervisors prior to them deploying sanitarians to affected area.
Public Health staff was unable to gain access to Galveston Island post hurricane and sometimes required many hours of waiting in traffic to enter Island to perform job duties. Traffic controllers were ineffective in identifying local emergency vehicles. Many GCHD employees do not have HD decal on vehicle to identifying as a public health officials.	Purchasing to obtain auto decals to identify GCHD employees as public health officials.
DSHS scheduled conference calls to determine damages of facilities before community health nurses (CHN) could assess the situation.	CHN managers should be able to assess damages of their facilities first, and then call DSHS when ready to give report on facilities.
Lack of knowledge of GCHD jurisdiction by other agencies caused confusion and duplication of efforts.	Supervisors should conduct orientation on GCHD operations, protocols and procedures for non GCHD staff (Shelter, DMAT, Angel Nursing staff, etc...).
GCHD employees manning the Health and Medical Desk at EOC stated information was not being relayed from those that attended State conference calls to people manning the work station in the EOC.	GCHD staff request that OEM staff post all information that's pertinent to the incident on Web EOC after each conference call with state.
PRE-HURRICANE PREPARATION	
ECH staff felt they were not given enough time to secure work place and personal property.	Director of Environmental will assure building preparedness at the ECH office, animal shelter and staging take place 24 hours earlier to allow staff time to prepare work and personal property.

GCHD did not have sufficient amount of plastic sheeting, plastic bags and duct tape to protect equipment.	Risk and Safety officer will assure their enough protective equipment available in stock for all equipment..
EMS had 2 vehicles in the repair shop and 2 vehicles in the reserve which were damaged due to high water.	EMS supervisor will ensure that all non usable vehicles are moved to higher ground.
Animals left in shelter during hurricane were not restrained and resulted in running at large in the dark within the shelter in 3 to 4 inches of water.	Animal Control supervisor will make arrangements to transfer all animals to a shelter outside of the potential impact area pre landfall of hurricane.
Animal shelter had sewer to back up into kennel area of the shelter because of low water pressure bad plumbing and flooding.	Long term would be to build a new facility on higher ground with better plumbing.
SHELTER/MEDICAL SPECIAL NEEDS	
Case Management found it difficult to get ill and fragile residents to leave shelter if they had to leave family members or pets.	DSHS to assure thorough assessments of patients be conducted before relocating ill and fragile residents from other shelters to Galveston County.
Lack of communications between Case Management and Red Cross staff cause carrying out task to be difficult.	DSHS shelter lead to ensure orientation of shelter operation is conducted for all agencies represented at shelter prior to shelter opening.
No on-site counseling services for less critical patients at the shelter were available until several weeks into shelter operation.	Lead health agencies to ensure counseling service are provided at the shelter earlier for residents with anxiety and depression reactions.
Lack of privacy for Case Management to communicate with residents at shelter.	Case Management manager will follow up with shelter lead for space to conduct private medical assessments of residents.
Interpretation of medical special needs definition varied among agencies (DSHS, GCHD, and Red Cross) which caused confusion on who should reside in the shelter.	Lead health agency will assure an agreement on the definition of Medical Special Needs so all agencies involved will have same understanding.

MSN patients were transported back from departing shelters to a non MSN receiving shelters causing confusion of treatment among shelter workers.	Improve communication between departing and receiving shelters and have understanding of MSN patients.
VOLUNTEERS	
What went wrong?	
Lack of volunteers to assist with epidemiology surveillance work post hurricane.	Epidemiology supervisor to recruit MRC, MPH students, and other volunteers to assist with epi work.
MRC volunteers were unable to help GCHD due to personal property loss and relocation.	Public Health Planner will recruit members for MRC that lives outside of Galveston County.
GCHD were unable to resolve contractual issues to utilize UTMB providers in clinic.	GCHD COO to work with UTMB.
WORKFORCE ISSUES	
ECH staff post hurricane had a difficult time finding fuel for their personal vehicles to get to work and perform work related duties (i.e. inspections, surveillance, traveling to different facilities).	ECH supervisor will follow up on MOA with the county to provide gasoline for GCHD employees conducting business within the county.
ECH staff had no place to live or stay post hurricane.	ECH supervisor will provide a contact name and number to assist employees and families affected by the disaster with finding a place to live.
GCHD employees manning the Health and Medical station at the EOC became fatigued after working eight straight days without relief.	Public Health Planner will identify key employees to be trained for manning the health and medical desk and EOC employees will be encouraged to notify supervisor when becoming fatigued.
Food, Ice and Water for ECH employees at the animal shelter was not readily available. Employees had to visit POD sites to get food, water and ice.	Animal shelter supervisor will ensure MRE's and bottle water is stockpiled at the animal shelter prior to evacuation.
Community Health staff became fatigued from working long hours, lack of food and water and dealing with personal issues from hurricane.	Community Health Director will ensure staff is rotated and coordinate with DSHS for additional assistance.
EMS first responders did not have food and water for available for consumption for the first 48 hours post hurricane.	EMS supervisor will ensure that freeze dried foods; MRE's and water are stocked for first responders prior to evacuation.

Prepared by GCHD Public Health Preparedness Staff

APPENDICES

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Appendix A: United Board of Health

APPOINTED MEMBERSHIP

www.gchd.org/boards/UBHMembrs.htm

John Zendt, Chair (Hospitality)
Ben G. Raimer, MD, Vice Chair (UTMB)
Bob Baylor (Veterinarian)
Scott C. Bentley, finance committee member
(Mainland Medical Center)
Ted Hanley (Citizen-at-Large)
John Konikowski, MD (Medical Society)
Steven Leach, CRNA (Municipality)
Bernard Milstein, MD (Citizen-at-Large)
Wayne Rast, (Municipality)
Paulette Roberson, BSN, MSN (Registered Nurse)
Patricia Rogers, MD (Citizen-at-Large)
Charles T. Scruggs, DDS (Dentist)
Walter Treybig, III (Engineer)
Harlan "Mark" Guidry, MD, MPH, CEO (Ex-Officio)

reappointed for a term of two years to the Board: Scott C. Bentley; J.A. Konikowski, MD; Steven Leach, CRNA; Bernard Milstein, MD and Walter Treybig, III. There were three board members (Milton Howard, DDS; Donald Cleary, DVM and Mary Anne Holcomb) who resigned their positions after a number of years of services to the citizens of Galveston County. Charles T. Scruggs, DDS; Bob Baylor, DVM; and Wayne Rast were nominated by Commissioner's Court and approved by a majority of the 13 member cities. In addition, in April board members voted to retain all current officers (John Zendt, Chair; Ben G. Raimer, MD, Vice Chair; and Mary Anne Holcomb, Secretary-Treasurer for a new term to end in April 2009.

Board Policy Actions

The Board approved the annual renewal of 40 previously adopted policies. 38 of the policies approved were internal operational policies and the remaining 2 (On-Site Sewage Facilities and Food Service Establishments) are public policies. In addition, the

Meetings

In 2008, the United Board of Health (Board) was prescheduled for 12 monthly meetings. There were 8 meetings convened, 2 no quorums (March and June), the September meeting was cancelled due to Hurricane Ike recovery activities and the Board approved combining the November and December meetings to December 10, 2008. The executive committee did convene on July 19th to review and act on needed items from the month of June. For the month March all items were moved to the following month for Board actions. All members met attendance Board requirements as stated in Board Bylaws www.gchd.org/boards/boardindex.htm.

Membership Updates

In 2008, the following members were

United Board of Health In Action

www.gchd.org/boards/boardpolicy.htm

2007 Annual Report
FY 09 GAAA & Public Health
Operating Budgets & Fees
Supported Gold Ribbon and Employee
Award Ceremonies
Joint Resolution to seek health care funding for
uninsured specialty care
Support of facility improvements
New Members, Charles T. Scruggs, DDS; Bob
Baylor, DVM; Wayne Rast

Board reviewed and approved a variety of reports, budget amendments, proposals for software purchases, and fees for GAAA ambulance transports, on-site sewage facilities, open records request, for public health services such as immunizations, birth/death records, and environmental programs. During this time of crisis in healthcare access, discussion at the Board of Health and the 4C's Governing Board meetings resulted in a joint Boards' resolution to support a plan to include tax solutions for financing healthcare for the uninsured. Finally, the Board conducted a self evaluation of its duties/responsibilities and performed an evaluation of the Chief Executive Officer in April 2008.

Prepared by: Pisa Lewis, Administrative Assistant to the United Board of Health; Reviewed by CEO.

Appendix B: 4C's Governing Board

APPOINTED MEMBERSHIP

www.gchd.org/boards/GBmbrNames.htm

Milton Howard, DDS, Chair (Health Professional)
Mary McCall, Vice Chair (Consumer)
Virginia Valentino, Secretary/Treasurer,
Finance committee chair (Consumer)
Donald Glywasky, finance member (Community)
Elizabeth Kinard, finance member (Community)
Dorothy Goodman (Consumer)
Tony A. Juarez (Consumer)
Lucy Vasquez (Consumer) new 12/08
Willie Tolivar (Consumer)
Barbara Thompson, MD (Ex-Officio)
Harlan "Mark" Guidry, MD, MPH, CEO (Ex-Officio)

nominated Lucy Vasquez in December 10, 2008 to fill the vacancy and the Governing Board approved the nomination for Ms. Vasquez's appointment at their December 18th meeting. Ms. Vasquez will start as a consumer representative on January 29, 2009. In addition, in the month of June, Governing Board members voted to retain all current officers (Milton Howard, DDS, Chairperson; Mary McCall, Vice Chair; and Virginia Valentino, Secretary-Treasurer) for a one year term to end in June 2009.

Governing Board Policy Actions

The Governing Board approved the annual renewal of 35 previously adopted policies. In addition, the Governing Board reviewed and approved a variety of reports, forms, budget amendments, proposals for software purchases, and fees for the 4C's medical records and the sliding fee scale. Public policies, scope of service and fees for the 4C's Clinics can be found at www.gchd.org/boards/GBboardpolicy.htm. During this time of crisis in healthcare access, discussion at the Board of Health and the 4C's Governing Board meetings resulted in a joint Boards' resolution to support a plan to include tax solutions for financing healthcare for the uninsured. Finally, the Governing Board conducted a self evaluation of its duties/responsibilities and performed an evaluation of the Chief Executive Officer in March 2008.

Prepared by: Judie Olivares, Administrative Assistant to the 4C's Governing Board; Reviewed by CEO.

Meetings

In 2008, the 4C's Governing Board was prescheduled for 12 monthly meetings. There were 11 meetings convened, September meeting was canceled due to Hurricane Ike recovery activities. All members met attendance requirements.

Membership Updates

In 2008, the following members were reappointed for a term of three years to the Governing Board: Tony Juarez, Mary McCall, and Willie Tolivar. After six years of service on the Governing Board, Rosie Morales resigned her position, due to Hurricane Ike in September. The Board of Health

4C's Governing Board In Action

www.gchd.org/boards/GBboardpolicy.htm

2007 Annual Report
Approval of 4C's Operating Budget
4C's Operational Policy
Approval of Standard 4C's HIV/STD Fee
Boards' Joint Resolution to seek health care
funding for uninsured specialty care
Privileging of 4C's Providers
Patient Rights & Responsibilities
Sliding Fee Scale
Medical Records Fees
Support of Dental Review & Improvement Plan
Support of facility improvements
Support for Improving Medical & Dental Fee
Schedules

Appendix C: 2008 Health District Grants/Service Contracts

	Funding Agency	Grant Program Title	Description of Grant	Term	Grant Award
1	U.S. Department of Health & Human Services (DHHS)	Health Resources & Services Administration (HRSA), Health Center Cluster 4C's Clinic 122-000	Provides for the operation of two primary care medical and dental clinics that serve the uninsured and underinsured residents of Galveston County.	4/1/07 – 3/31/08 4/1/08 – 3/31/09	\$1,644,268 \$1,672,039
2	Department of State Health Services (DSHS)	Breast and Cervical Cancer Control Program (BCCCCP) 120-160	Provides for breast and cervical cancer screening, diagnosis activities; case management.	7/1/07 – 6/30/08 7/1/08 – 6/30/09	\$60,500 \$77,561
3	Department of State Health Services (DSHS)	Breastfeeding Peer Counselor Programs (WIC) 120-214	Provides for peer counselors outside WIC clinic hours and settings to provide a safety net for mothers, by providing critical intervention at times when they would not otherwise have access to breastfeeding support services.	10/1/07 – 9/30/08 10/1/08 – 9/30/09	\$50,000 \$50,000
4	Department of State Health Services (DSHS)	Childhood Obesity Prevention and Education - (WIC) 120-217	Provides for childhood obesity prevention and educational sessions as part of a obesity prevention project.	10/1/07 – 9/30/08 10/1/08 – 9/30/09	\$10,000 \$15,000

5	Department of State Health Services (DSHS)	CHS – Childhood Obesity Services 120-175	Provides for the establishment of a Comprehensive Childhood Obesity Clinic (CCOC) in an existing primary care setting, which includes services of a health educator and a nutritionist.	9/1/08– 8/31/09	\$100,000
6	Department of State Health Services (DSHS)	CHS – Fee for Services 120-180	Provides for preventative and primary child health and dental services for Title V eligible clients	9/1/07– 8/31/08 9/1/08– 8/31/09	\$30,000 \$66,600
7	Department of State Health Services (DSHS)	Community Preparedness – Bioterrorism & Pandemic Influenza Preparedness 120-145	Funds activities designed to enhance GCHD’s preparedness and response capacity in the areas of planning, surveillance and epidemiology, information technology, public communications, education and training to prevent, detect, report, investigate, and control terrorism and non-terrorism event/emergencies and to recover and improve systems after such an event. And, Pandemic Influenza Preparedness dollars.	9/01/07 – 7/31/08 8/01/08 – 7/31/09	\$339,121 \$204,332
8	Department of State Health Services (DSHS)	Community Preparedness Section- Cities Readiness Initiative 120-144	To enhance regional collaboration in training and purchase equipment and supplies to distribute prophylactic medications to all county residents w/in 48 hours of a large-scale public health emergency.	9/1/07– 7/31/08 8/1/08 – 7/31/09	\$105,500 \$105,500
9	Department of State Health Services (DSHS)	EMS Local Projects Grant (EMS/LPG) 1243	Provides for emergency medical care and transportation on Galveston Island and other Galveston County locations by contract.	11/1/07 – 8/31/08 11/1/08 – 8/31/09	\$26,414 \$10,000

10	Department of State Health Services (DSHS)	HIV Surveillance (HIV/SURV) 120-124	Funds active HIV/AIDS surveillance & reporting activities	9/1/07 – 8/31/08 9/1/07 – 8/31/08	\$44,283 \$44,283
11	Department of State Health Services (DSHS)	Immunization (Local) 120-130	Funds vaccinations for children and adults at clinics located throughout the county. Adult vaccinations include tetanus, pneumococcal, and influenza in accordance with state and national guidelines.	9/1/07 – 8/31/08 9/1/08 – 8/31/09	\$239,845 \$251,837
12	Department of State Health Services (DSHS)	Immunization (Doses) 120-135	Provides immunization for children and adolescents eighteen (18) years of age or younger, with special emphasis on children less than thirty-six (36) months of age.	1/1/08 – 12/31/08	\$31,000
13	Department of State Health Services (DSHS)	Lactation Services (WIC) 120-215	Provides for a Certified Lactation Consultant to counsel WIC mothers with breastfeeding problems that are beyond the expertise of WIC staff. And, provides training to WIC staff, conducting special breastfeeding classes and support group sessions.	10/1/07 – 9/30/08 10/1/08 – 9/30/09	\$11,865 \$9,000
14	Department of State Health Services (DSHS)	Registered Dietitian (WIC) 120-216	Provides for a certified Registered Dietitian to conduct nutrition educational classes, high-risk individual counseling, staff training, and quality assurance program	10/1/07 – 9/30/08 10/1/08 – 9/30/09	\$19,000 \$10,000

15	Department of State Health Services (DSHS)	Regional & Local Services Section Local Public Health System (RLSS/LPHS) 120-170	Funds essential public health services in immunization, TB, environmental and consumer health.	9/1/07 – 8/31/08 9/1/08 – 8/31/09	\$314,856 \$314,856
16	Department of State Health Services (DSHS)	STD/HIV 120-121	Funds case management, sex/needle sharing, partner elicitation/notification	1/1/08 – 12/31/08	\$161,448
17	Department of State Health Services (DSHS)	T/B Prevention Elimination 120-110	Provides for TB outreach and prevention, treatment and contact investigation	9/1/07 – 8/31/08 9/1/08 – 8/31/09	\$78,105 \$77,852
18	Department of State Health Services (DSHS)	T/B Prevention 120-111	Services include screening, diagnosing and treating people for tuberculosis; and educating, investigating and assisting people who come in contact with TB.	1/1/08 – 12/31/08	\$46,249
19	Department of State Health Services (DSHS)	Women, Infant, and Children (WIC) 120-210	Funds nutritional assessments, education and food vouchers for women, infants, and children at-risk.	10/1/07– 9/30/08 10/1/08– 9/30/09	=\$10.47 per participate =\$10.73 per participate
20	D'Feet Breast	D'Feet Breast Cancer	Provides for breast cancer screening, diagnosis, and	1/1/07 –	\$234,439

	Cancer, Inc.	125-480		treatment activities and breast self-examination education using UTMB Oleander van.	3/31/08 4/1/08 – 3/31/09	\$197,083
21	Harris and Eliza Kempner Fund	Lead Hazard Reduction 125-452		Funds the purchase of lead detection equipment and for the certification of district staff members	5/1/08 – 12/31/08	\$30,000
22	Michigan Public Health institute	Collaborative Research Agreement 125-345		To develop a representative national network of primary care service delivery organizations serving vulnerable populations to study, monitor and evaluate the quality of health care provided by HRSA/BPHC-sponsored programs.	9/1/06 – 831/08	\$10,500
23	National Association of County and City Health Officials (NACCHO)	Local Medical Reserve Corps (MRC™) Unit Agreement 120-142		NACCHO grant to build local Medical Reserve Corps (MRC) units. The MRC is comprised of organized medical and public health professionals who serve as volunteers to respond to natural disasters and emergencies.	12/20/07 – 7/31/08	\$5,000
24	Texas General Land Office (GLO)	Texas Beach Watch 205-525		Funds monitoring and analysis of beach water quality and applicable beach water advisories	9/1/07– 8/31/08 9/1/08 – 8/31/09	\$117,327.60 \$119,897.00
25	Texas Commission on Environmental Quality (TCEQ)	TCEQ – Sec PM 10 Monitoring Section 105 204-520		Federal funding for the operations, maintenance, and quality assurance of two (2) particulate matter monitors. Data is submitted to TCEQ for review.	9/1/07– 8/31/09	\$277,215

26	Texas Commission on Environmental Quality (TCEQ)	TCEQ – Sec PM 2.5 Air Quality Monitoring 204-526	Federal funding for the operations, maintenance, and quality assurance of two (2) particulate matter monitors. Data is submitted to TCEQ for review.	9/1/06– 8/31/09	\$231,100
27	Texas Commission on Environmental Quality (TCEQ)	TCEQ State Funded 204-521	Funds inspections and investigations of air pollution sources to determine compliance with applicable state and federal air regulations.	9/1/05 – 8/31/09	\$160,568 not to exceed \$642,272 /term

Prepared by Kristina Garcia, JD, Compliance Auditor

Appendix D
2008 4C's Clinic Utilization Report with 2007 state/national averages

UDS Comparison Report (February 2009)	CY 2007	CY 2008	TX 2007	National 2007
Patients	17,759	16,078		
Male	6,748	6,084		
Female	11,011	9,994		
African American	30%	31%	17%	38%
White	31%	30%	19%	31%
Hispanic	36%	37%	64%	36%
Other	3%	2%	1%	5%
100% and below	10,298	9,534		
101-150%	3,349	2,754		
151-200%	1,423	1,241		
200% and over	2,689	2,549		
Uninsured	15,695 (88%)	13,519 (84%)	57%	39%
Medicaid	1,306 (7%)	1,279(8%)	25%	35%
Medicare	581 (3%)	625(4%)	6%	8%
Private Insurance	147 (1%)	144(1%)	8%	15%
Other Public Insurance - Title V/Contracts	0	511(3%)		
Medical Users	16,693	15,507		
Dental Users	4,882	3,746		
Mental Health Users	169	354		
Total Encounters	55,333	50,897		
Medical	38,957	32,153		
Dental	9,115	8,073		
Mental Health	565	1,194		
Medical Encounters/Medical Patients	2.26	2.07	3.00	3.15
Dental Encounters/Dental Patients	1.88	2.16	2.27	2.39
Mental Health Encounters/Patients	3.02	3.40	3.17	5.19
Physician FTE's	3.97	2.62		
Physician Productivity	5,309	4,549	4,021	3,826
Mid-Level FTE	3.61	4.0		
Mid-Level Productivity	4,625	5,027	3,155	2,868
Medical Team Productivity	6,541	6,788	4,604	4,338
Dental FTE	3.52	3.00		

UDS Comparison Report (page 2) (February 2009)	CY 2007	CY 2008	TX 2007	National 2007
Dental Productivity	2,215	2,217	2,540	2,669
Hygienist FTE	1.07	1.09		
Hygienist Productivity	1,232	1,305	1,344	1,341
Dental Team Productivity	2,248	2,264	2,568	2,671
Total Cost	\$6,692,436	\$6,818,838		
Medical cost/medical patient	\$177	\$185	\$333	\$386
Dental cost/dental patient	\$295	\$378	\$307	\$344
Total cost/patient	\$377	\$417	\$503	\$562
Cost/medical encounter	\$78	\$91	\$111	\$123
Cost/dental encounter	\$157	\$175	\$135	\$144
Cost/pharmacy encounter	\$28	\$34	\$18	\$15
Cost/lab x-ray encounter	\$25	\$31	\$13	\$9
Total Charges	\$10,619,517	\$8,766,566		
Medicaid	3%	2%	26%	44%
Medicare	1%	2%	7%	9%
Other Public Insurances	0%	<1%	7%	4%
Private Insurance	<1%	1%	6%	13%
Self Pay	96%	94%	54%	30%
Total Collection	\$1,572,623	\$1,145,887		
Medicaid	20%	26%		
Medicare	21%	8%		
Other Public Insurances	0%	3%		
Private Insurance	1%	2%		
Self Pay	58%	61%		
Retro Active Payment	4%	2%	7%	15%
Overall Collection	15%	13%	44%	60%
Adjustment to Sliding Fee Scale	\$6,807,387	\$5,485,273		
Write Off to Bad Debt	\$2,930,033	\$2,513,552		

Prepared by Warren J. Holland, III, Chief Operating Officer

Appendix E: Animal Services Highlights for 2008

http://www.gchd.org/animal_shelter/index.htm

Animal Services are provided in accordance with an Interlocal Agreement and contracts with the County of Galveston and the cities of Bayou Vista, City of Clear Lake Shores, City of Dickinson, City of Hitchcock, City of Kemah, City of La Marque, City of Santa Fe, City of Texas City, and the Village of Tiki Island. For a chart of services by county and city jurisdictions, see 2008 Animal Services Statistics on page 81.

Decreased Demand for Services

In 2008, Animal Services realized a 17% decrease in animals incoming to the shelter from citizen turn-ins and a 28% decrease in animals incoming from Animal Control Officers. The animal shelter took in 6,923 animals in 2008 – 2,061 less than in 2007. In 2008, *the adoption/redemption rate decreased* to 34.8% compared to 40.9% in 2007. There was *an increase of 7.4% in the euthanasia rate*, from 50% in 2007 to 57.4% in 2008. The effects of

Hurricane Ike throughout many parts of the county may be part of the reason for the decrease in demand for services.

2008 Animal Services Highlights

Animal Service Advisory Committee
Voters approved bonds for new shelter
Increase in Animal Seizures
Increase in Animal Shelter Donations
Favorable Internal Audits
Veterinary Technician Position funded
Hurricane Ike Recovery
Animal Services Policy revision

Animal Services Advisory Committee

The Galveston County Animal Services Advisory Committee met as required (Health and Safety Code Chapter 823. Animal Shelters) and discussed various issues concerning the operation of the animal shelter and field services. Advisory committee members reviewed the FY 2009 operating budget, reviewed and commented on the

revisions to the animal services policy, reappointed members to the committee and heard a report from the Animal Shelter Subcommittee on shelter expansion.

Increase in Donations to Shelter

Animal Services saw a sharp increase in the donations received at the shelter. The donations are being used to replace vaccinations lost as a result of Hurricane Ike and to upgrade computer hardware. In addition, \$15,000 was received from the Humane Society of United States to help get the shelter back on their feet following Hurricane Ike and approximately \$75,000 in supplies and equipment from the PetsMart Corporation to assist with the sheltering of animals rescued following the hurricane. Also, the Shelter Buddies volunteer group provided the shelter with approximately 2000 vaccinations for our animals.

Animal Seizures and Dangerous Dog Declarations

Animal civil seizures continue to be executed. Animals are typically seized due to neglect, poor living conditions or abandonment and brought to the animal shelter. In addition, our Animal Control Officers investigated and made recommendations to the Animal Services Manager in support of declaring many dogs dangerous. Dangerous dog declarations are filed following an event such as the attack and killing of another domestic animal or the unprovoked attack on a human.

Animal Services Improvements

Animal Services executed a contract with Carolina Biologicals for the purchase of eligible cat cadavers with the funding from this project being directed for improvements to the cattery. Staff began to vaccinate many of the adoptable animals that are taken into our shelter. The Animal Services Advisory Committee recommended the United Board of Health approve hiring a veterinary technician. Animal Services is currently accepting applications for this position.

Hurricane Ike Recovery Efforts

For a complete report on Hurricane Ike, see page 39.

2009 Plans

In 2009, Animal Services is anticipating working with the County Commissioner's Court and the County's architect to begin the planning and design work for the new animal shelter. Efforts will continue to increase our adoption rate and lower our euthanasia rate. Staffs, with assistance from the Animal Services Advisory Committee, are making plans for the next animal summit.

Prepared by Ronnie Schultz, Director of Environmental Services; Reviewed by CEO

Appendix F: Health District Services by Jurisdictions

Consumer Health Services – Annual Report 2008

City/Location	#Food Establishments	Food Inspections	#Swimming Pools	Pool Inspections	#Animal Establishments	Animal Inspections	Complaints Received	Septic Applications Received
Bayou Vista	4	6	2	2	0	0	0	0
Clear Lake Shores	10	31	8	9	0	0	0	0
Dickinson	108	244	17	18	7	8	43	7
Friendswood	114	271	42	54	6	1	19	7
Galveston	420	811	208	217			104	19
Hitchcock	30	70	9	7	2	3	14	2
Jamaica Beach	2	4	0	0	0	0	1	0
Kemah	56	152	15	15	3	3	11	0
La Marque	78	184	5	4	5	5	29	0
League City	228	567	111	124	18	12	62	43
Santa Fe	63	144	2	2	10	3	63	36
Texas City	203	739	48	63	5	18	102	7
Tiki Island	1	1	0	0	0	0	3	0
Unincorporated	121	264	2	3	6	4	203	154
TOTAL	1438	3488	469	518	62	57	654	275

Air & Water Pollution Services – Annual Report 2008

City/Location	WWTP Inspections	Storm Water Samples	Water Complaints	Grease Traps	Air Complaints	Drinking Water
Dickinson			22	50	4	77
Friendswood		96	6	53	0	353
Galveston					5	
Hitchcock	2	30	15		2	801
Jamaica Beach	3	18	0		0	125
La Marque	4	66	19		3	
League City	7		11	96	8	5
Santa Fe	1	47	10	32	9	1042
Texas City		113	30	71	23	103
Unincorporated	9	44	25		8	704
TOTALS	26	414	138	302	62	42

Health District Services by Jurisdictions

Animal Services – Annual Report 2008

Jurisdiction	Incoming: Shelter	Incoming: Field	Adopted/ Rescued/ Redeemed	Euthanized	Died Prematurely	Calls Received	Bite Reports
Bayou Vista	10	13	5	9	0	25	2
Clearlake Shores	0	2	1	3	0	23	1
Dickinson	341	447	264	496	5	858	25
Hitchcock	125	180	87	209	2	489	12
Kemah	23	47	21	32	1	83	6
La Marque	239	398	169	342	4	1273	16
Santa Fe	353	469	260	431	13	579	40
Drop Box	739		182	514	22		
Texas City	1054	1203	868	1280	34	3704	83
Tiki Island	1	2	0	2	0	11	9
Unincorporated	607	670	556	655	11	1947	35
2008 TOTALS	3492	3431	2413	3973	92	8992	229
2007 Totals	4232	4752	3680	4493	811	9640	174
Difference	-740	-1321	-1267	-520	-719	-648	+55

Net Incoming Difference (%): decreased by 2061 (- 23%) from 2007

**** Due to Hurricane Ike and the transport of animals out of the state of Texas, the total number of animals coming into the shelter does not match the total number of animals that left the shelter. ****

Health District Services by Jurisdictions

Community Health Services – Annual Report 2008

City/Location	Immunization At Clinic Sites (Dickinson, La Marque, Texas City, Galveston) <i>By resident</i>	Outreach Immunizations (Hurricane Ike & Flu) By Locations	TB (Actual Infectious Cases)	STD (Chlamydia, Gonorrhea, Syphilis)	HIV/AIDS (Cases Reported)	Vaccine Preventable Diseases*
Bayou Vista	10	0	0	0	0	0
Clear Lake Shores	0	0	0	0	0	0
Dickinson	1082	1072	5	141	4	17
Friendswood	205	155	0	82	5	28
Galveston	1248	6552	6	466	25	19
Hitchcock	67	56	1	76	3	3
Jamaica Beach	0	0	0	0	0	0
Kemah	53	200	0	13	1	0
La Marque	513	193	2	141	5	12
League City	868	75	0	120	2	44
Santa Fe	373	73	1	52	0	27
Texas City	1624	1806	5	389	12	16
Tiki Island	1	138	0	0	0	0
Unincorporated	506	1245	0	32	1	2
Out of County	779	0	0	0	0	0
TOTAL	7,329	11,562	20	1,512	58	168

*Vaccine Preventable Diseases = Hepatitis A, Hepatitis B, Pertussis, Tetanus, Varicella, Meningococcal & Mumps,

Health District Services by Jurisdictions

Community Health Services – Annual Report 2008

City/Location	WIC Clients by Resident	Senior Outreach Education at Senior Centers	Lead Home Assessments	Outreach Health Screenings (Breast/Cervical Cancer, Blood Pressure & Sugar Checks)	Outreach Education Sessions
Bayou Vista	0	0	0	0	0
Clear Lake Shores	0	0	0	0	0
Dickinson	1703	381	0	188	5
Friendswood	108	0	0	32	2
Galveston	2639	192	18	221	8
Hitchcock	489	0	0	52	14
Jamaica Beach	0	0	0	0	0
Kemah	40	0	0	14	0
La Marque	743	364	3	118	6
League City	348	35	1	93	2
Santa Fe	369	0	0	79	2
Texas City	2525	306	2	357	15
Tiki Island	71	0	0	36	0
Unincorporated	575	266	0	92	6
Out of County	482	0	0	2	0
TOTAL	10,092	1,544	24	1,284	60

Health District Services by Jurisdictions

Galveston Area Ambulance Authority - Annual Report 2008

City/Location	Number of Emergency Responses	Number of Non-Emergency Transfer Responses
Bayou Vista	24	3
Clear Lake Shores	0	0
Dickinson	10	5
Friendswood	0	0
Galveston	10926	2492
Hitchcock	576	12
Kemah	1	0
La Marque	18	29
League City	0	0
Santa Fe	61	30
Texas City	67	3012
Tiki Island	15	5
Unincorporated	591	47
TOTAL	12289	5635