Heat-Health Vulnerability in North Carolina: The Heat – Health Vulnerability Tool (HHVT)

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North Carolina Disease Event Tracking and Epidemiologic Tool (NC DETECT)
NC- DETECT (2007 – 2012)

- Age
- Gender
- Date and Time of Visit
- All diagnostic codes (992)
- Billing address zip code/County
ED visit linked to the daily maximum temperature at the nearest weather station.
Methodology

HRI rates are adjusted for the frequency of temperature observations → **Average daily HRI ED Visits Per 100,000 people**

More ED visits on abnormally hot (95 to 100F) days but marked decrease in HRI rates at the highest temperatures (greater than 100F)
Rural Urban Commuting Areas (RUCA) Classification

Metropolitan | Rural Metropolitan | Rural Town | Rural Isolated

Most Urban | Most Rural
Detailed Rural Urban Commuting Areas Differences
Rural Urban Commuting Areas -- Demographic

The graph illustrates the number of HRI ED visits per 10,000 person-years across different age groups and urban commuting areas. The x-axis represents the age of the HRI ED patient, while the y-axis shows the number of visits. The graph uses different colors to represent different categories:
- Metropolitan
- Rural Metropolitan
- Rural Town
- Rural and Isolated

The data shows fluctuations in visit rates across various age groups and commuting areas, with noticeable differences between urban and rural settings.
Summary

Heat-related illness is greatest in:

- Abnormally Hot (90 to 100°F)
  - Not the exceptionally hot (greater than 100°F)
- Rural locations
  - Not the urban locations
- 18 to 44 male demographic
  - Not the elderly or very young
The Heat-Health Vulnerability Tool
Web-Based Heat-Health Vulnerability Tool (HHVT)

Inputs NWS maximum temperature forecasts and translates these values into predictions of the number of cases of heat illness.

- County or region level
- Demographic/socioeconomic group
  (e.g. adult males, those in poverty etc.)
Isolated Rural (Per Capita Degree) Model for Halifax County at Halifax-Northampton Regional Airport (KIXA)
Observations from 2013-06-28 through 2013-07-04
NDFD forecast issued 2013-07-05

Maximum Temperature for Halifax County at Halifax-Northampton Regional Airport (KIXA)
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The NC DETECT Data Oversight Committee does not take responsibility for the scientific validity or accuracy of methodology, results, statistical analyses or conclusions presented.

Heat Health Vulnerability Tool--http://sercc.com/hhvt