Heat Related Morbidity: Phoenix, Arizona (2001 – 2006)

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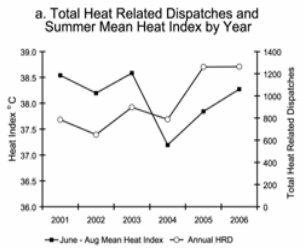
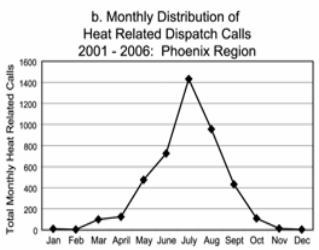
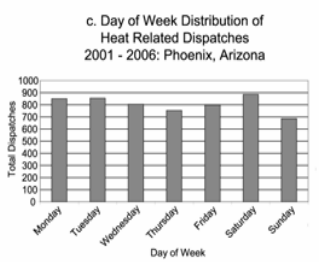
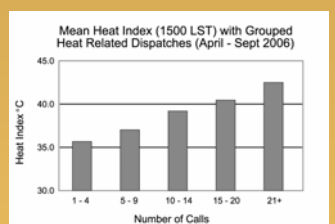




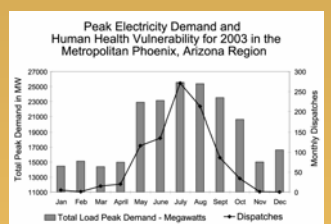


- HRD varied by year (a).
- Calls were highly seasonal - summer months received highest number of calls (b).
- Day of week did not play a significant roll in HRD (c).

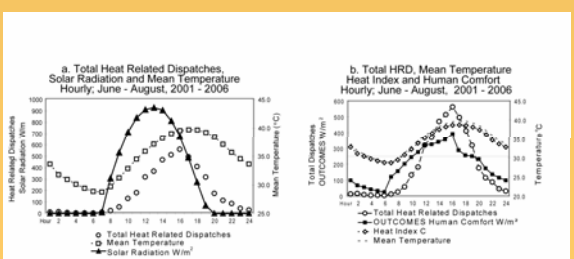
Analysis of six years (2001-2006) of heat-related dispatches through the Phoenix Fire Department regional dispatch center were examined for temporal, climatic and other non-spatial influences contributing to high-heat-related medical dispatch events. The Phoenix metropolitan area, with a population of >3.6 million, covers 1,295 km2 (500 square miles) has a hot, arid climate. Though the annual number heat related emergency dispatches (HRD) varied, several years experienced over 1200 HRD.

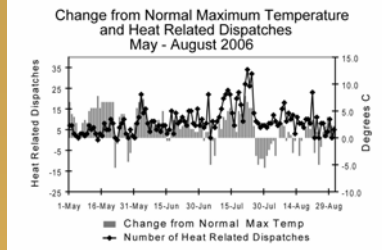


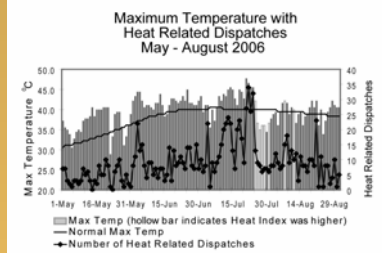
• Location of Heat Related Emergency Dispatch

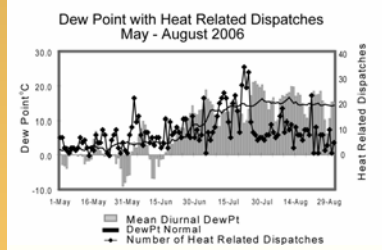


Conclusions: Findings showed greatest incidence of heat-related medical dispatches occurred between the times of peak solar irradiance and maximum diurnal temperature, and during times of elevated human comfort indices (combined temperature and relative humidity). Though the Heat Index was highly correlated to increased HRD, use of a more complex comfort index (OUTCOMES – Heisler and Wang, 2002) provided a better indicator of increased HRD during the diurnal cycle. There were no significant variations in day-of-week dispatch events.









Increases in temperature, humidity, and high maximum temperatures all play a role in increased HRD.

- Higher than normal temperatures increased HRD (a)
- High maximum temperature (b)
- Increased Dew Point (c)

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