

# Blackout of 2003: Public Health Effects and Emergency Response

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## Left in the Dark

Yesterday's blackout possibly originated at a Niagara power station and spread across several states and Canada, closing airports, snarling traffic and causing all types of misery.

### How It Unfolded

**4:00 p.m.** Financial markets close without incident.  
**4:11** Power goes out.  
**5:30** Gov. George Pataki declares state of emergency.  
**6:00** Power restored to some parts of New York State, including Albany.  
**8:00** City subway service partially restored.

SOURCES: The Associated Press; staff reporting

### Total Affected

**7** U.S. states  
**9,300** square miles  
**1 million** customers in New Jersey  
**9 million** customers in New York State  
**10 million** customers in Canada  
**50 million** customers in entire U.S.

### New York Metro Area

City subways and LIRR grind to halt and are evacuated. Amtrak stops service between New Haven, Conn., Newark and Penn Station. Manhattan bridges and tunnels closed to inbound traffic. Kennedy, LaGuardia, Newark and MacArthur Airports closed. No reported power problems in eight south New Jersey counties.



# Health Care

- 4/75 NYC hospitals temporarily without electricity. Longest interruption was 2 hours, 45 minutes. Not all sections of hospital covered
- Persons dependent on medical devices (home ventilators) presented to hospital EDs, further straining medical services, outpatient dialysis patients referred to hospitals
- NYC EMS served 133% more patients during the blackout than in a typical day
- Elective surgeries cancelled

# Surveillance

- Syndromic surveillance disrupted, DOHMH sends staff to hospital EDs to manually collect data
- Biowatch filters were tested at backup laboratories

# Environmental Issues

- Microbial monitoring of water supply continued, but water quantity to high rise buildings was compromised
- Increase in restaurant inspections
- Increase in rodent abatement
- Emergency regulations for waste pickup
- 500 million gallons of untreated sewage released
- Beach water testing, beaches closed for 3 days

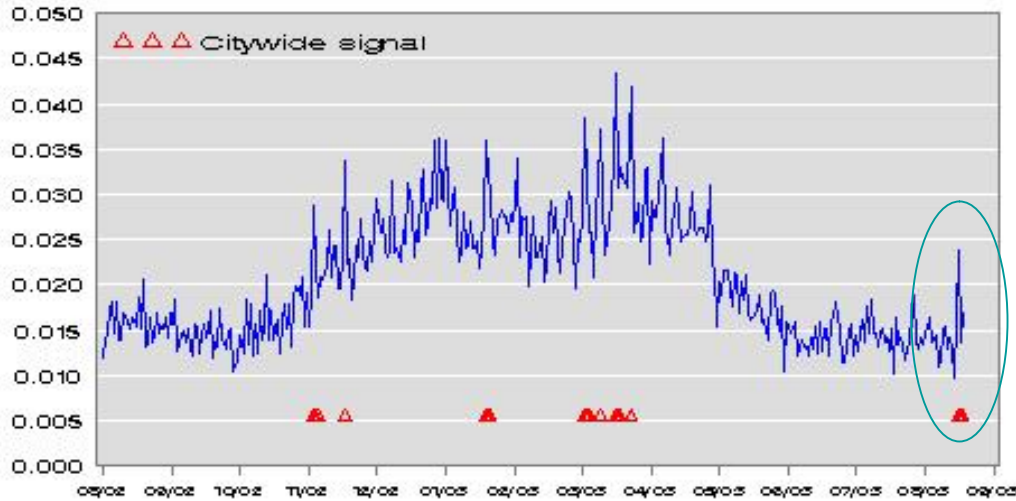
# Other Issues

- Cooling centers opened in all boroughs
- Health alerts sent about food spoilage
- Alerts to NYC physicians about vaccine spoilage
- Critical “routine” DOHMH functions continued: poison control, burial desk, WNV activities, clinical operations, OCME

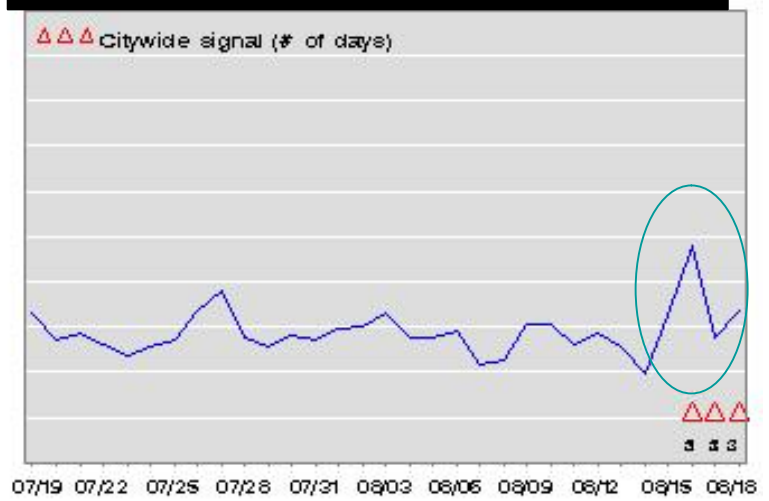
# NYC Emergency Department Surveillance

Citywide trends in the ratio of syndrome visits to other visits through Aug 18, 2003

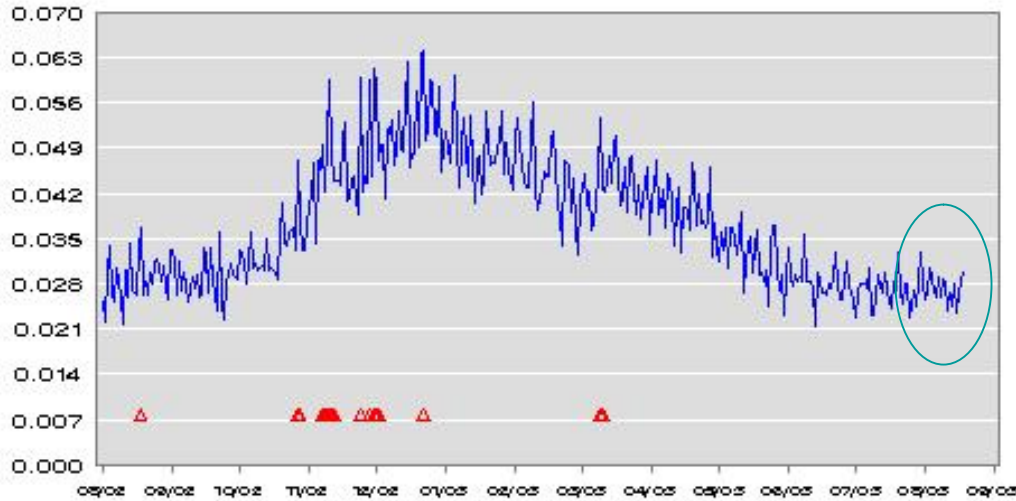
## Diarrhea syndrome, all ages, past 12 months



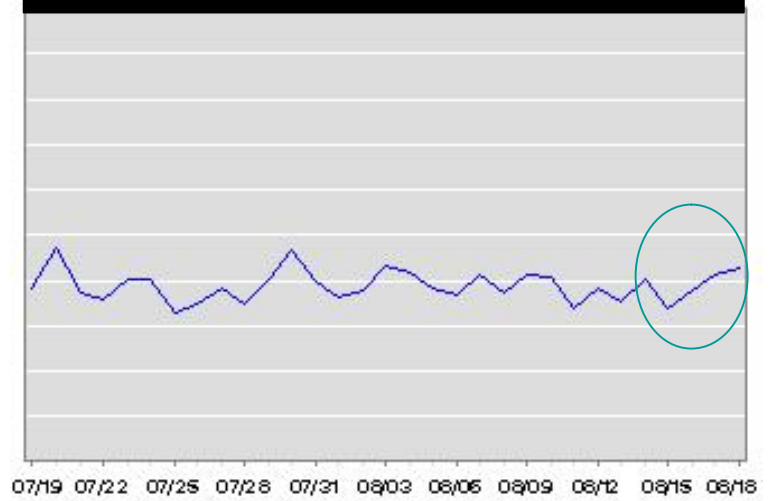
## Diarrhea, all ages, past 30 days



## Vomiting syndrome, all ages, past 12 months



## Vomiting, all ages, past 30 days



# Association of Diarrhea Symptoms and Foods Eaten Between Blackout and Illness in Patients < 13 Years of Age

	Cases (N=58)	Controls (N=100)	OR	95% CI
Vegetables/fruit	28%	37%	0.7	0.3 – 1.3
Chicken	26%	34%	0.7	0.3 – 1.4
Bread	31%	41%	0.6	0.3 – 1.3
Deli meats	14%	20%	0.7	0.3 – 1.6
Dairy	52%	52%	1.0	0.5 – 1.9
Meat	26%	25%	1.1	0.5 – 2.2
Seafood	5%	3%	1.7	0.3 – 8.8

# Lessons Learned

- Need better equipped EOC: we are too dependent on computers!
- Generator testing requirements for hospitals should be upgraded
- Vulnerable population providers need emergency preparedness plans
- Enhance plan for availability of potable water