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Promoting Healthy Communities: Linkages to Policy

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Environmental Health Tracking

- **Early warning systems for immediate health crises such as heavy metal and pesticide poisonings.**
- **Federal, state and local rapid investigative capability for clusters, outbreaks and emerging threats.**
- **Supporting community interests and scientific research to further health tracking efforts.**

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Environmental Public Health Indicators

- **Provide information about a population's health with respect to environmental factors**
- **Useful for: national, state and local surveillance of environmental exposures and related diseases.**

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Tracking of Status and Trends

- **Prevent known or suspected adverse public health events associated with environmental exposures.**
- **Detect new adverse health events associated with environmental exposures.**

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Program and Policy Development, Planning, and Evaluation

- **Track program goals and objectives,**
- **Support existing programs, and**
- **Guide research initiatives**

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Build Core Capacity and Cooperative Relationships

- **Problem response, e.g., outbreaks, clusters, identification of new threats**
- **Strengthen ability of health and environmental agencies to cooperate on addressing environmental health problems**
- **Enhance right to know and empowerment of communities**

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An “Ideal” Indicator Is: (1)

- **Measurable, quantifiable, utilizes data**
- **Possible to track over time**
- **Based on demonstrated linkages between environment and health**
- **Usable, useful, and understandable at different levels and to diverse populations**
- **Informative to the public and to responsible agencies**

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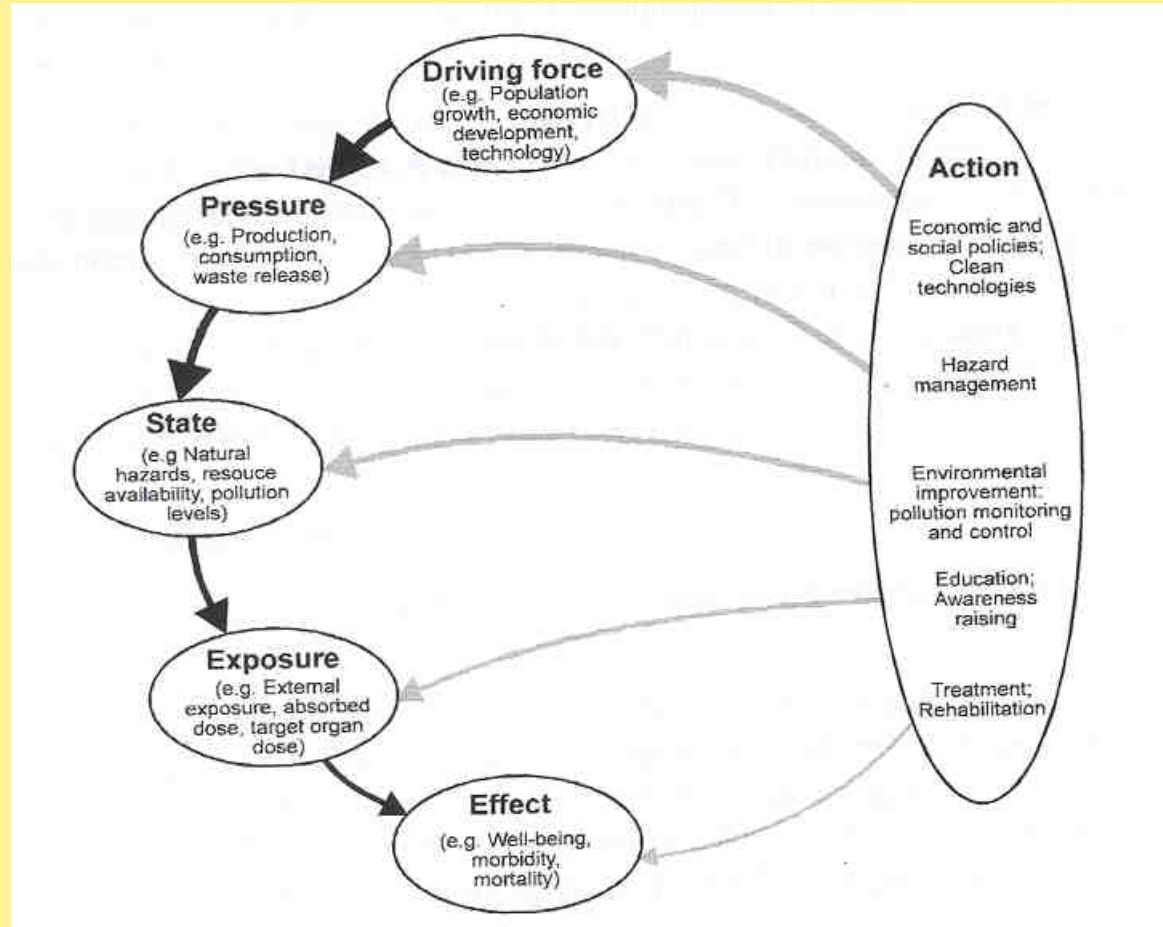
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An “Ideal” Indicator Is: (2)

- **Tied to public health objective(s)**
- **Action-oriented, directs responsible parties to perform specific actions**
- **Based on clearly defined hazards, exposures, and health outcomes**
- **Relevant to existing standards as well as health objectives**

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WHO “DPSEEA” (Pressure State) Model



<http://www.northampton.ac.uk/ncr/who/index.html>
<http://193.172.235.142/download/doc45/EHI-report.pdf>



Hazard Indicator

- **A condition or activity that identifies the potential for exposure**
- **Example:**
 - **Levels of monitored contaminants in water supplies**



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Exposure Indicator

- **Biological marker in tissue or fluid that identifies the presence of a substance or combination of substances that may potentially harm the individual**
- **Example:**
 - **Elevated blood lead levels**

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Health Effect Indicator

- **A disease or condition that identifies the occurrence of an adverse effect from exposure to a known or suspected environmental hazard.**
- **Example:**
 - **Unusual patterns of acute respiratory disease**

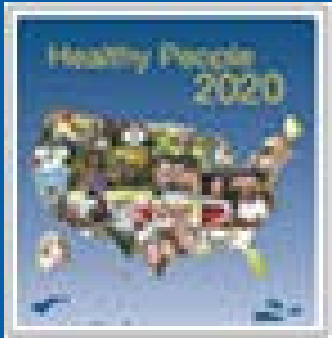


Intervention Indicator

- **Implementation of a program or official policy that minimizes or prevents an environmental hazard, exposure, or health effect.**
- **Example:**
 - Degree to which drinking water systems meet standards



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PHS Healthy People 2020:

<http://www.health.gov/healthypeople/>

- **Goal: Promote health for all through a healthy environment.**
- **Healthy People 2020 Environmental Health themes:**
 - Outdoor air quality
 - Surface and ground water quality
 - Toxic substances and hazardous wastes
 - Homes and communities
 - Infrastructure and surveillance
 - Global environmental health

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Environmental Indicators Information Sources

- **National Air Quality and Emissions Trends Report**
- **National Exposure Inventory**
- **EPA Urban Air toxics program**
- **Safe Drinking Water Information system**
- **Poison control centers**
- **Pesticide monitoring systems**
- **State environmental agencies**

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Health Outcome Indicators Information Sources

- **Vital statistics**
- **National Health and Nutrition Examination Survey**
- **National Health Interview Survey**
- **Behavioral Risk Factor Surveillance System**
- **Cancer registries**
- **State health agencies**

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Concerns of Policy Makers about Information

- **Who is responsible for data systems?**
- **How are data stored and maintained?**
- **How accessible are data?**
- **How reliable are data?**
- **Can multiple data systems be linked?**
- **Information collection burdens?**
- **Ability to use data to support economic analysis.**
- **Ability to link information with specific policies.**

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Examples

- **Asthma prevalence trends**
- **Heat related mortality**
- **Childhood lead exposure**
- **Reyes Syndrome**

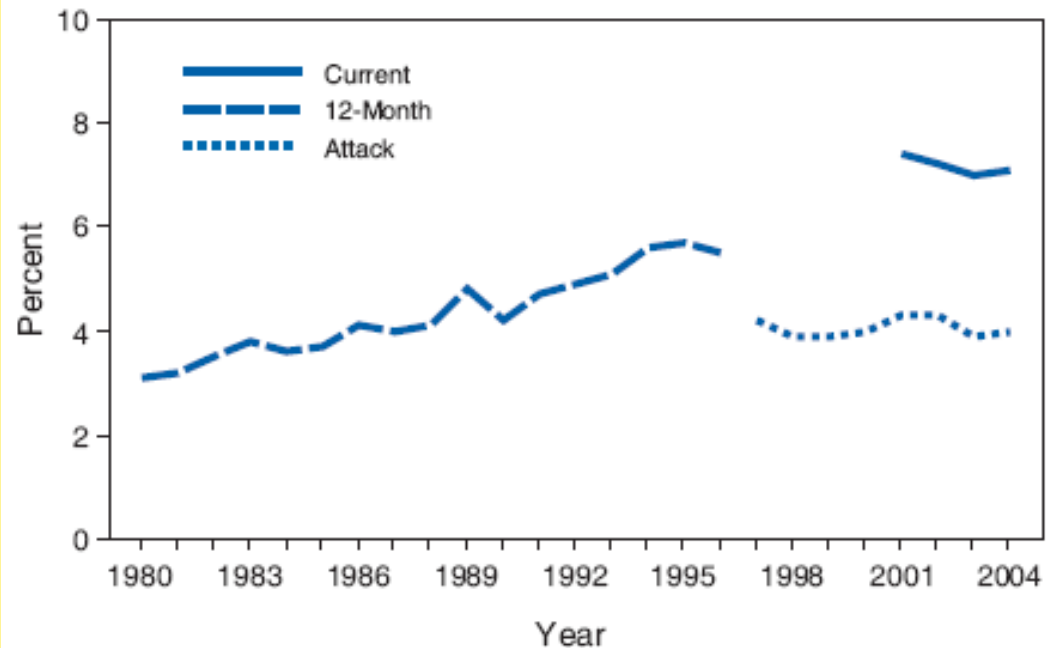
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Asthma Prevalence: 1980-2004

FIGURE 1. Estimated prevalence of asthma, by persons who reported an asthma attack during the preceding 12 months, persons who reported having asthma during the preceding 12 months, and persons who reported current asthma — United States, 1980–2004



Source: National Health Interview Survey; National Center for Health Statistics.

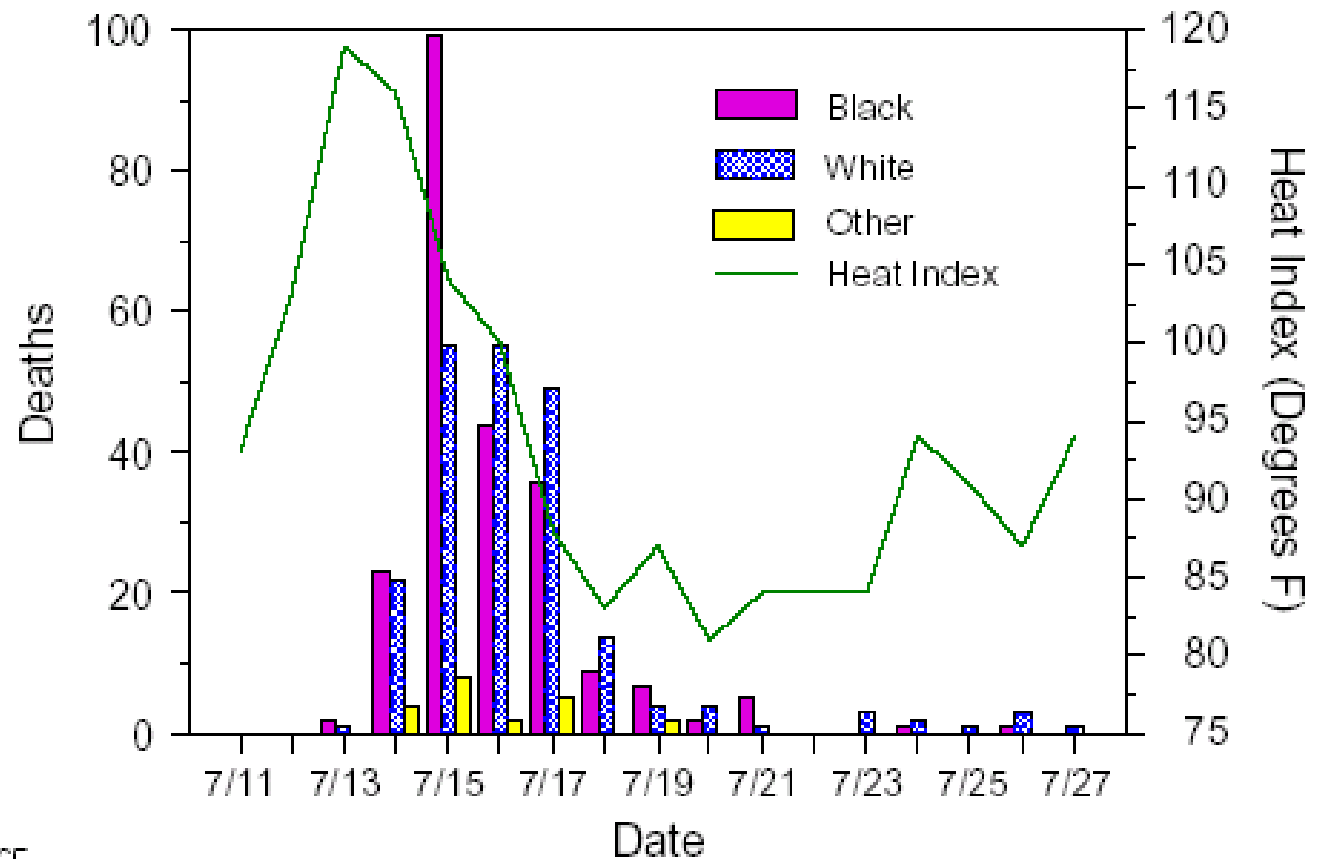
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National Surveillance for Asthma United States, 1980–2004.
MMWR October 19, 2007 / Vol. 56 / No. SS–8



Number of heat-related deaths, and heat index, by date — Chicago, July 11–27, 1995

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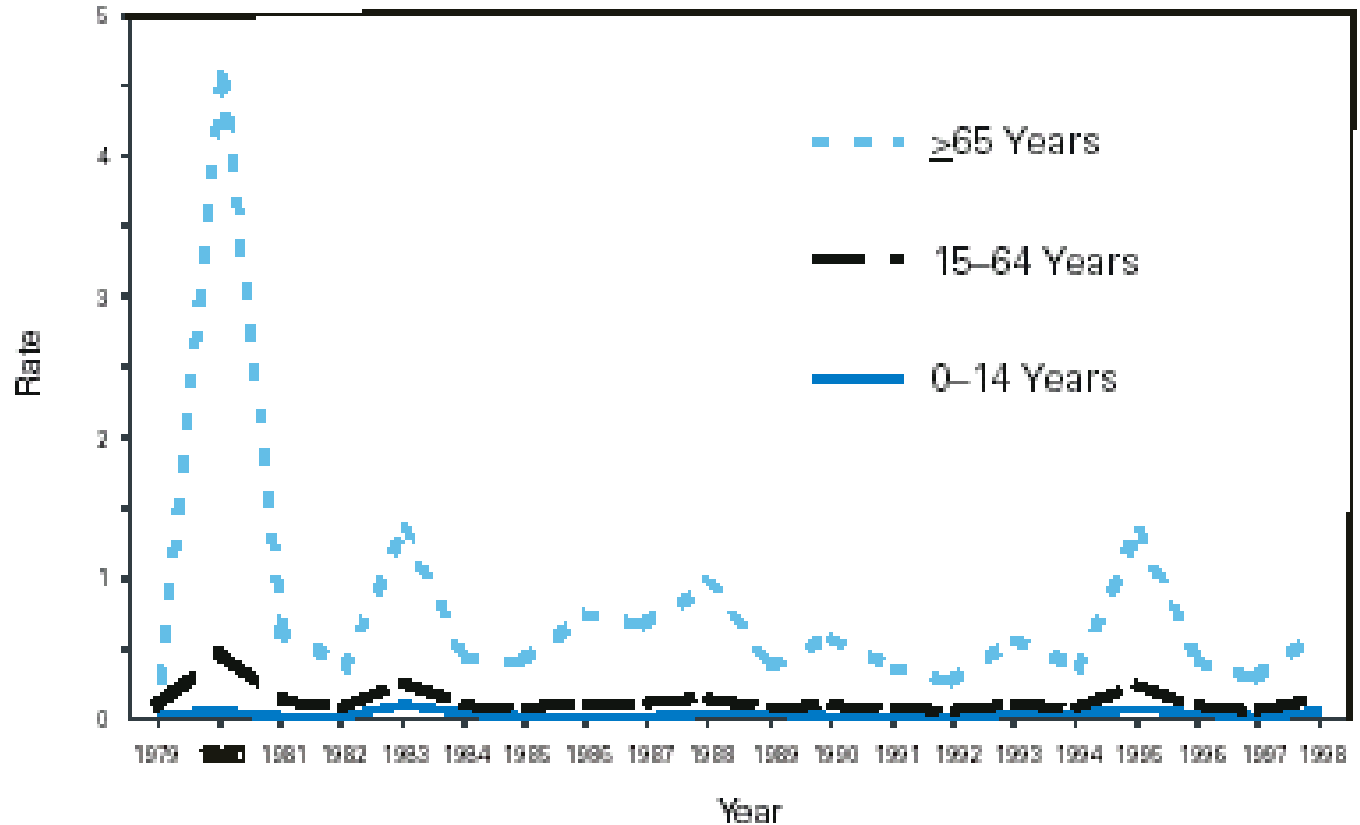
*n=465.



Rate of heat-related deaths, by age group — United States, 1979–1998

(CDC MMWR)

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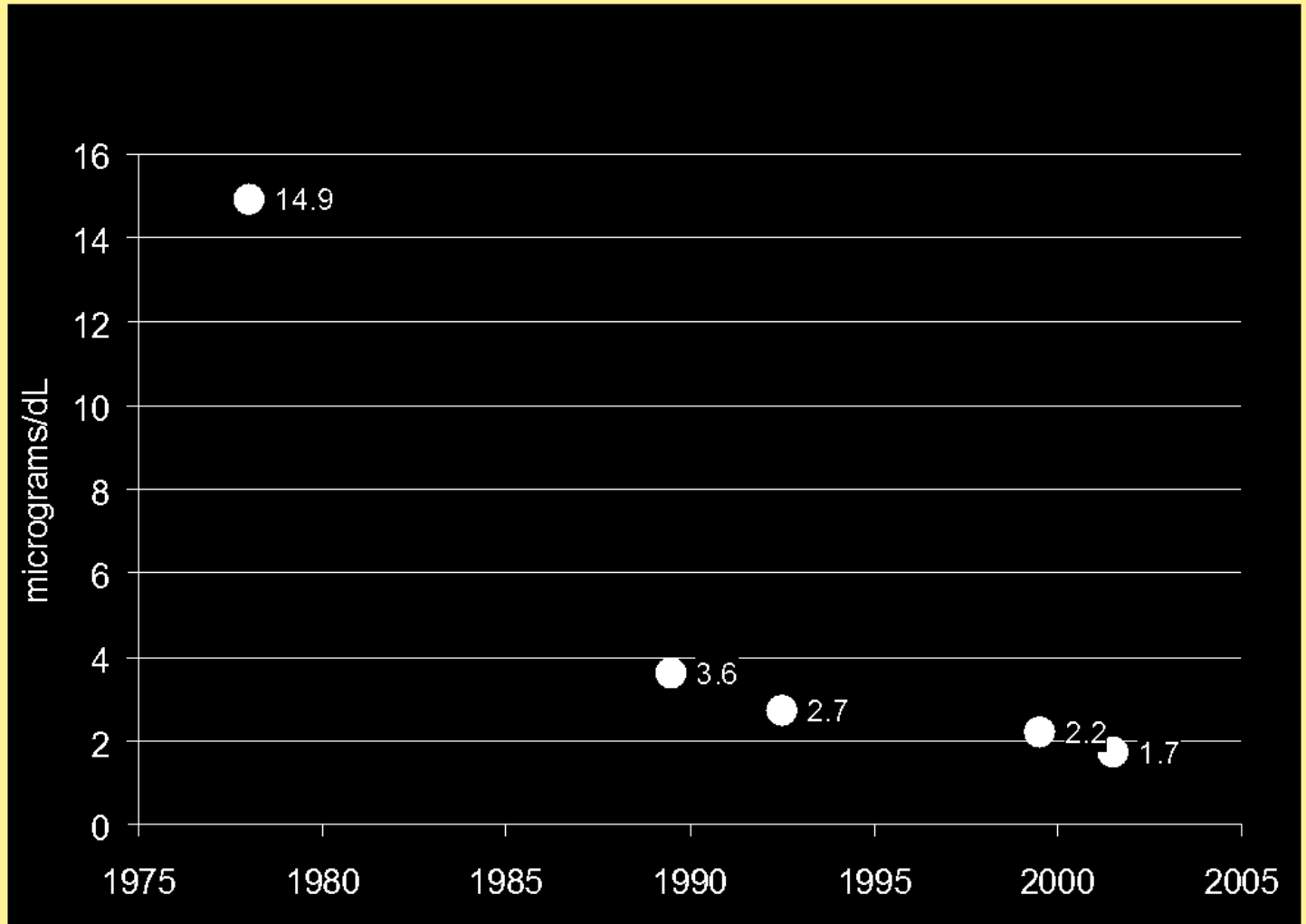
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Lead in Blood, NHANES, 1975-2002

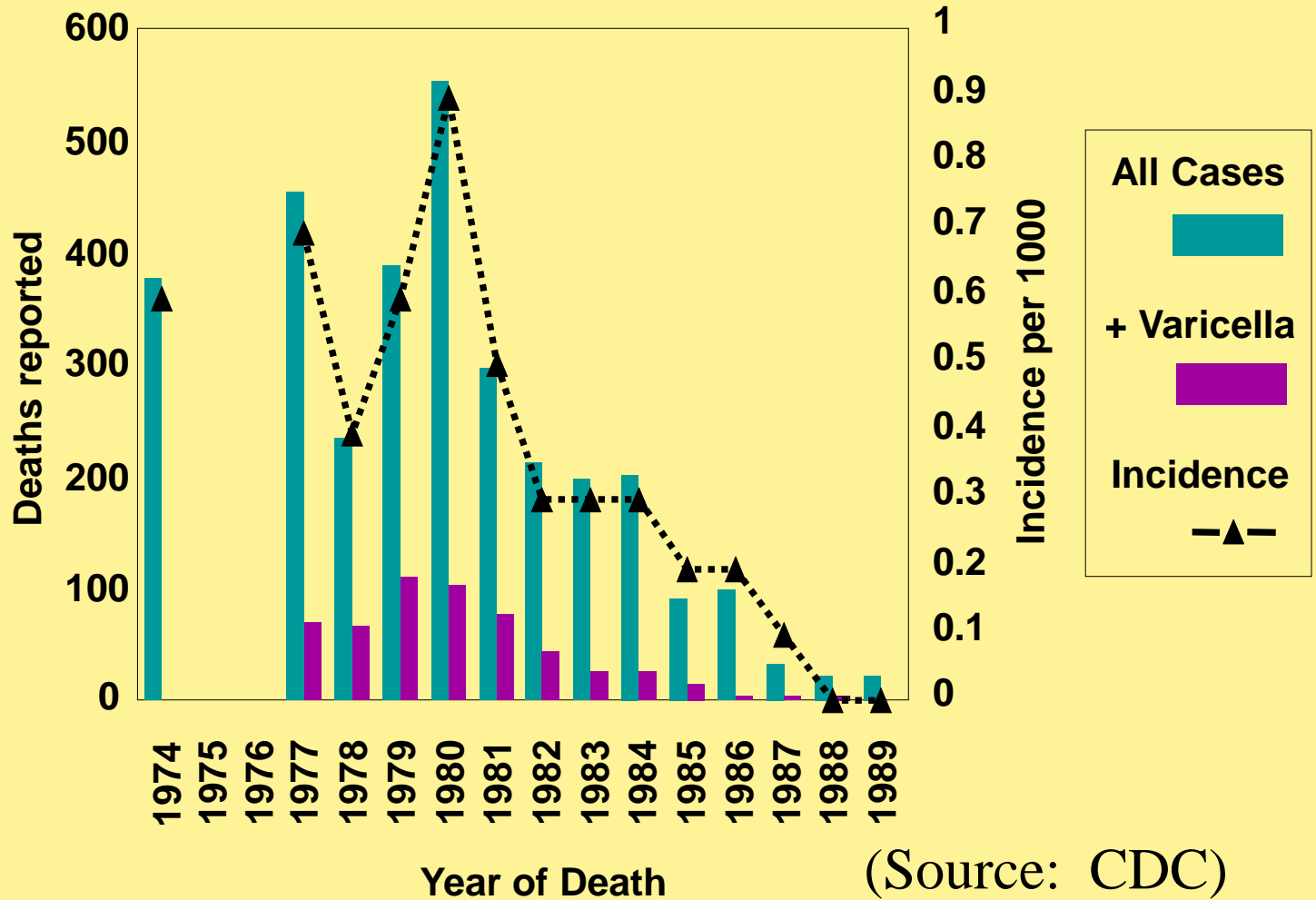
(Geometric mean blood lead, all US children 1-5)



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Reye's Syndrome, US, 1974-1985



(Source: CDC)



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Thanks!
