

Surveillance for Childhood Obesity: An Overview

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Disclaimer:

The conclusions of this presentation represent those of the
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Definition of surveillance

“The **ongoing systematic collection, analysis, and interpretation of outcome-specific data** for use in the planning, implementation, and evaluation of public health practice”
(Thacker 1988)



Comparison of BMI surveillance programs with BMI screening programs*

BMI surveillance programs

- Assess the weight status of population groups (e.g., % of adolescents who are obese in City A)
- Does not need follow-up

BMI screening programs

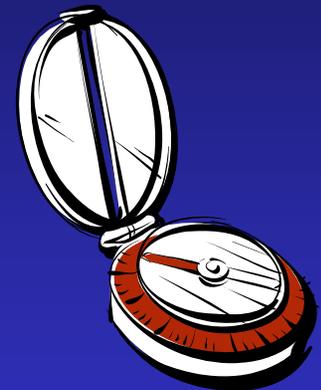
- Assess the weight status of individuals (e.g., Is John Jones obese?)
- Needs follow-up

*Adapted from Nihiser et. al. J Sch Health 2007



Uses of surveillance to direct public health action

- Identify emerging public health problems
- Identify specific populations for intervention
- Set and monitor progress toward meeting health objectives
- Evaluation



Why monitor childhood obesity?

- Health effects
 - Immediate
 - Long term
- Magnitude of problem
- Potential for intervention

Body mass index

Definition:

$\text{Weight (kg)} / \text{height (m)} * \text{height (m)}$

Considerations

- Measure of excess weight not adiposity
- Interpretation needs to account for age and sex

Weight status definition for children

Based on comparison of child's BMI to CDC growth charts for age and sex

Obese \geq 95th percentile

Overweight 85th to 95th percentile



Where are data obtained?

- **Periodic surveys**
 - Only weight and height
 - Weight, height, and other data
- **Data collected for other purposes**
 - Screening
 - Health care records
 - Administrative records



How are weight and height collected?

- Direct measurement
- Self-report
- Parental report



Considerations in choosing methodology

- Needs of the stakeholders
 - Existing mandates
 - Expectation of funders
 - Data users
- Resources



Comparison of federal surveillance systems on three characteristics

<i>System</i>	<i>Population</i>	<i>BMI Assessment</i>	<i>State or local data</i>
National Health and Nutrition Examination Survey (NHANES)	<ul style="list-style-type: none"> •0 to 20 years of age •Non-institutionalized US population 	<ul style="list-style-type: none"> •Measured •Mobile exam centers 	No
Pediatric Nutrition Surveillance System (PedNSS)	<ul style="list-style-type: none"> •Primarily < 5 years of age •Receive services for low income families 	<ul style="list-style-type: none"> •Measured •Part of clinic visit 	Yes (select)
Youth Risk Behavior Survey (YRBS)	<ul style="list-style-type: none"> •Grades 9 through 12 •Attend school 	<ul style="list-style-type: none"> •Self report •Questionnaire in classroom 	Yes (select)
National Survey of Children's Health (NSCH)	<ul style="list-style-type: none"> •0 to 17 years of age •Non-institutionalized US population 	<ul style="list-style-type: none"> •Parental report •Telephone 	Yes

Contact information

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