

Nutritional Epidemiology in Vietnam

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Nutritional Epidemiology

the study of the nutritional determinants of disease or outcome in the human population and the application of interventions to prevent diseases or outcomes



Current research

- ◉ Diet, BMI, diabetes & pancreatic cancer
- ◉ Overweight & obesity among youth – nutrition & physical activity
- ◉ Healthy eating & exercise intervention among Hispanics
- ◉ Dietary intake assessment methods – nutritional analysis software FIAS – Food Intake Analysis System

Nutrition & Public Health

- ◉ Vietnam faces many of same public health challenges as the rest of the world
- ◉ Most public health issues have a nutritional component – both chronic and infectious diseases
- ◉ Essential to describe and monitor nutritional risk factors for disease among Vietnamese

Nutrition & Public Health

- ① Training and education of health professionals about nutrition is essential to prevent most chronic diseases
- ① Appropriate methodologies to assess nutritional intake and status for the Vietnamese are needed
- ① Partnerships of primary care physicians & public health officials are needed

Chinh Van Dang, MD, PhD
Institute of Hygiene & Public Health

- ◉ Completed his PhD at the University of Texas School of Public Health , May 2008
- ◉ Major :Epidemiology
- ◉ Minors: Nutrition and Biostatistics
- ◉ “BODY MASS INDEX OF VIETNAMESE CHILDREN AGES 6-15 YEARS OLD”

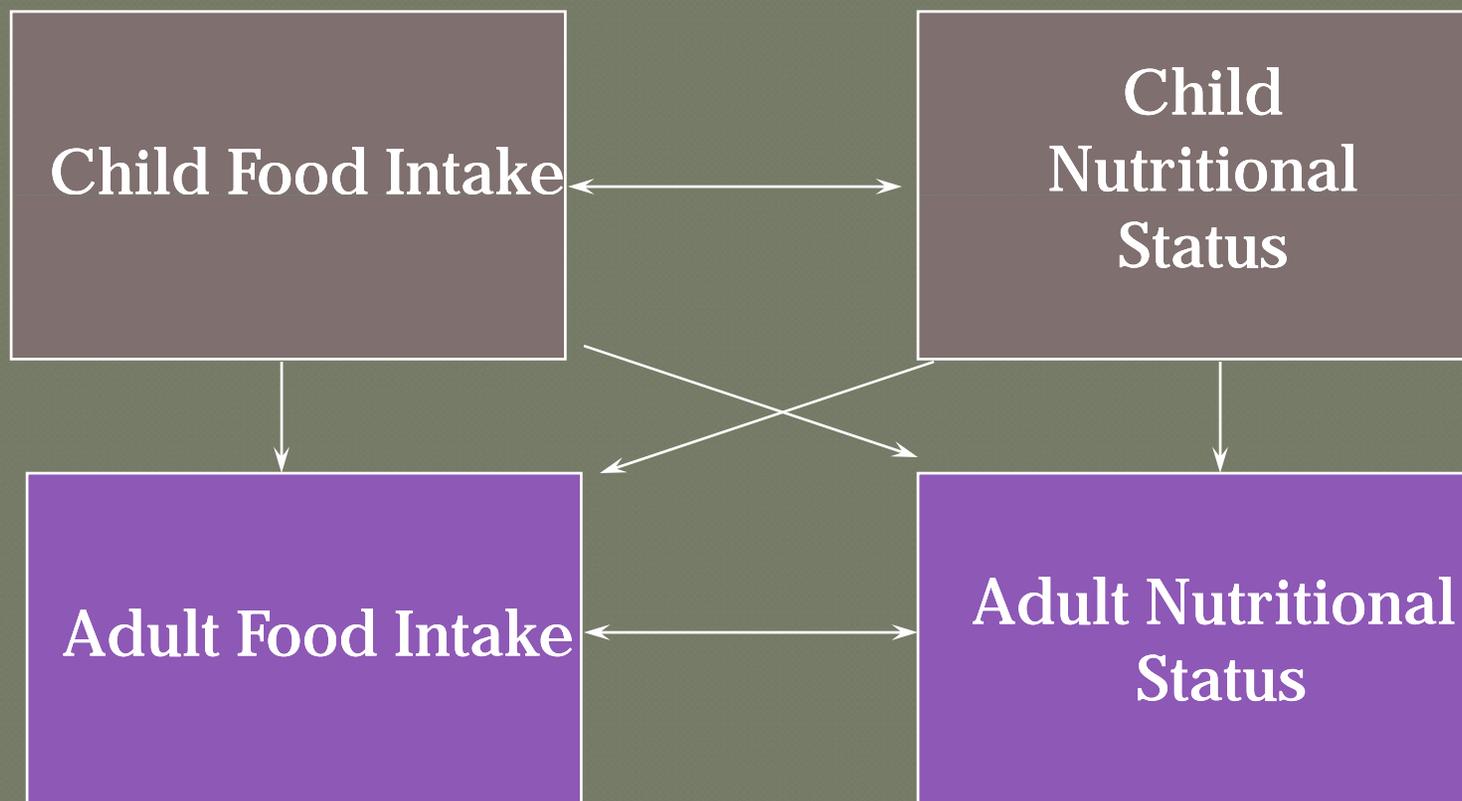
Background

- ◉ Major socioeconomic & environmental changes in last 20 years in Vietnam
- ◉ Changes in dietary patterns & lifestyles
- ◉ Increased prevalence of overweight adults

Background

- ◉ Childhood obesity is one of most difficult problems for pediatricians
- ◉ Rising numbers demand attention
- ◉ Childhood obesity is a problem for children and families

Relationship of Child and Adult Food Intake and Nutritional Status



Are There Disease Risks?

- Heart disease – increases in cholesterol and blood pressure
- Type 2 diabetes increasing
- Overweight adolescents 70% chance of becoming overweight adults
- Poor self esteem and depression

Other Health Complications Among Children

- Growth
- Hyperlipidemia
- Glucose Intolerance
- Hepatic steatosis & cholelithiasis
- Hypertension
- Pseudotumor cerebri
- Sleep apnea
- Othopedic complications
- Polycystic ovarian disease

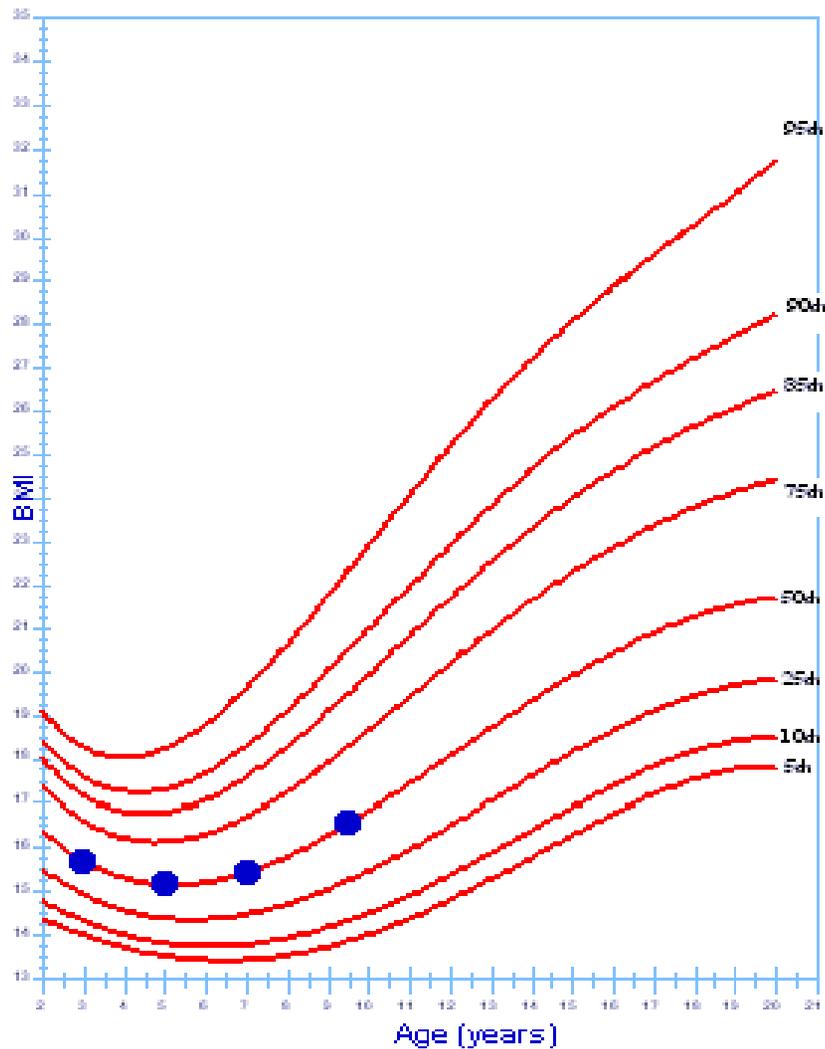
Chinh Dang's Dissertation Objectives

- ◎ To examine the prevalence, trends and determinants of BMI and weight status among Vietnamese children ages 6-15 years, using an international reference standard using data from three cross-sectional assessments in 1992-93, 1997-98, and in 2000

CDC Definition of Overweight Children 2-20 Years

- Body Mass Index = weight in kilograms divided by height in meters squared
- **At risk of Overweight** = sex and age specific 85th-95th percentile of BMI
- **Overweight** = >95% percentile of BMI

Girls: 2 to 20 years



Example: 95th Percentile Tracking

Age **BMI**

2 yrs 19.3

4 yrs 17.8

9 yrs 21.0

13 yrs 25.1

IOTF Percentiles for BMI

- ◉ Underweight BMI-for-age $< 5^{\text{th}}$
- ◉ Normal weight BMI-for-age $5^{\text{th}} - 90^{\text{th}}$
- ◉ At risk overweight BMI-for-age $90^{\text{th}} - 97^{\text{th}}$
- ◉ Overweight BMI-for-age $> 97^{\text{th}}$

Prevalence of at risk of overweight, normal weight & underweight over time (%)

RSD17	1992	1997	2000
At risk of overweight & overweight	0.4	0.8	2.0
Normal weight	65.3	64.5	64.6
Underweight	34.3	34.7	33.4

Slide 16

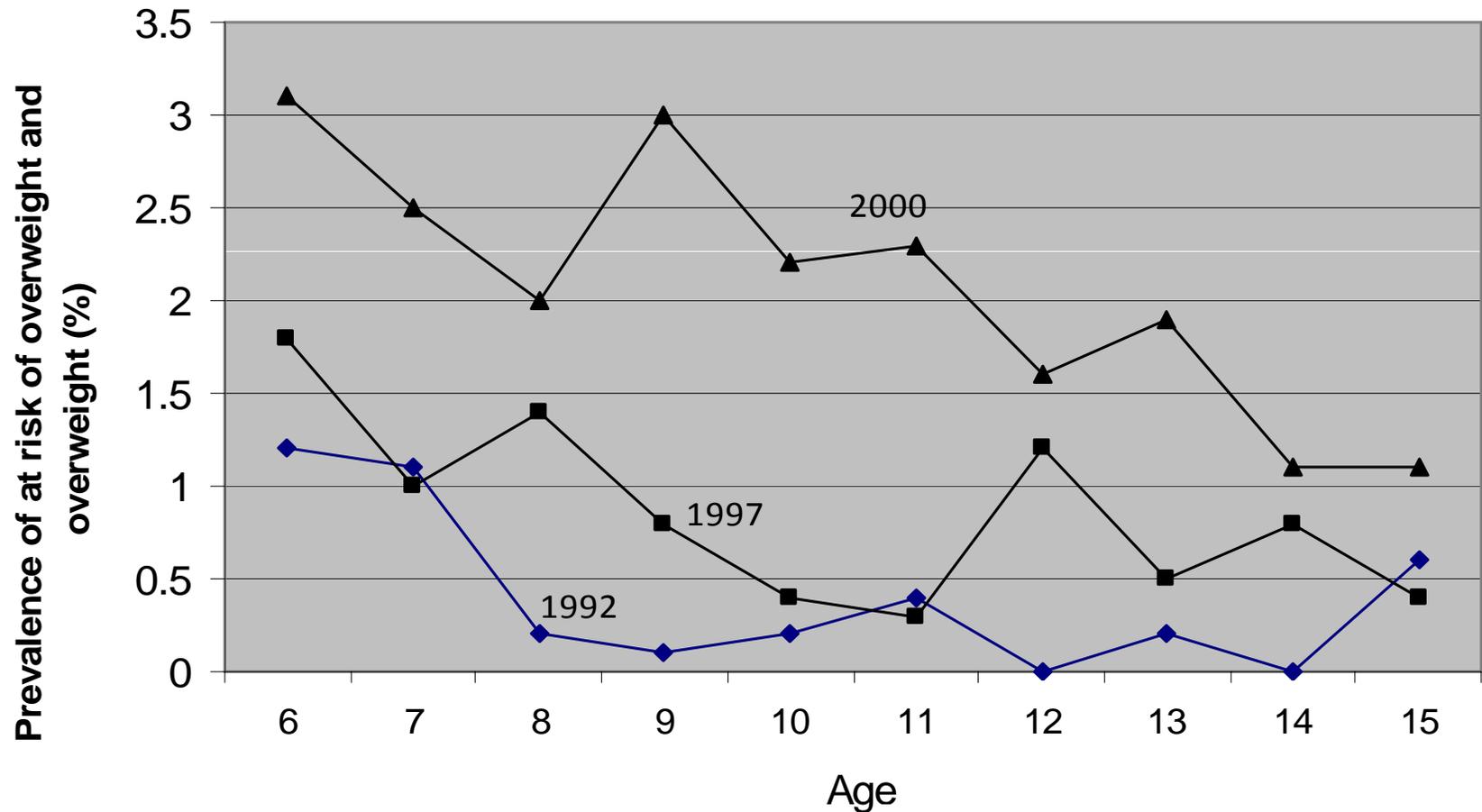
RSD17

these fonts are now 28 pt and i adjusted the lines of the columns to allow the text to fit better

Susie Day, 4/10/2008

Prevalence of at risk of overweight among children 6-15 yrs 1992, 1997 & 2000

RSD18



Slide 17

RSD18 shortened the title - removed the words figure, and made the font larger

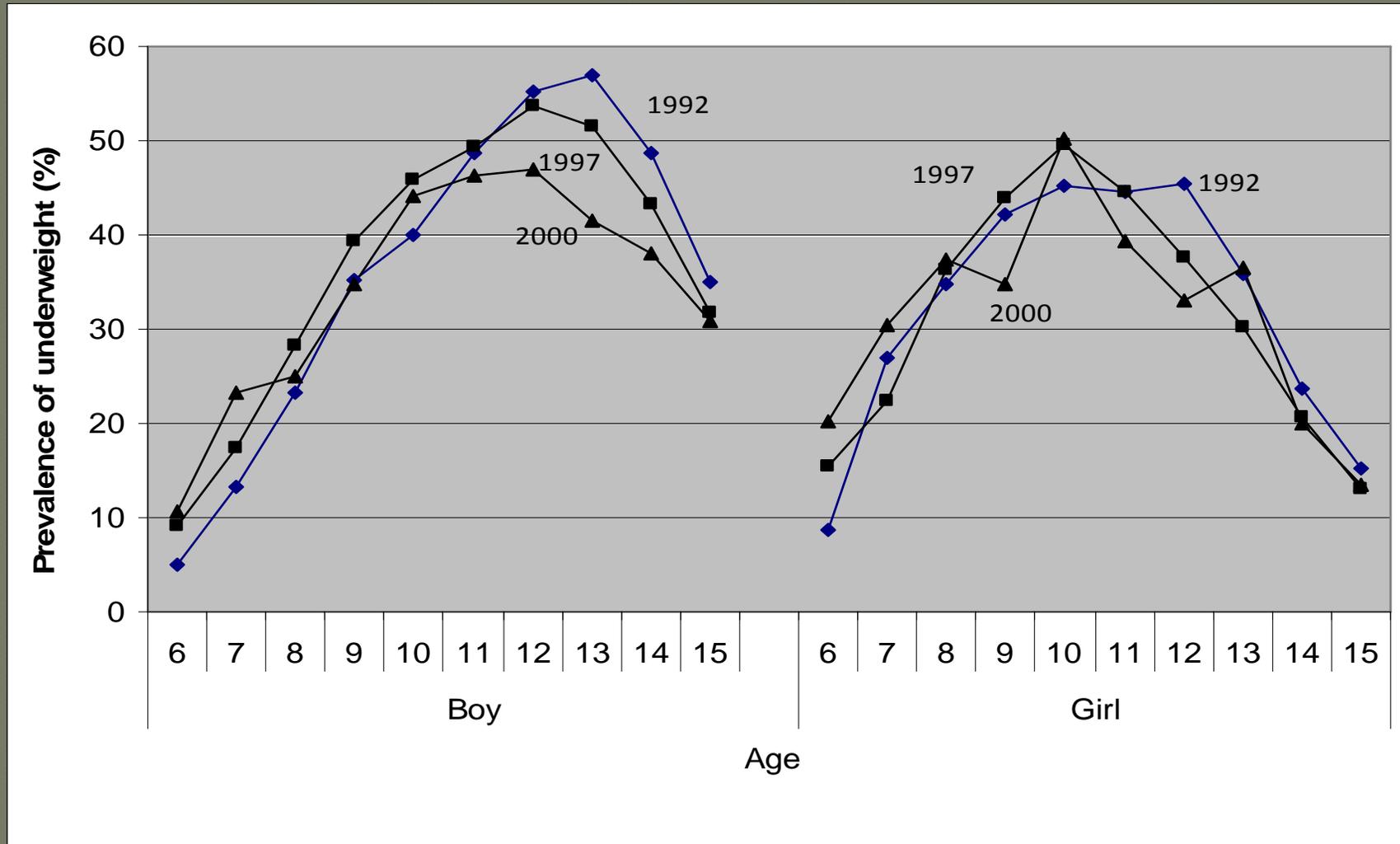
Susie Day, 4/10/2008

RSD19 made the figure a little larger and centered it on the slide

Susie Day, 4/10/2008

RSD21

Prevalence of underweight by age & gender in 1992, 1997 & 2000



Slide 18

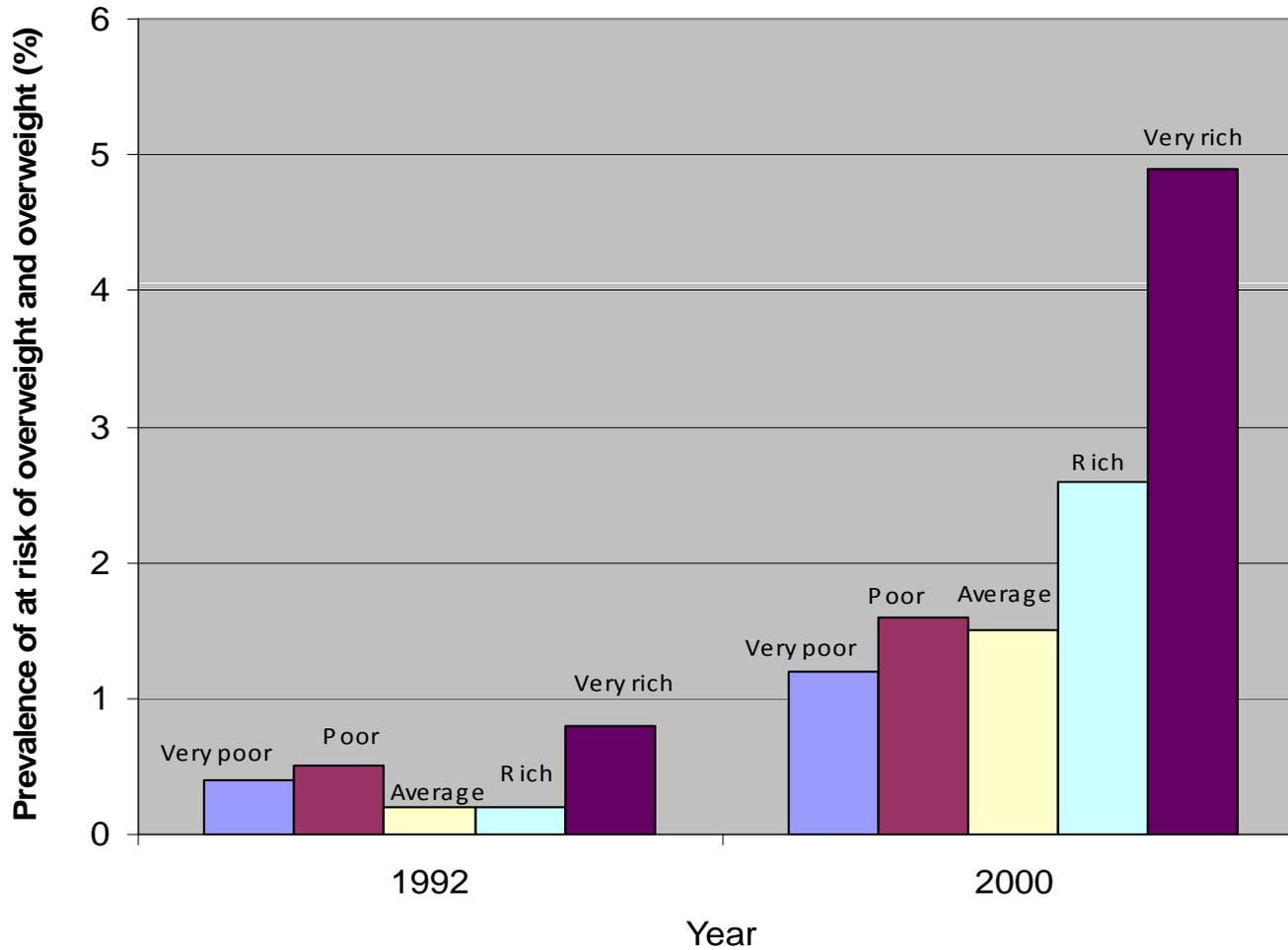
RSD21

same edits and typo in title

Susie Day, 4/10/2008

RSD23

Prevalence of at risk of overweight by SES in 1992 & 2000, pooled, weighted data



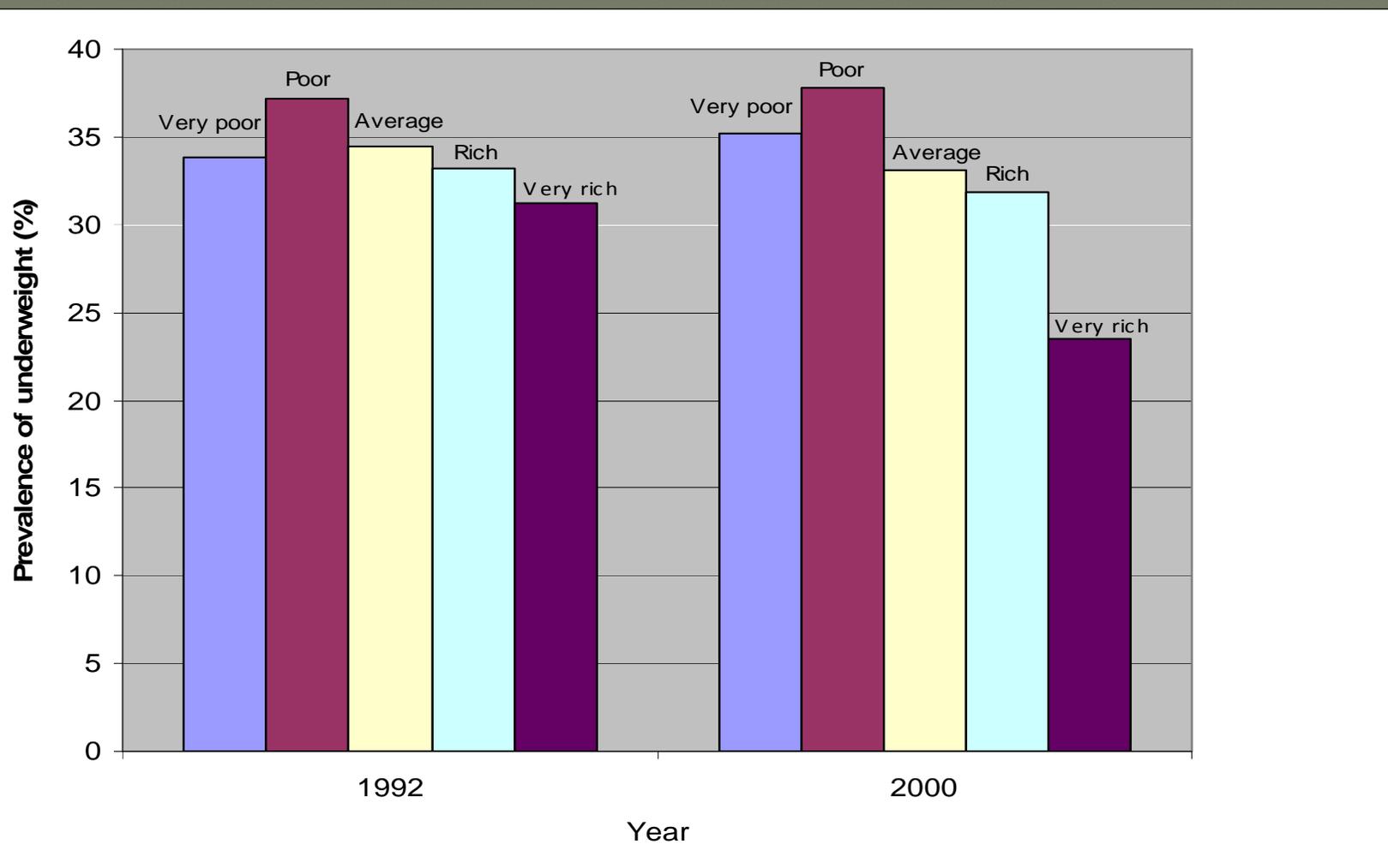
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RSD23

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Susie Day, 4/10/2008

Prevalence of underweight by socioeconomic status among children 6-15 yrs, 1992 & 2000, pooled, weighted data



Short Term Goals

1. Manuscripts for Publication:
 1. Body weight, height and BMI of Vietnamese children 6-15 years of age in 1992-2000
 2. BMI among a cohort of Vietnamese children 6-10 years of age, 1992-1997
 3. BMI of Vietnamese children 6-15 years of age in 2000 and its determinants

Long Range Goals

- ◉ Consult with Institute of Hygiene and Public Health in nutritional epidemiology
 - Assessment of nutritional status & physical activity
 - Design and analysis of epidemiological studies of obesity, cancer, CVD and related chronic diseases
 - Educational training