INTRODUCTION
In the past 25 years, the prevalence of overweight and at-risk for overweight children quadrupled, increasing from roughly four percent to sixteen percent. It is important to document both the prevalence of the overweight and the timing of weight gain among children because overweight children are more likely to become obese adults.

CURRENT STUDY
We use the Early Childhood Longitudinal Study-Kindergarten Cohort (ECLS-K), a nationally representative sample of US kindergartners, to identify weight trajectories using growth mixture models. We use multinomial logistic regression to explore the relationship between weight patterns and key demographic and socioeconomic characteristics. Multiple measures of body mass index (BMI) from kindergarten through 8th grade (N=14,000) are used.

DATA & MEASURES
Race / Ethnicity / Parental Nativity:
- Hispanic (of any race), and non-Hispanic white, Black, Asian, and Other. Children of Newly Arrived Immigrants (arrived in the U.S. ages 0-11), children Newly Arrived (arrived in the U.S. age 12 and older), and children of US-born native parents.

Socioeconomic Status:
- Family income in kindergarten (logged), change in income between kindergarten and 8th grade (logged), and parental educational attainment.

RESULTS
Three distinct patterns of weight gain from kindergarten through eighth grade were identified:
- Consistently Normal (below the 85th percentile for height and weight).
- Always Overweight, and Gradual Onset of overweight.
- Always at risk of overweight or gradually becoming overweight or at-risk, the majority is in the "always" category and therefore appears to have been at risk as early as kindergarten (boys: 66%; girls: 56%).

ALWAYS OVERWEIGHT
- Hispanics are more likely than non-Hispanic whites to experience continuous overweight.
- Parental education is a weaker predictor of sustained overweight among boys than among girls.
- Sons of recently arrived immigrant parents have higher odds of membership in the "Always Overweight" class compared to non-Hispanic whites.
- Among girls, higher levels of income in kindergarten and upward shifts in income over time reduce the risk of transitioning into overweight.

GRADUAL ONSET OF OVERWEIGHT
- Higher parental education reduces the risk of boys and girls experiencing the onset of overweight after they enter kindergarten.
- Among boys, increased number of daily television viewing hours and black ethnicity are associated with gradual onset of overweight.
- Among girls, significant predictors include parent’s annual income and changes in parental income between kindergarten and eighth grade.

NORMAL WEIGHT
- Possessing better health, having a lower birth weight, more siblings, watching less television, and having higher levels of parental income and education appeared to increase the chance of maintaining a normal weight throughout the course of the study.

CONCLUSIONS
EARLY AND SUSTAINED OVERWEIGHT DISPROPORTIONATELY AFFECTS HISPANIC BOYS, GIRLS AND CHILDREN WITH LOW LEVELS OF FAMILY INCOME AND PARENTAL EDUCATION.
Given that race and ethnic differences are evident as early as Kindergarten and that racial and ethnic gaps in the incidence of obesity widen as children move through high school and beyond, it will be important to identify and target family or community based interventions even before children enter elementary school.

THE RELATIONSHIP BETWEEN SOCIOECONOMIC STATUS AND CHILDREN’S HEALTH MAY OPERATE DIFFERENTLY ACROSS GENDER.
Parental education may reduce the risk of overweight if education is related to health knowledge and better child feeding practices. However, the effects of income may be more complex because income can be used to purchase healthier food, but can also increase consumption of obesity-promoting goods and activities (e.g., video games and fast food).

THE CHILDREN OF IMMIGRANTS HAVE BEEN DISPROPORTIONATELY AFFECTED BY THE OBESITY EPIDEMIC.
Children of immigrants whose parents had less exposure to the U.S. may be unaware of the health risks of American junk food. They may be coming from environments characterized by food scarcity and under nutrition and may not consider indulgence in food among their children a problem. In environments in which food sources are less secure (such as in some less-developed countries), overweight may be a marker of status, or at least is not perceived as unhealthy. Immigrants may bring such inclinations with them to the United States, and their effects may become manifested early in children’s lives.

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