

# Early life, including the Youth as an opportunity to curb the NCD epidemic

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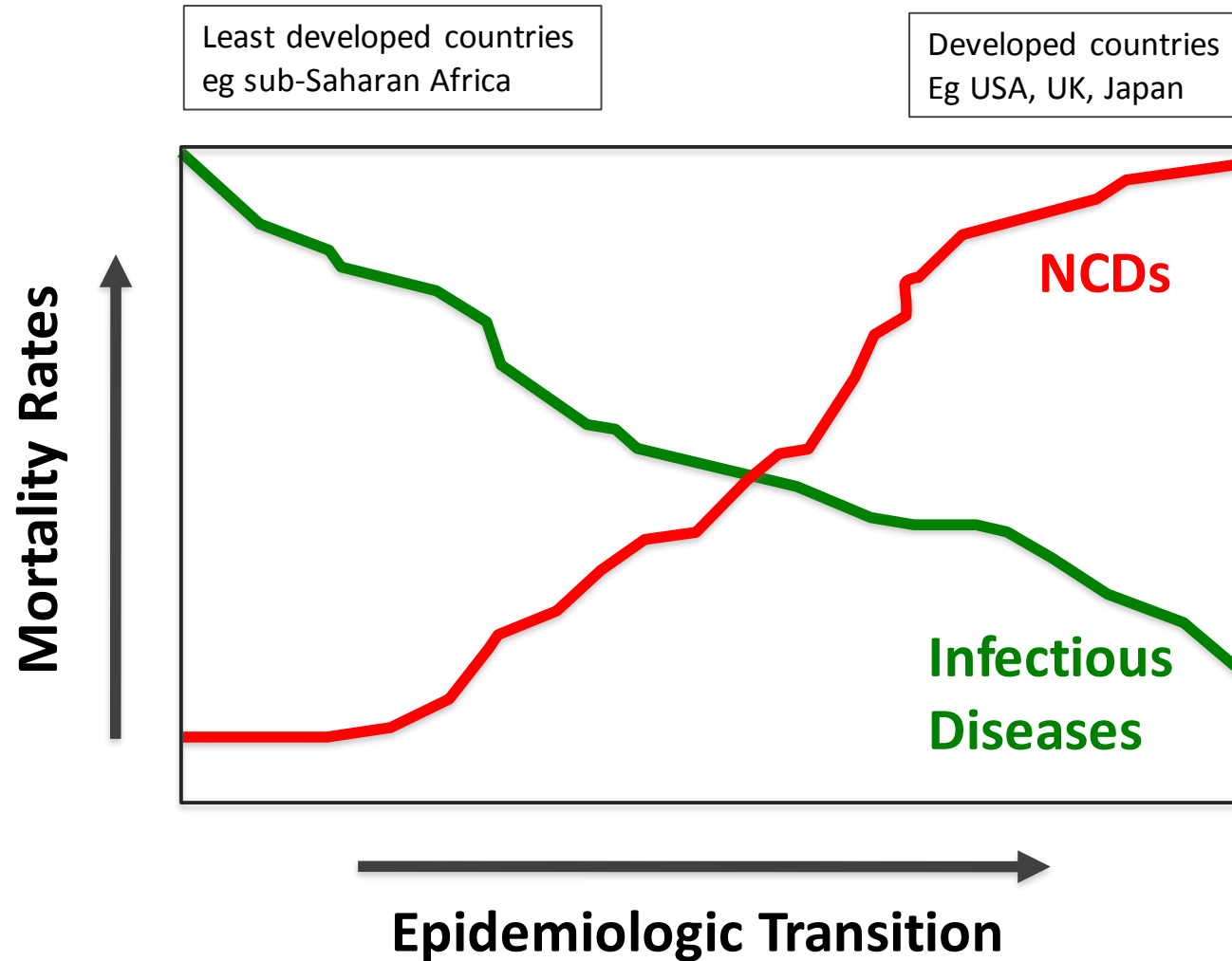
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MRC

MRC / UVRI Uganda  
Research Unit on AIDS

# Epidemiologic Transition

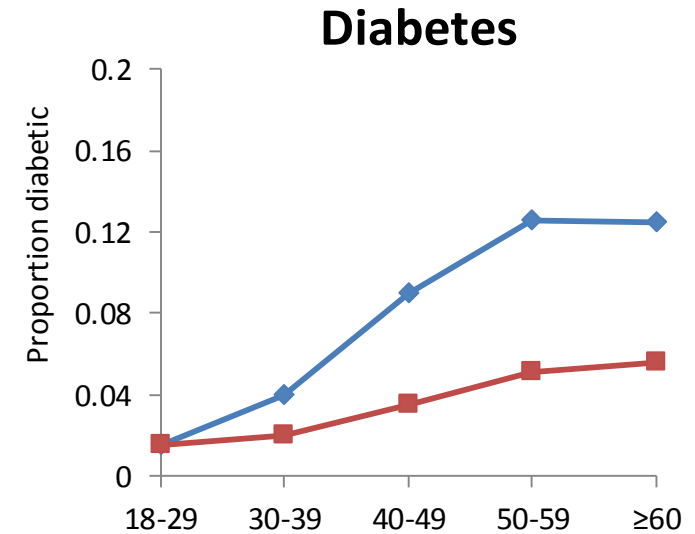
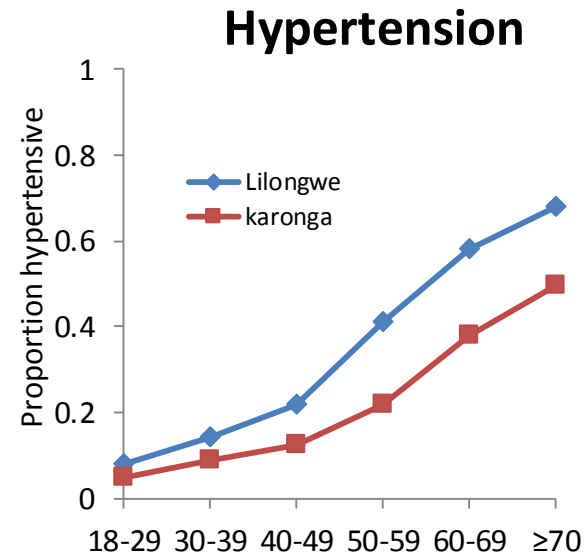


# What is unique about epidemic in Africa

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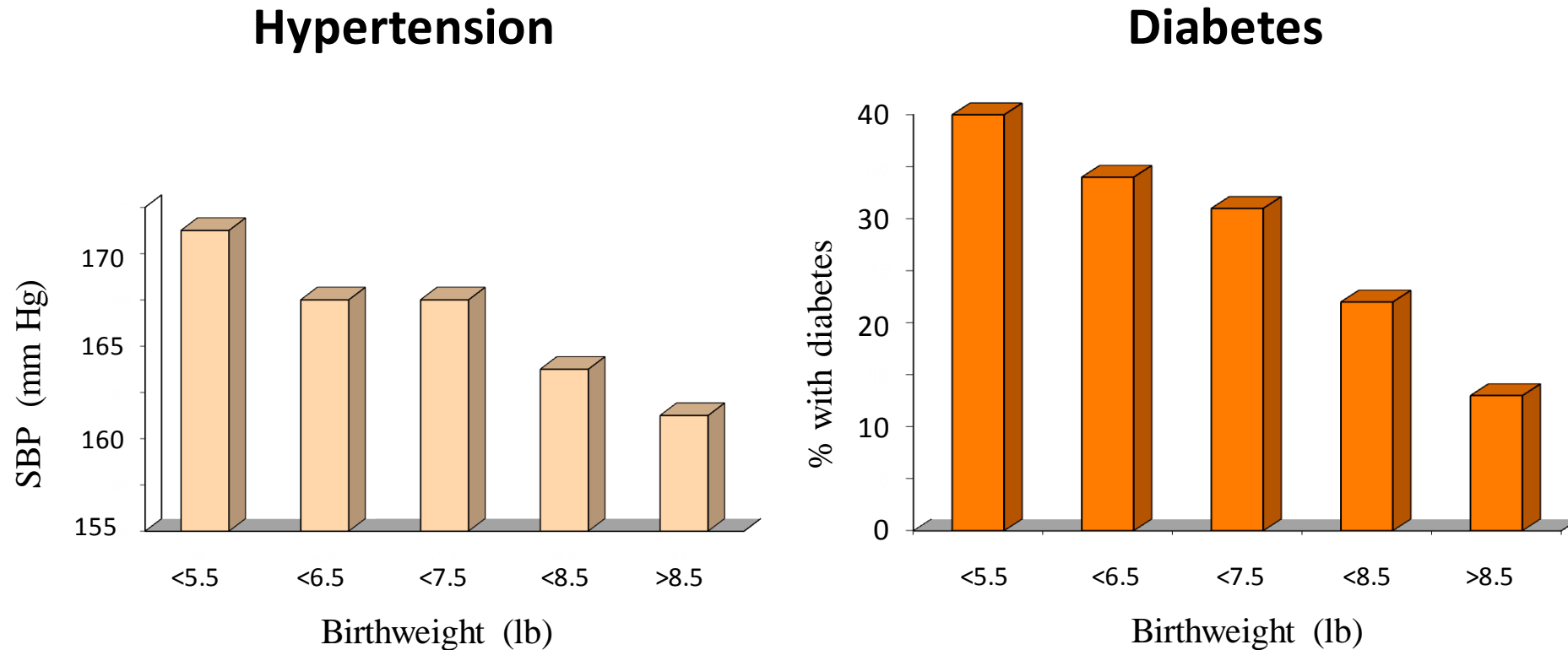
- Early in the transition
- Speed of the epidemic
- Affecting young people
- Not necessarily associated with affluence

# NCDs in the young and lean



- ~ 50% of people with hypertension or diabetes are <50 years old
- 40-50% have BMI <25kg/m<sup>2</sup>

# Birth weight and risk of NCDs



Developmental origins of health and disease (DOHaD)

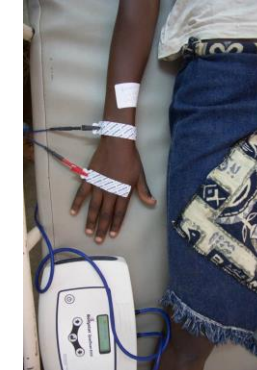
# Long term effects of malnutrition



Baseline  
2006  
1024 enrolled  
Median age: 21.5 months



Follow up  
2014  
400 recruited  
Median age: 10 years  
Compared with controls



Reduced exercise capacity  
Higher waist-hip ratio  
Higher blood pressure

## Chronic disease outcomes after severe acute malnutrition in Malawian children (ChroSAM): a cohort study

Natasha Lelijveld, Andrew Seal, Jonathan C Wells, Jane Kirkby, Charles Opondo, Emmanuel Chimwezi, James Bunn, Robert Bandsma, Robert S Heyderman, Moffat J Nyirenda, Marko Kerac

### Summary

**Background** Tackling severe acute malnutrition (SAM) is a global health priority. Heightened risk of non-communicable diseases (NCD) in children exposed to SAM at around 2 years of age is plausible in view of previously described consequences of other early nutritional insults. By applying developmental origins of health and disease (DOHaD) theory to this group, we aimed to explore the long-term effects of SAM.

Lelijveld et al. *Lancet Glob Health* 2016; 4: e654–e662

## Long-term effects of severe acute malnutrition on lung function in Malawian children: a cohort study

Natasha Lelijveld<sup>1,2,3</sup>, Marko Kerac<sup>2,3,4</sup>, Andrew Seal<sup>1</sup>, Emmanuel Chimwezi<sup>2</sup>, Jonathan C. Wells<sup>5</sup>, Robert S. Heyderman<sup>2,6</sup>, Moffat J. Nyirenda<sup>2,3</sup>, Janet Stocks<sup>7</sup> and Jane Kirkby<sup>7</sup>

Lelijveld et al. *Eur Resp J* 2017 49: 1601301; DOI: 10.1183/13993003.01301-2016

## Commission on Ending Childhood Obesity

[Commission on Ending Childhood Obesity \(ECHO\)](#)

[About the work of the Commission](#)

[Working Groups](#)

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### About the work of the Commission

#### Role of the Commission

The Commission has been tasked with producing a report specifying which approaches and combinations of interventions are likely to be most effective in tackling childhood and adolescent obesity in different contexts around the world. The Commission will deliver its report to the WHO Director-General so that she can convey its recommendations to the World Health Assembly.



Pablo P Yori, Courtesy of Photoshare, 2008

#### Contact us

Commission on Ending Childhood Obesity  
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#### Consideration of the evidence on childhood obesity



Report of the ad hoc working group on science and evidence for ending childhood obesity

- The number of overweight and obese children in Africa has doubled since 1990
- A quarter of overweight and obese preschool-age children live in Africa

# A life course approach to NCDs

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