

Home-based health records to manage excessive gestational weight gain: a pilot E-health study in China

Mo Xiuting^{1,2,3} Gai Ruoyan², Nakayama Takeo³

1. JSPS research fellow

2. National Center for Child Health and Development, Japan

3. Graduate School of Medicine, Kyoto University

Excessive gestational weight gain (GWG)

- **For mothers:** pregnancy-induced **hypertension**, gestational diabetes mellitus (**GDM**) emergency and elective **caesarean** section...
- **For offspring:** **premature** birth, **macrosomia**... more likely to be overweight in childhood.
- **Long-term effects:** such as metabolic diseases, cardiovascular diseases and cancers, are related to the offspring's early stages of development

Reference: Margerison et al, 2010.

Glossary

- Definition
- 2009 WHO weight categories

Active

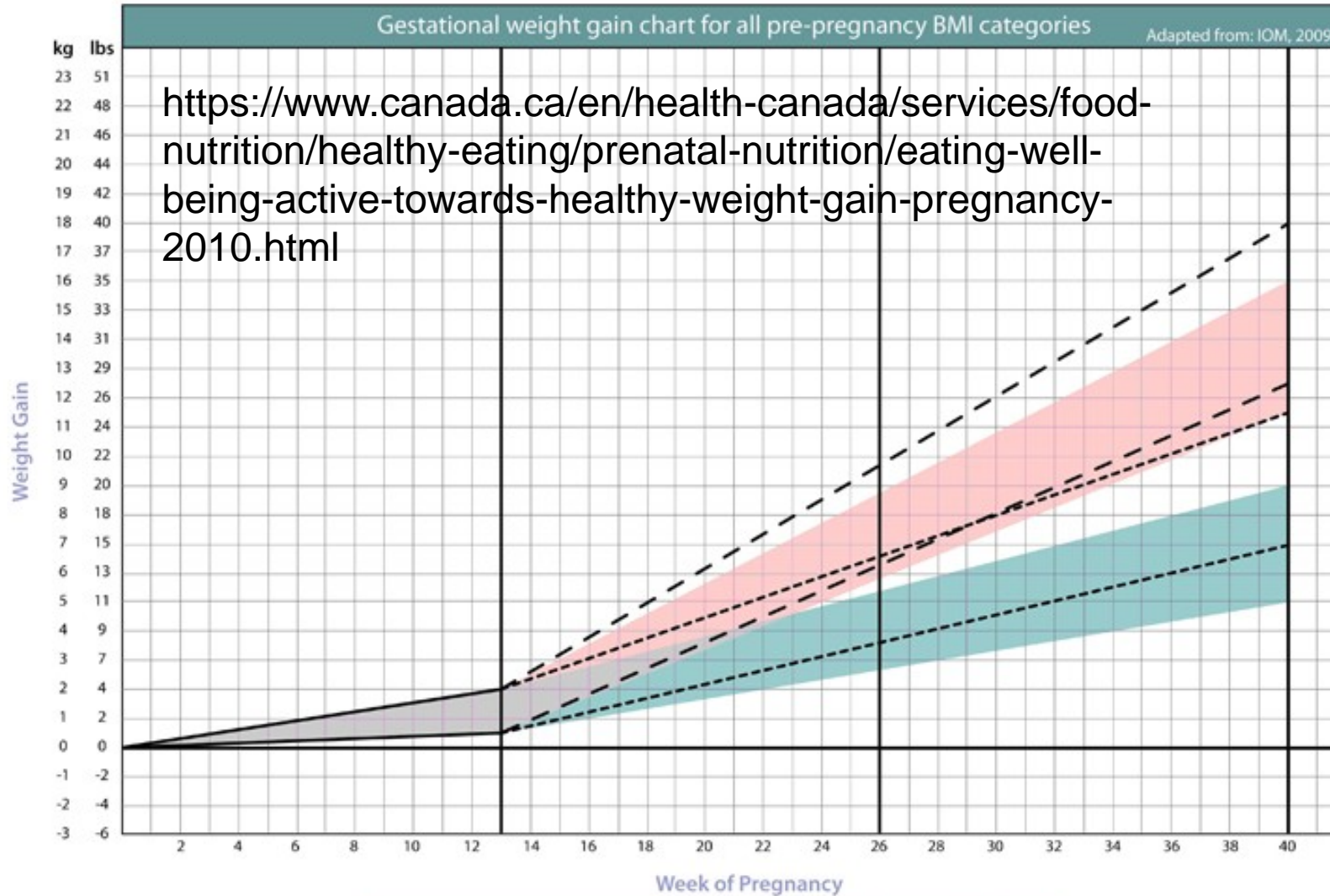
Low

Normal

Overweight

Obese

<https://www.canada.ca/en/health-canada/services/food-nutrition/healthy-eating/prenatal-nutrition/eating-well-being-active-towards-healthy-weight-gain-pregnancy-2010.html>



per total

per week

per trimester

3

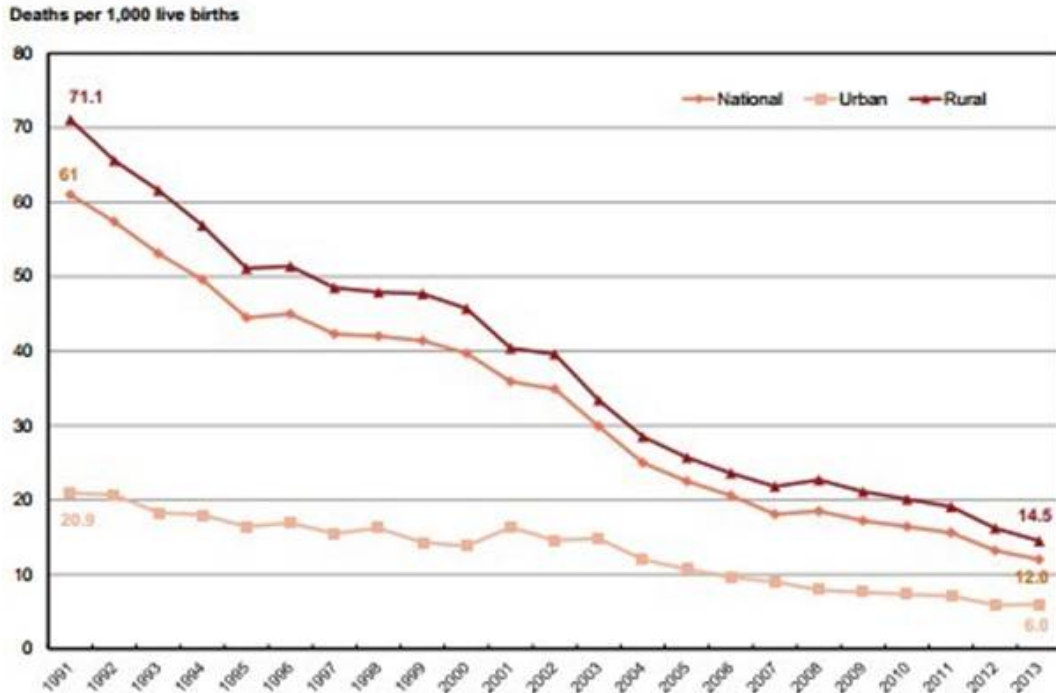
0

3

7

Maternal and child health issues in China

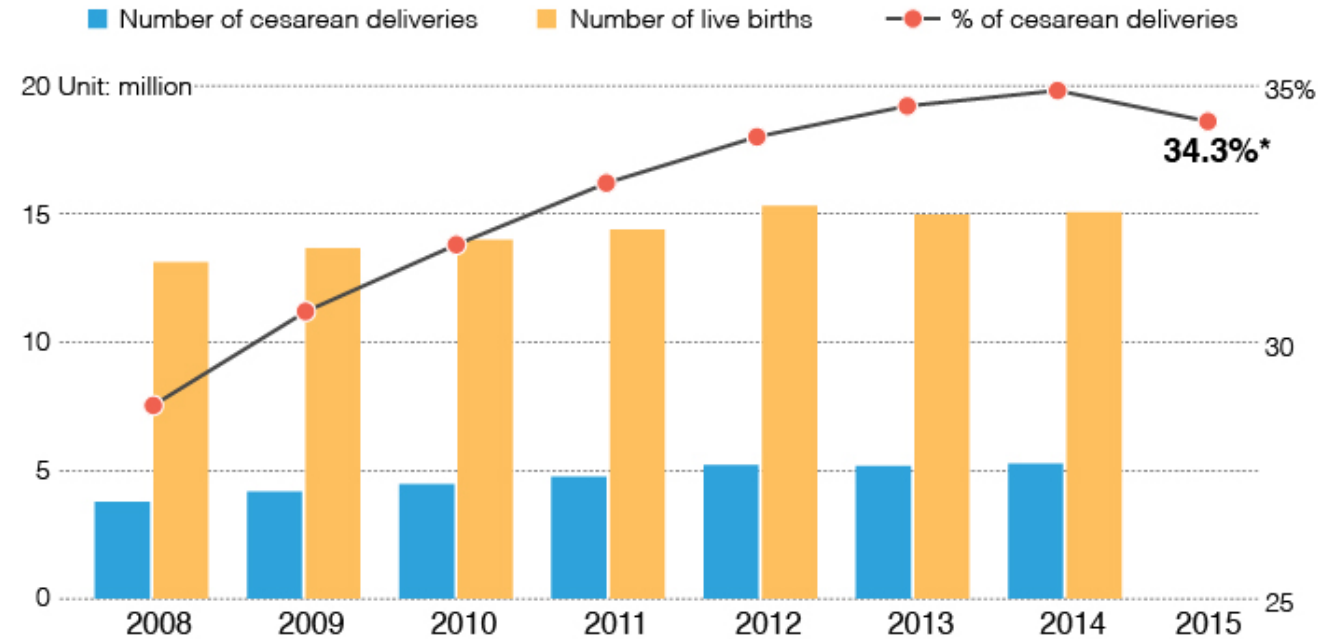
Under-five mortality rate, 1991-2013



Source: National Health and Family Planning Commission, *China Health and Family Planning Statistical Yearbook, 2014*

2018/12/17

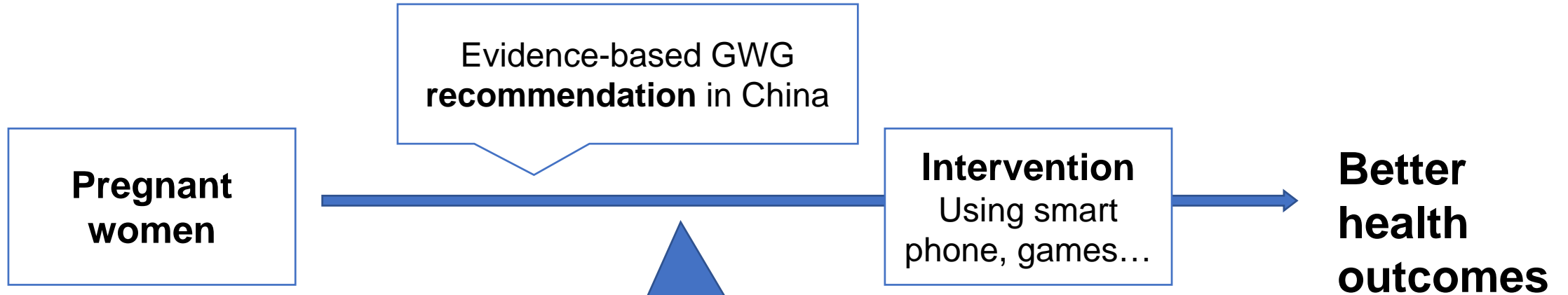
Cesarean Delivery Rate on Chinese Mainland, 2008-2015



Sources: *National Health and Family Planning Commission of China, WHO, *Geographic Variations and Temporal Trends in Cesarean Delivery Rates in China, 2008-2014*, *The Journal of the American Medical Association*

Caixin

A pilot E-health study in China



Why excessive GWG?

- Knowledge, attitude and practices (KAP) of pregnant women and their families
 - Physical exercises
 - Diet / Nutrition

图 1.4 人口密度, 2008年

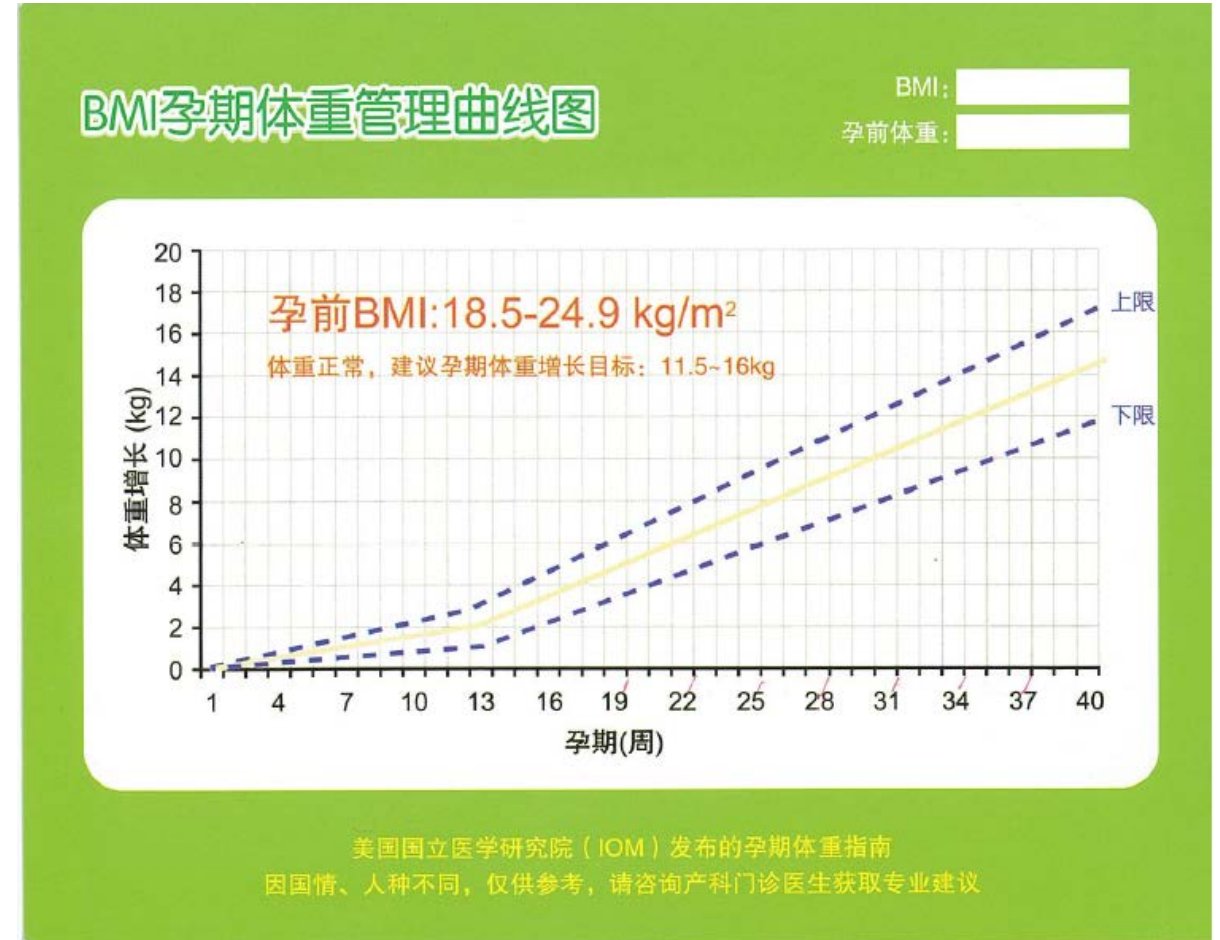


每平方公里的人数
<50
50-199
200-399
400-599
>599
缺失值

资料来源: 国家统计局, 《中国统计年鉴》, 2009年(加工数据)

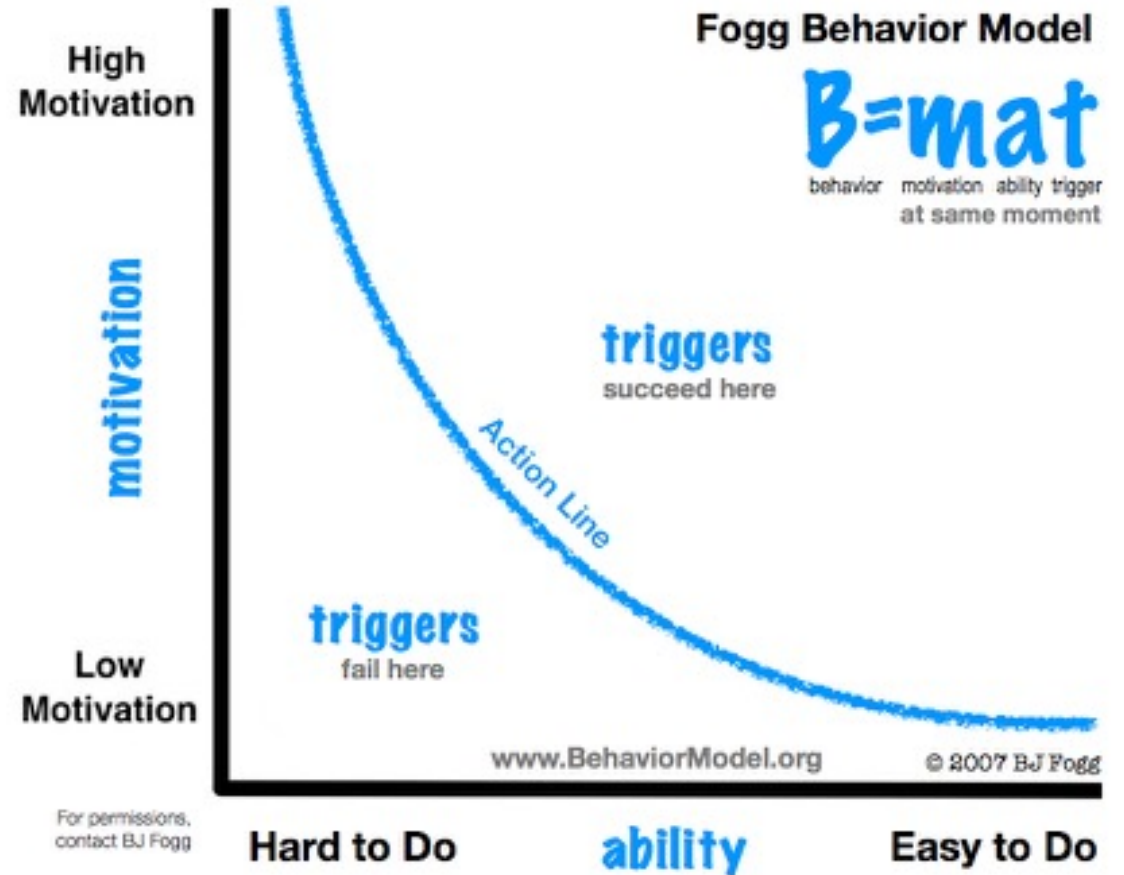
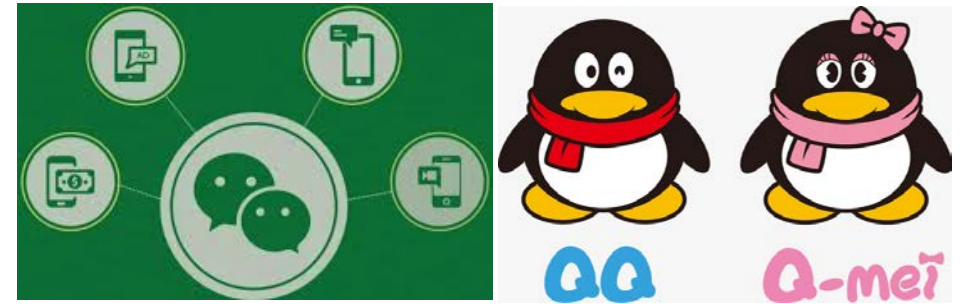
Why excessive GWG?

- Limited health literacy
 - Various information sources with uninsured quality
 - Conservative suggestions from health professionals, with a profound background of lack of trust between physicians and patients
- Family supports but with overconcerns
- Weather, place, time limited...



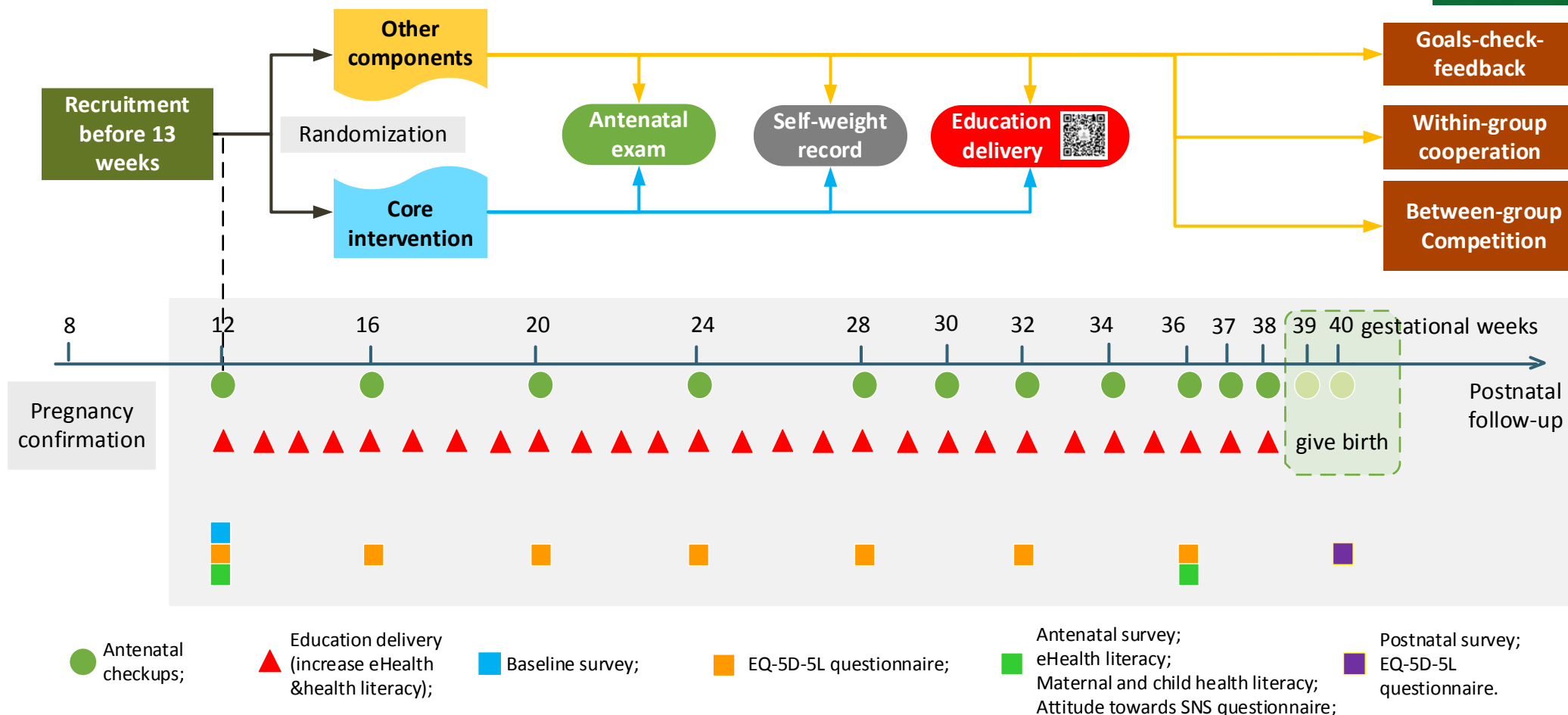
Potential intervention? Behavior change

- Behavior change model
 - Motivation, Ability, Triggers
- Behavior economics:
 - Social games, “My Plate”...
- Challenge:
 - Long-term
 - Family closely related
 - Social capital



<https://www.behaviormodel.org/>

A pilot E-health study in China



Lessons learned for the implementation

- 1. Potential roles of MCH handbook to manage emerging MCH issues such as excessive GWG in China
- 2. Perspective of E-Health and big data for the home-based health records
- 3. Research to inform evidence-based implementation