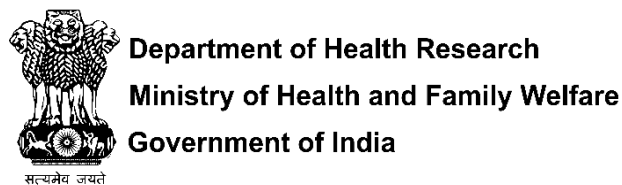


State-Level Trends of Malnutrition Burden and its Indicators 1990-2017

India State-Level Disease Burden Initiative Malnutrition Collaborators

18 September 2019



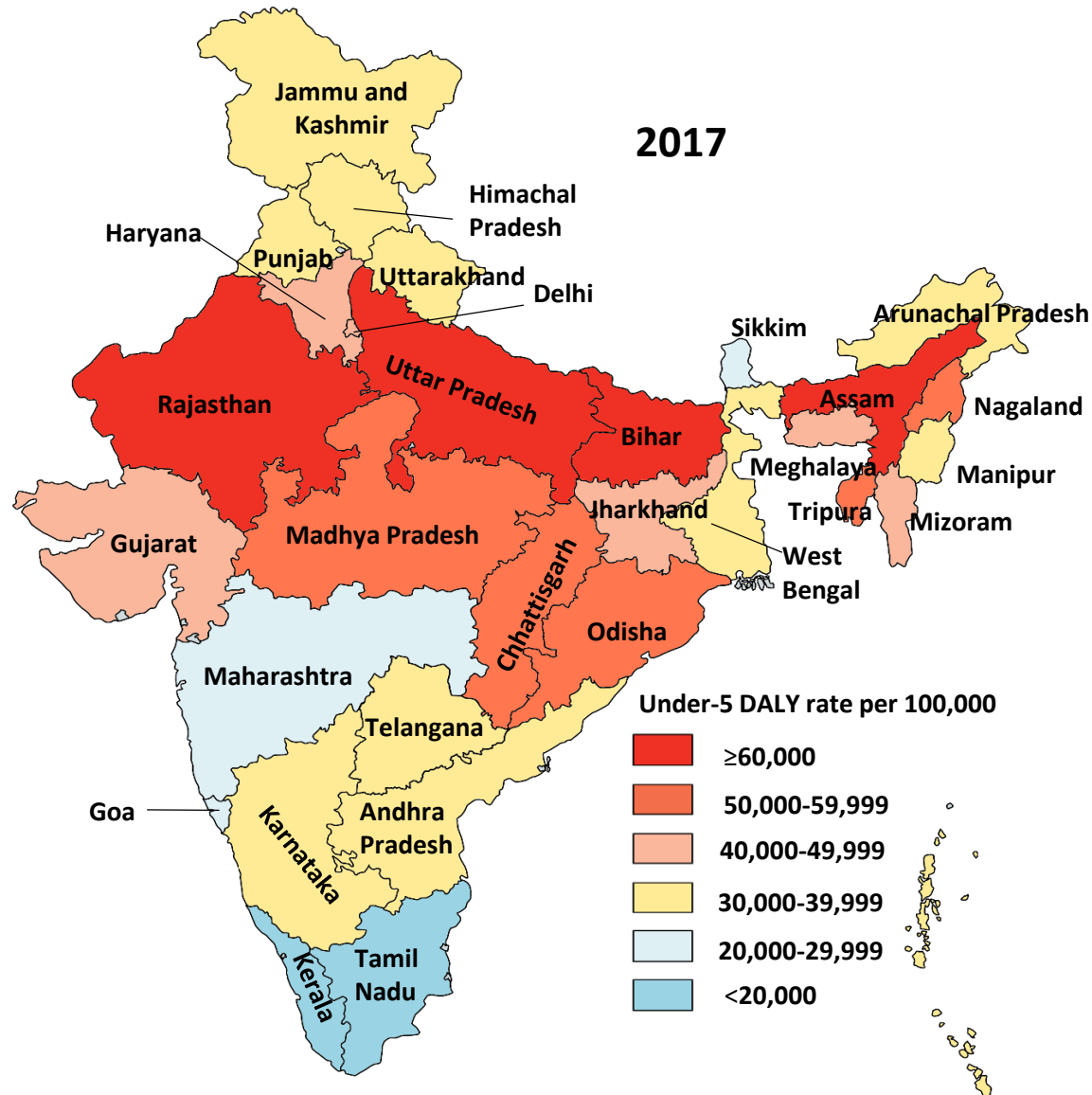
India State-Level Disease Burden Initiative

- Launched in October 2015 as a joint effort of the ICMR, PHFI and IHME, in collaboration with the Ministry of Health and Family Welfare
- Disease burden and risk factors estimation for all states of India as part of the Global Burden of Disease Study (GBD)
- Extensive exercise to engage relevant domain experts, policy makers and other stakeholders across India: 300 collaborators from over 100 institutions across India
- Clear guidelines for collaborators, including primary ownership of India-specific research outputs with domain experts
- Clearly defined roles for ICMR, PHFI and IHME
- Identify major data gaps and contribute to building long-term data systems
- Advisory Board comprising of senior level policy makers and stakeholders

NNM 2022 and WHO/UNICEF 2030 Targets for Malnutrition Indicators

Indicator	National Nutrition Mission 2022 targets	WHO/UNICEF 2030 targets
<i>Low birthweight</i>	2% points ↓ prevalence annually: 2017-2022	30% ↓ prevalence: 2012-2030
<i>Child stunting</i>	Prevalence of 25% by 2022	50% ↓ number of children under-5 who are stunted: 2012-2030
<i>Child underweight</i>	2% points ↓ prevalence annually: 2017-2022	
<i>Child wasting</i>		Prevalence of less than 3% by 2030
<i>Anaemia</i>	3% points ↓ prevalence annually in children under-5 and reproductive age women: 2017-2022	50% ↓ prevalence in reproductive age women from 2012 to 2030
<i>Exclusive breastfeeding</i>		Prevalence of exclusive breastfeeding in the first 6 months of at least 70% by 2030
<i>Child overweight</i>		Prevalence of less than 3% by 2030

Malnutrition Burden in India



7-fold variation between the states in DALY rate

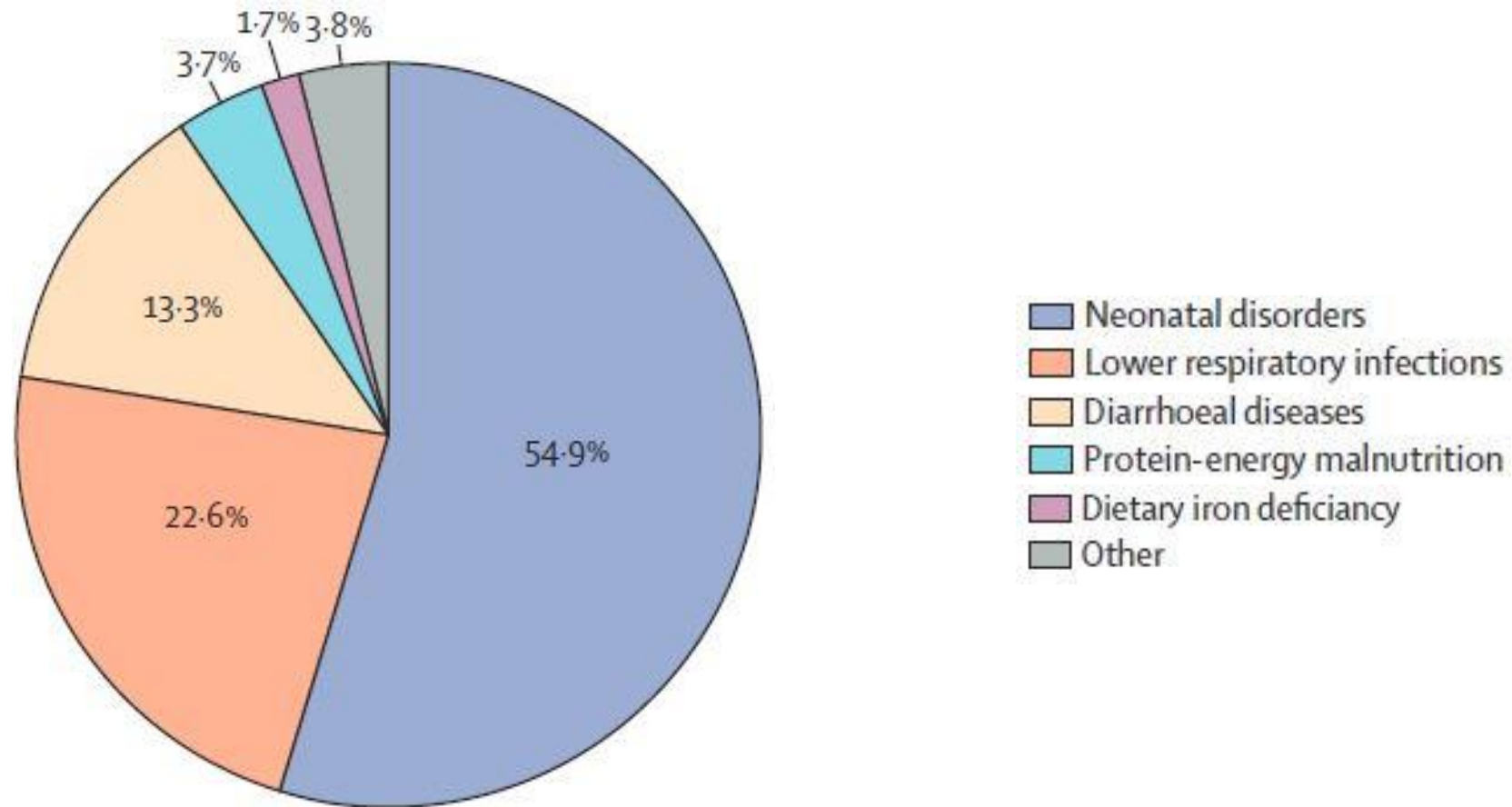
1990 to 2017

- Two-thirds reduction in under-5 DALY rate and death rate attributable to malnutrition
- Proportional contribution of malnutrition to DALYs in all ages reduced from 36% to 17%

2017

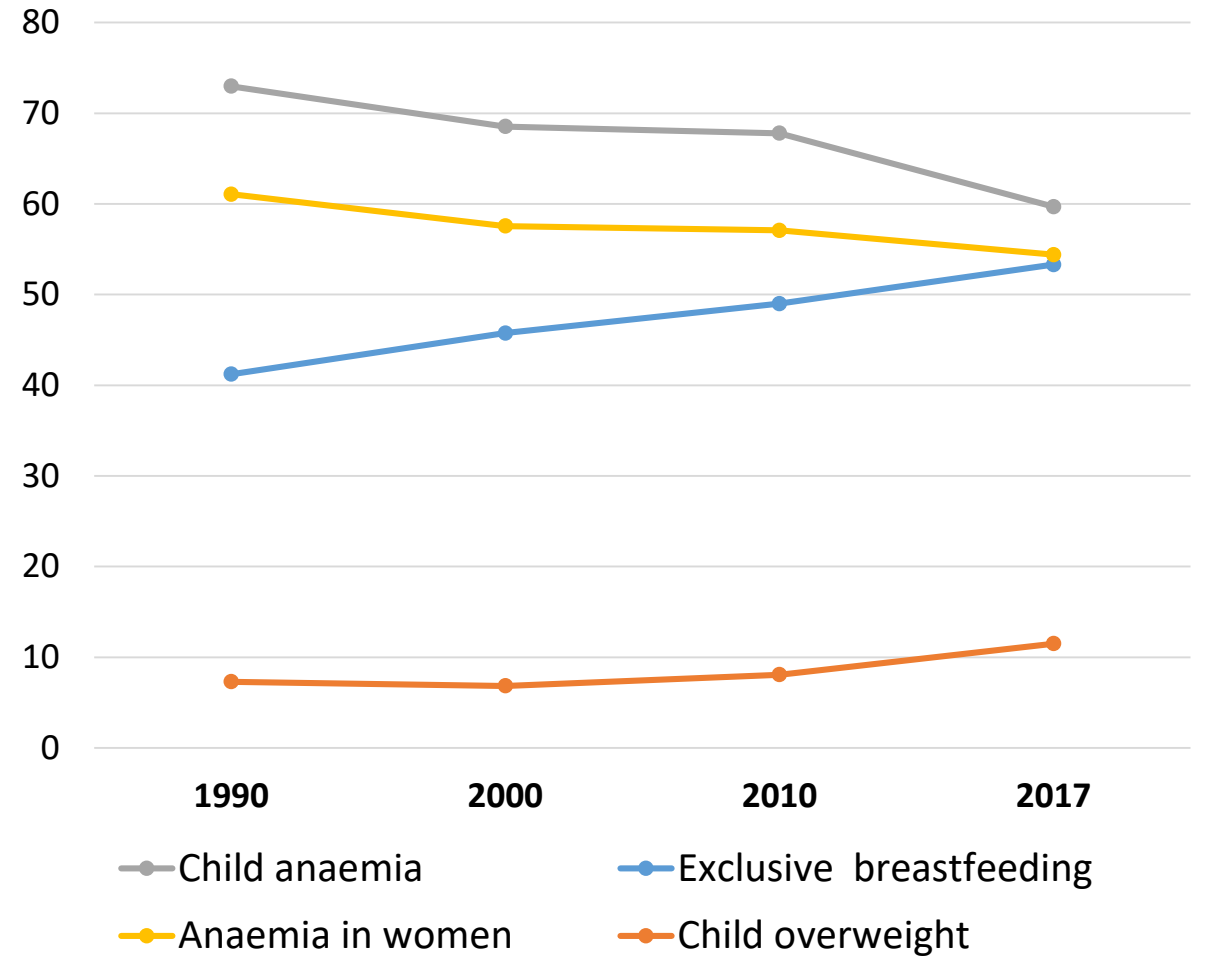
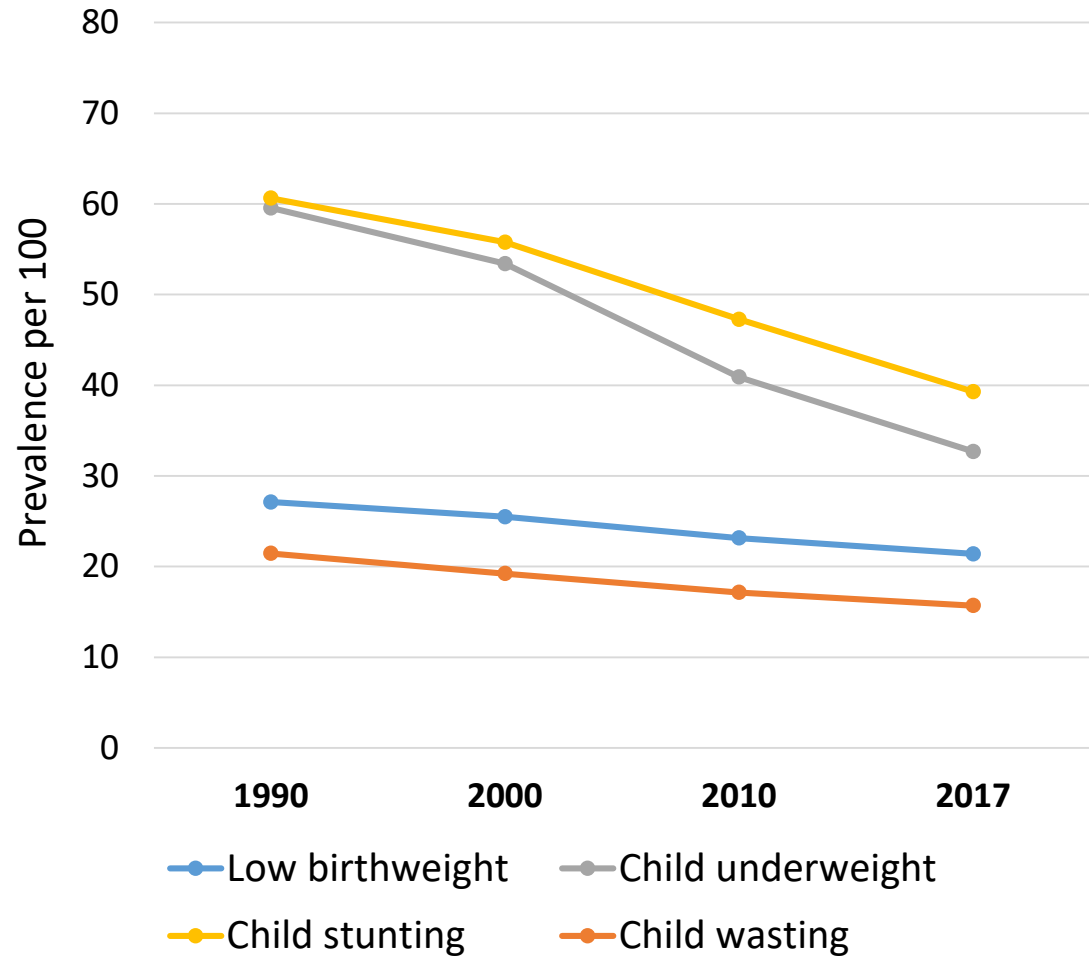
- Two-thirds of total DALYs and deaths in under-5 still attributable to malnutrition
- Malnutrition is the leading risk factor for DALYs in all ages as well

Malnutrition Burden Manifest Through Specific Diseases



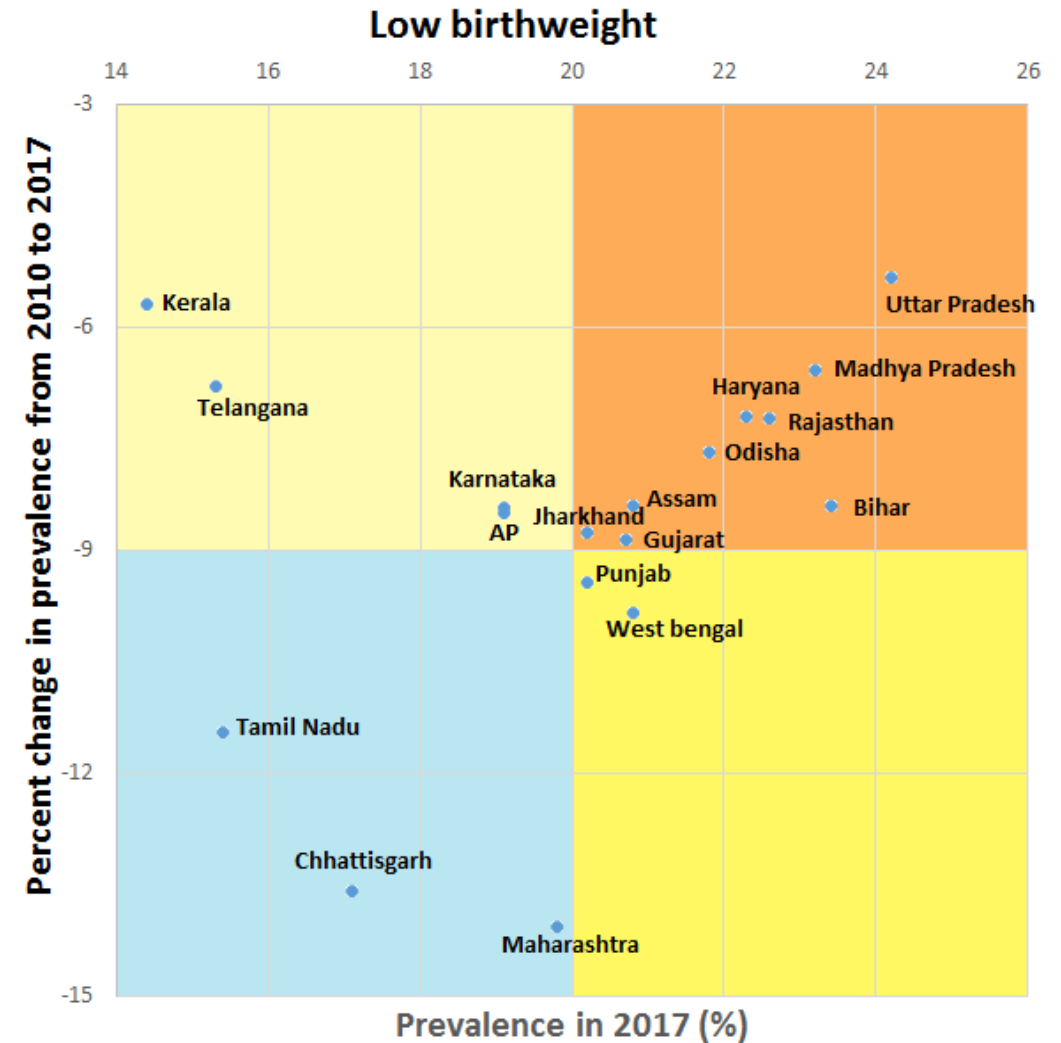
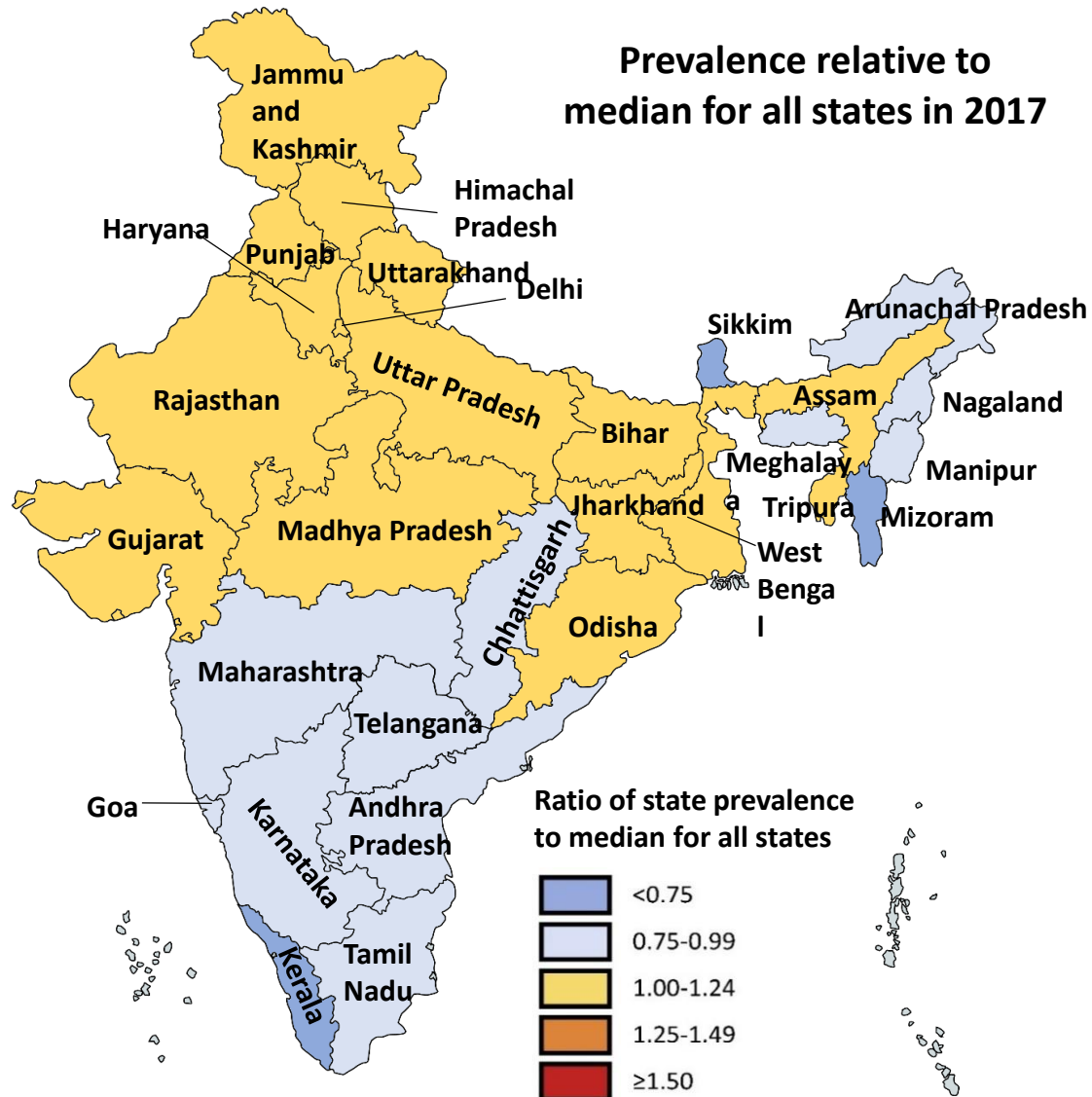
Percent of total malnutrition DALYs from specific diseases in India in 2017

Prevalence Trends of Malnutrition Indicators in India: 1990 to 2017



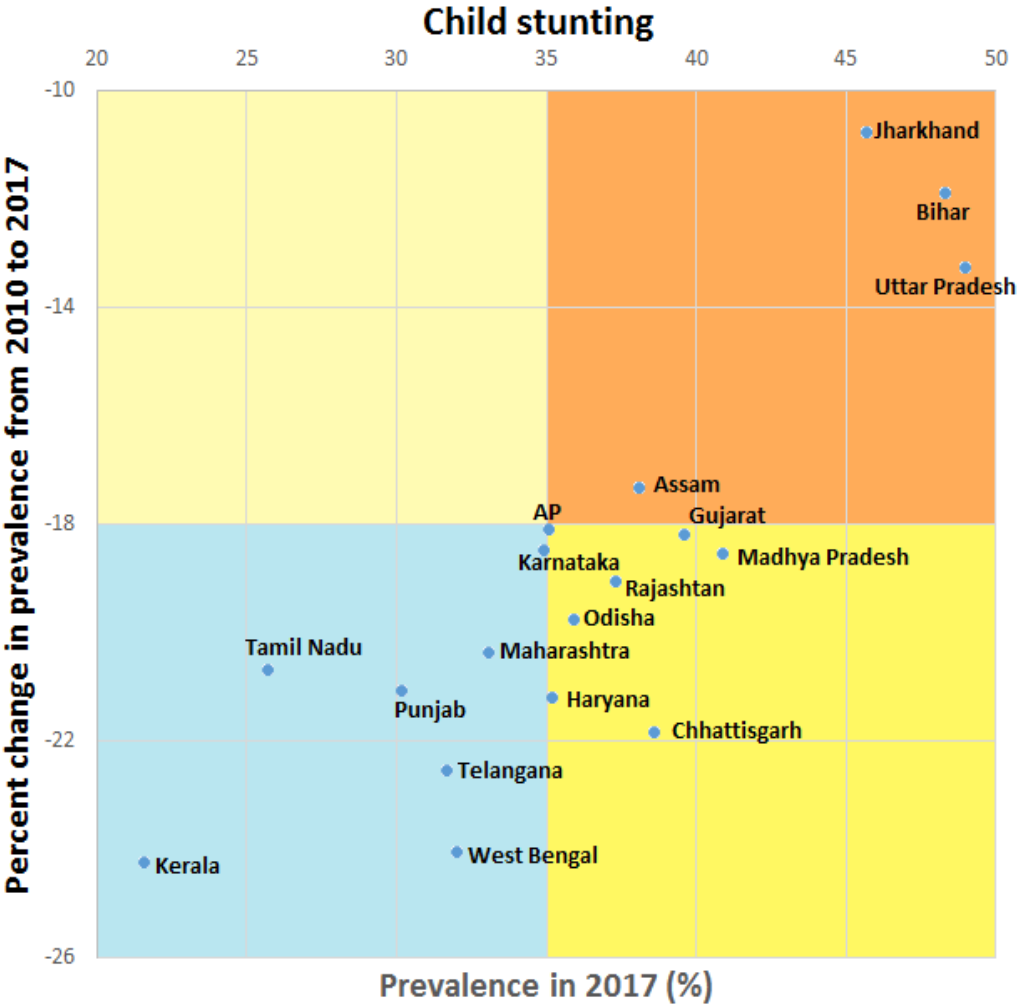
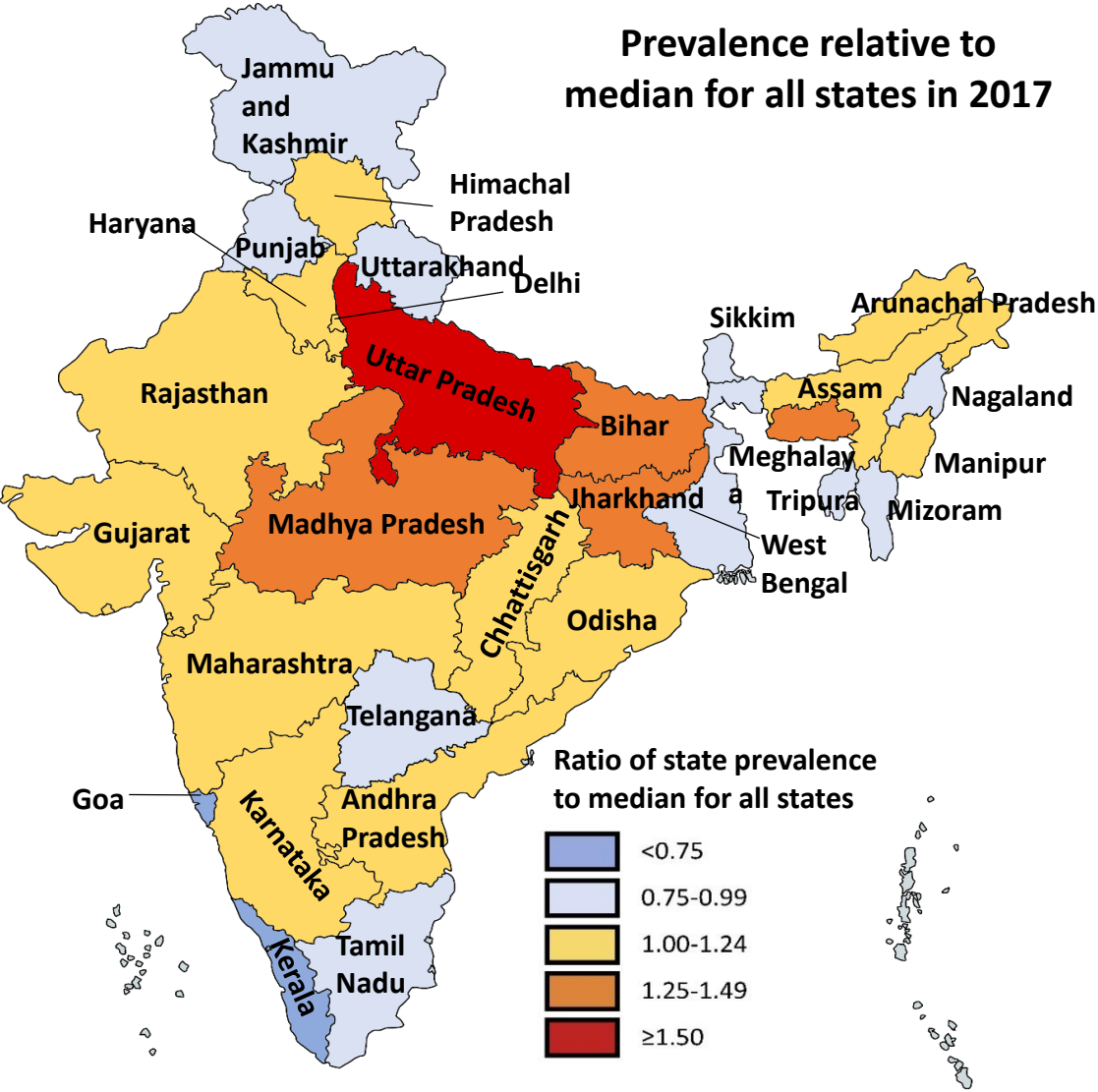
Low birthweight and short gestation largest contributor to child deaths among the malnutrition indicators

Low Birthweight: Prevalence and Rate of Change



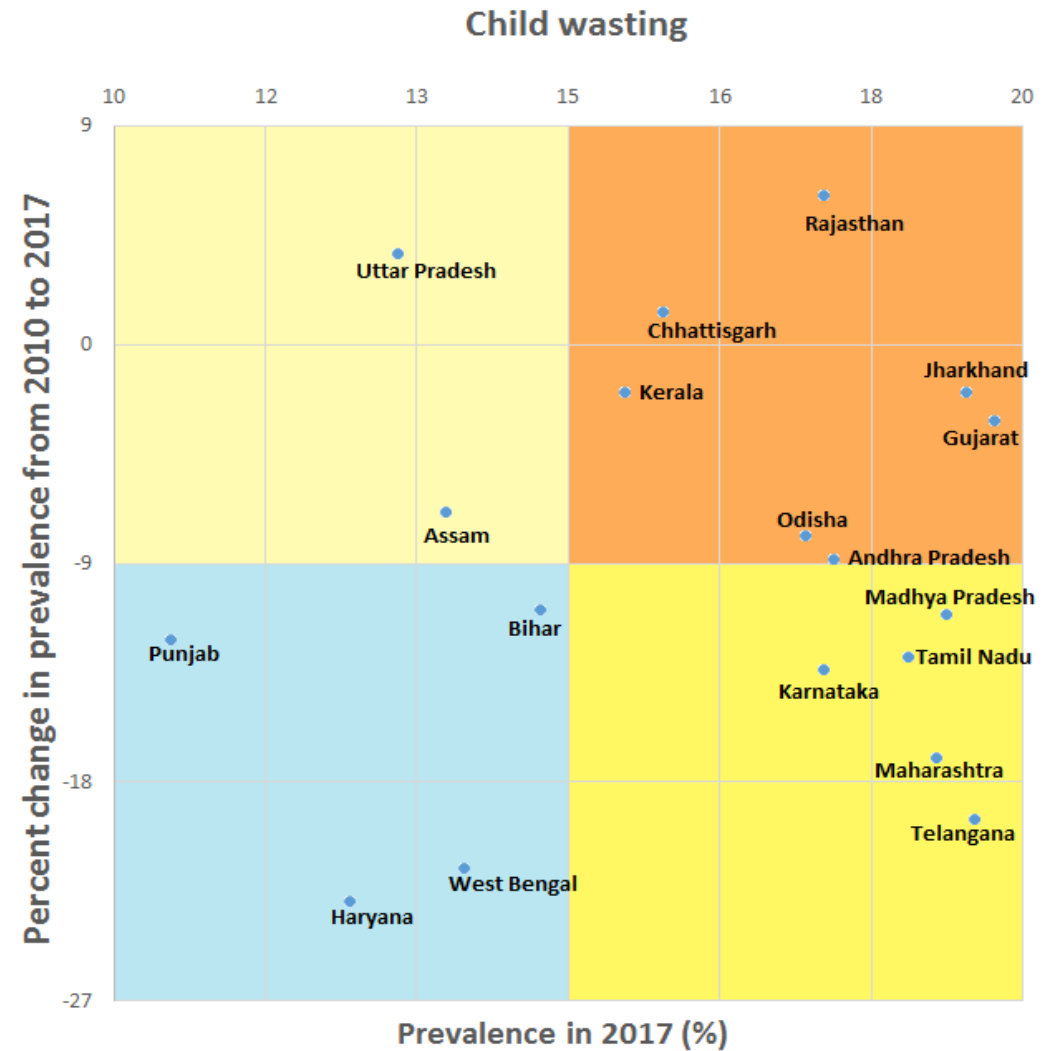
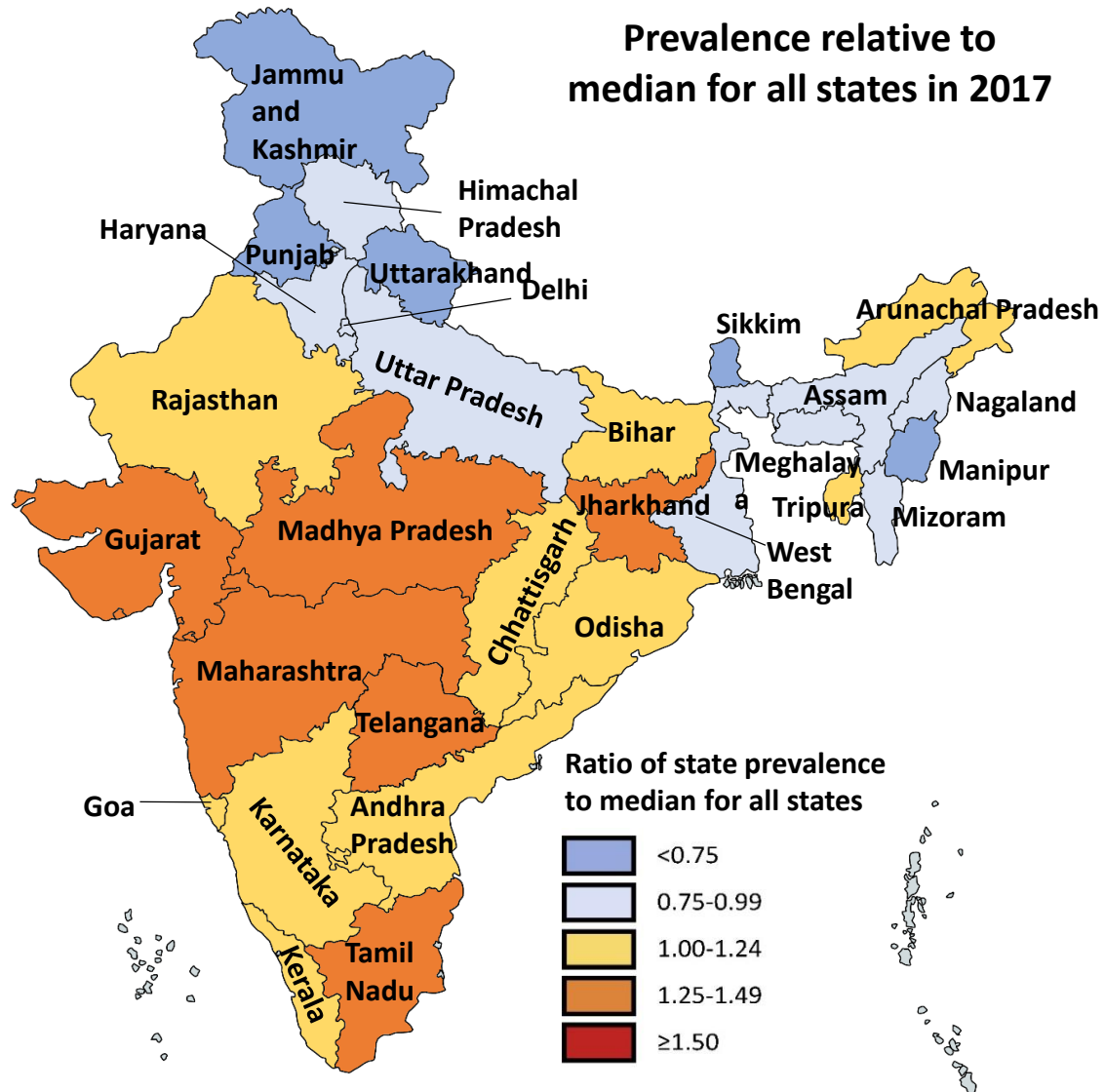
Data shown for states with population over 25 million in 2017

Stunting: Prevalence and Rate of Change



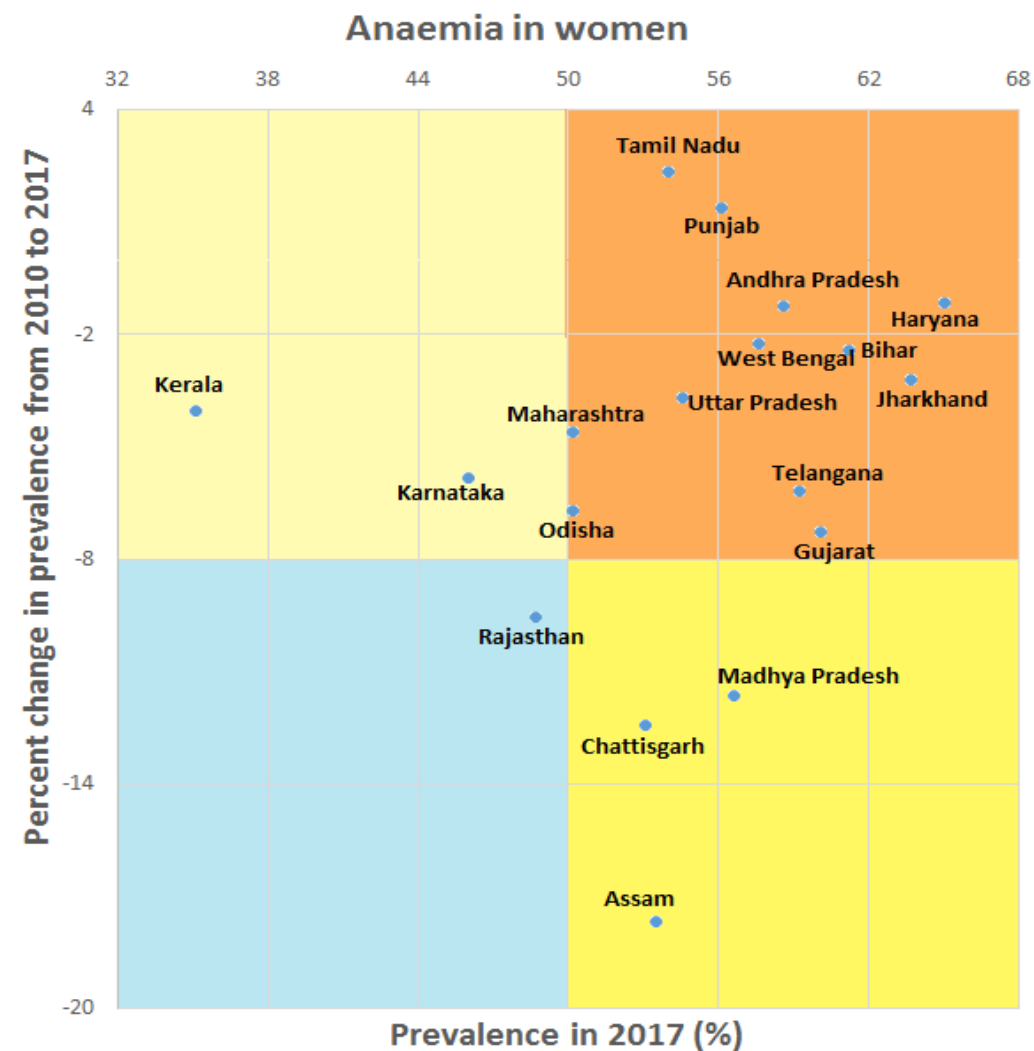
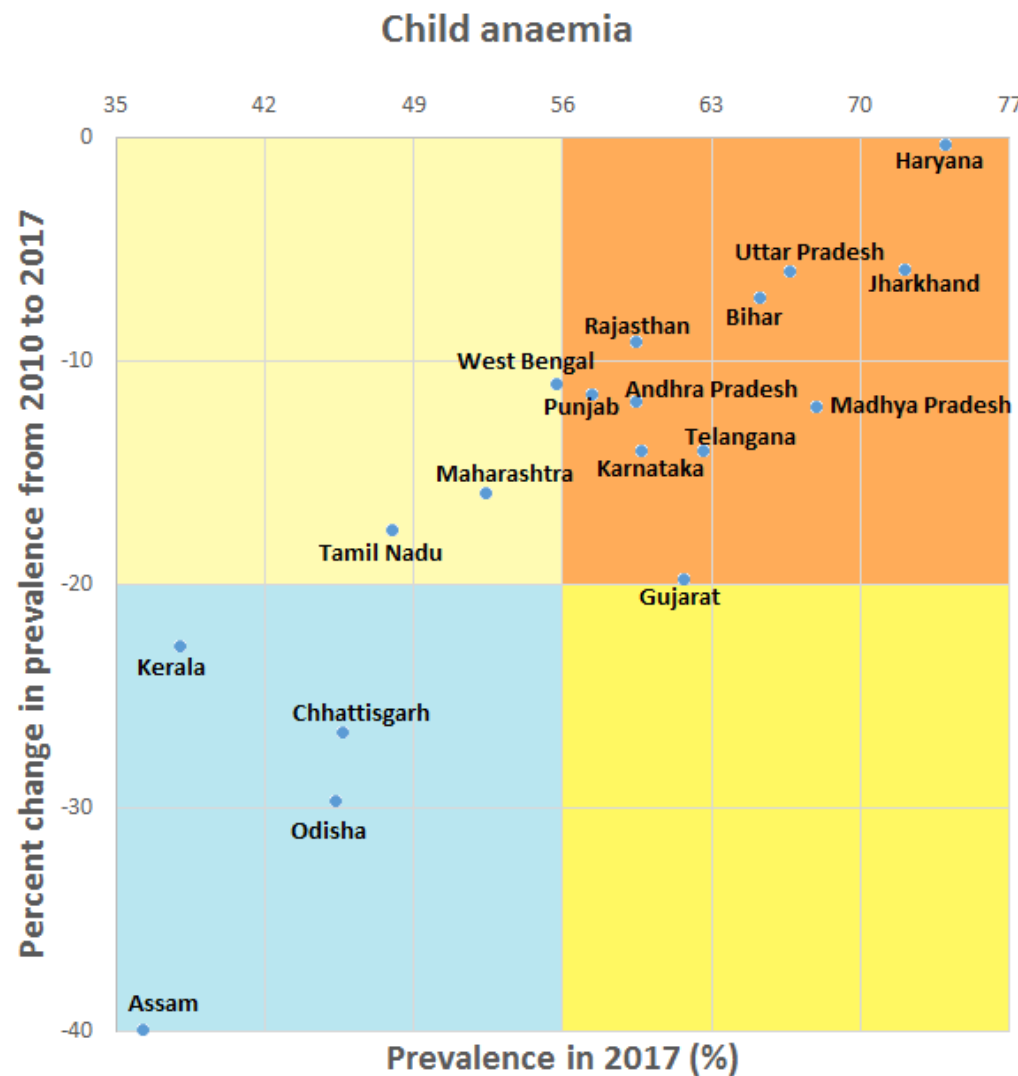
Data shown for states with population over 25 million in 2017

Wasting: Prevalence and Rate of Change



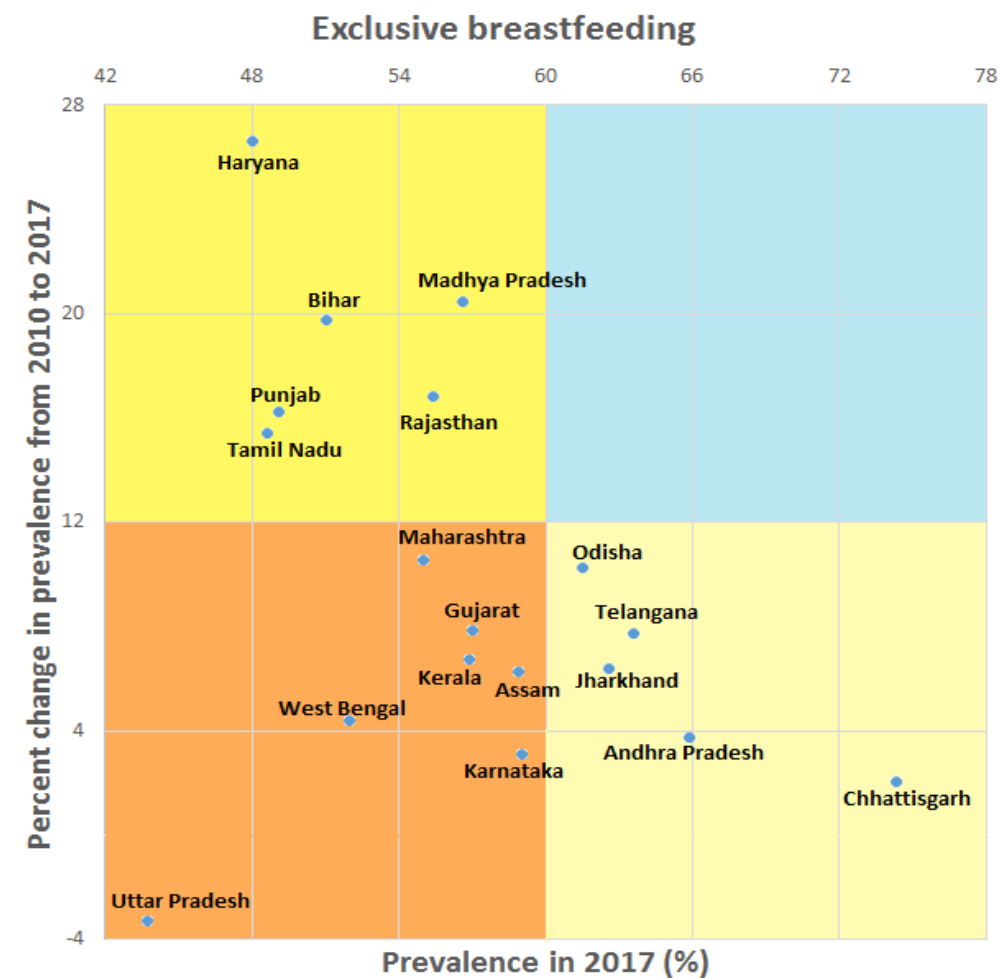
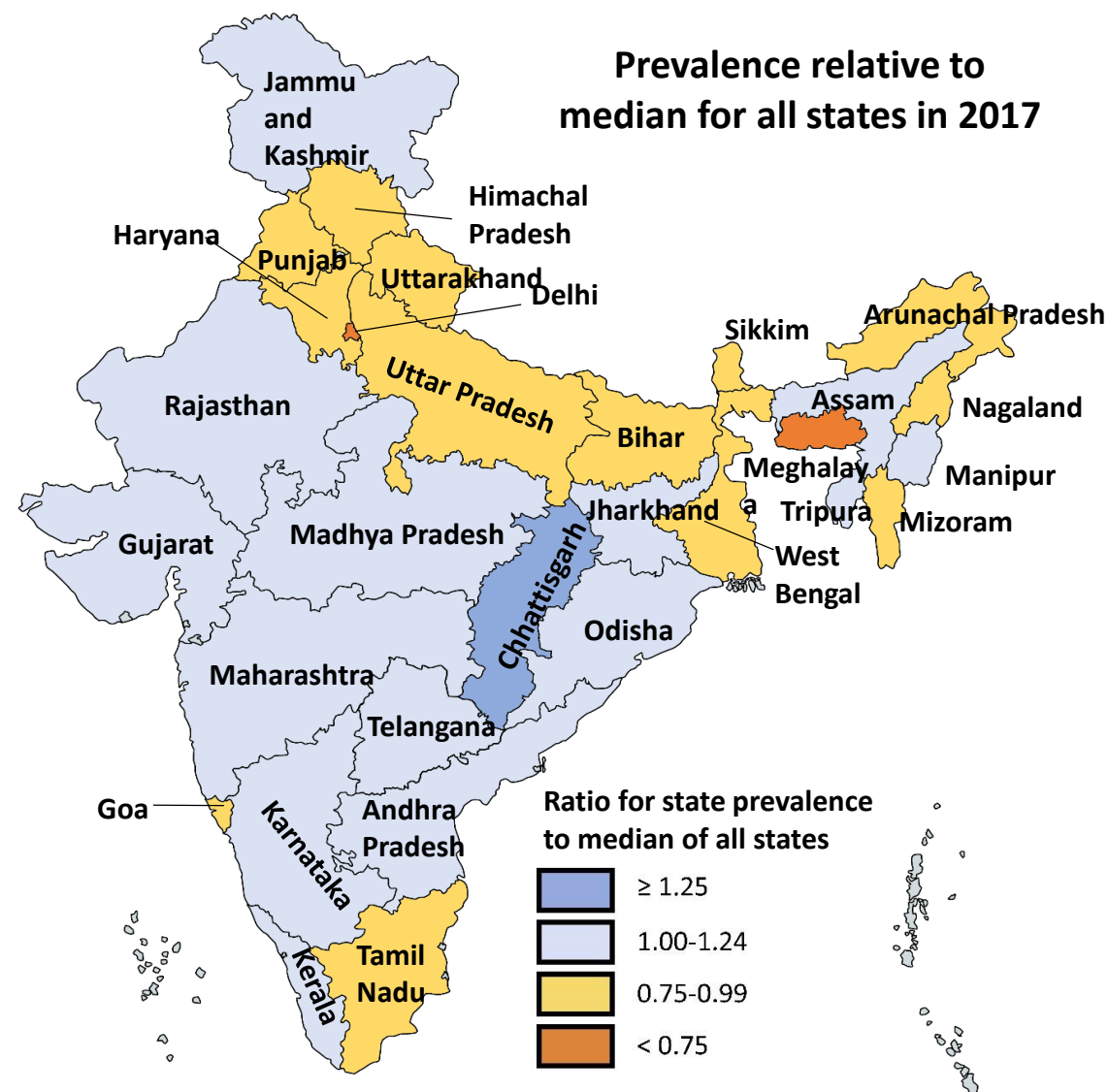
Data shown for states with population over 25 million in 2017

Anaemia: Prevalence and Rate of Change



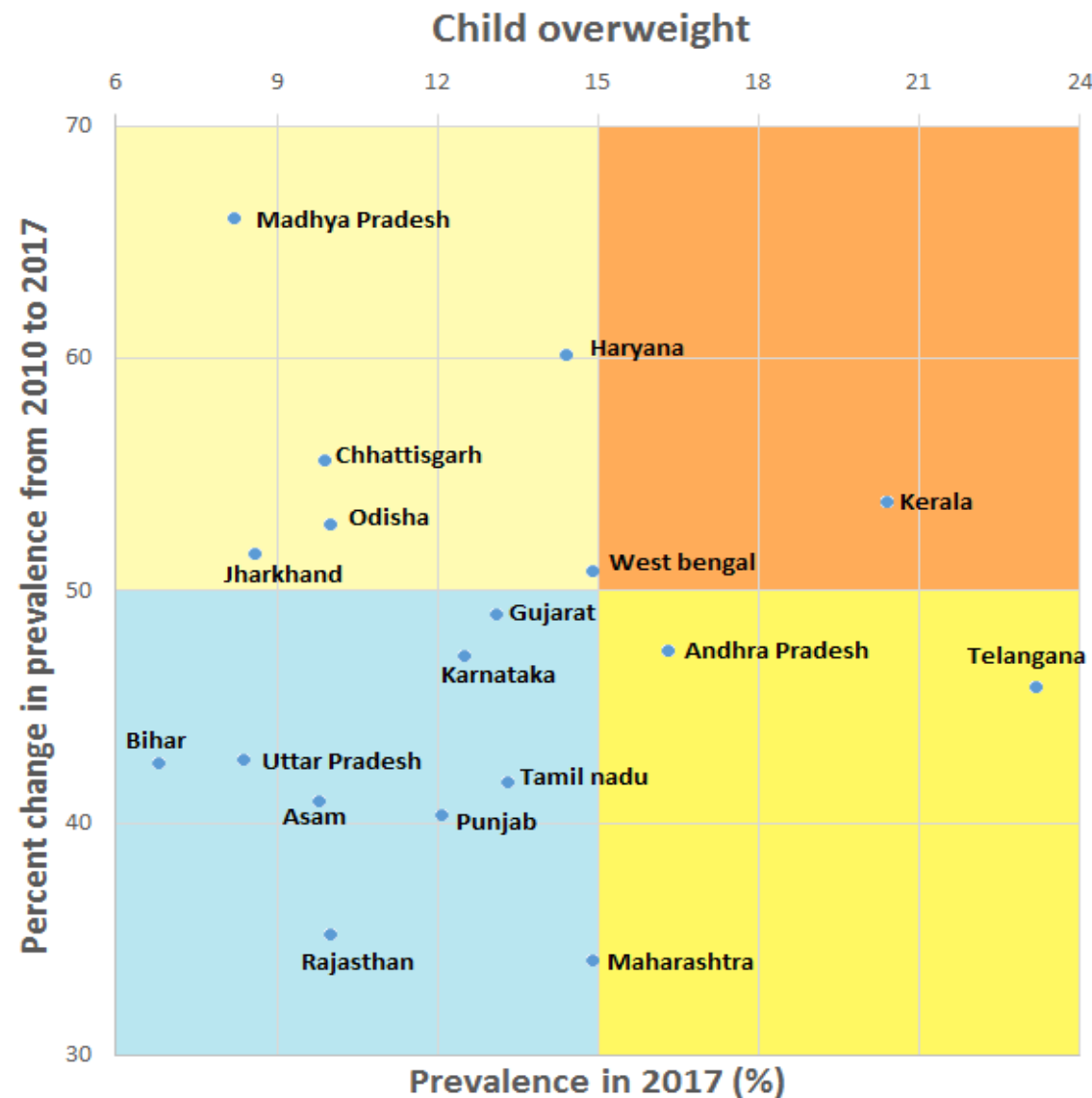
Data shown for states with population over 25 million in 2017

Exclusive Breastfeeding: Prevalence and Rate of Change



Data shown for states with population over 25 million in 2017

Child Overweight: Prevalence and Rate of Change



Data shown for states with population over 25 million in 2017

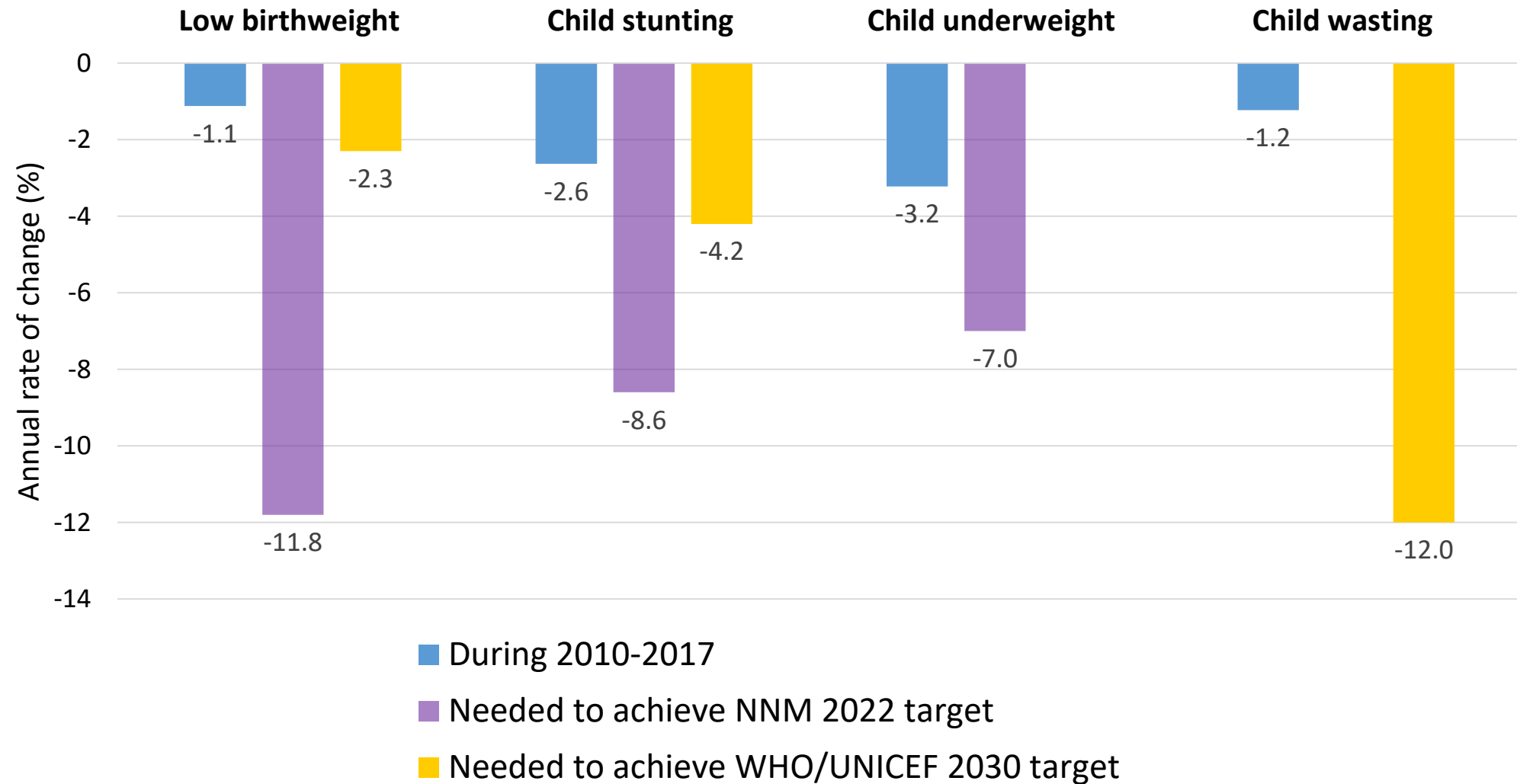
- Child overweight is increasing in a subset of children at 5% per year in India
- It is increasing in all states, with several EAG states having among the highest rates of increase

States Projected to Achieve Targets if the Trends up to 2017 Continue

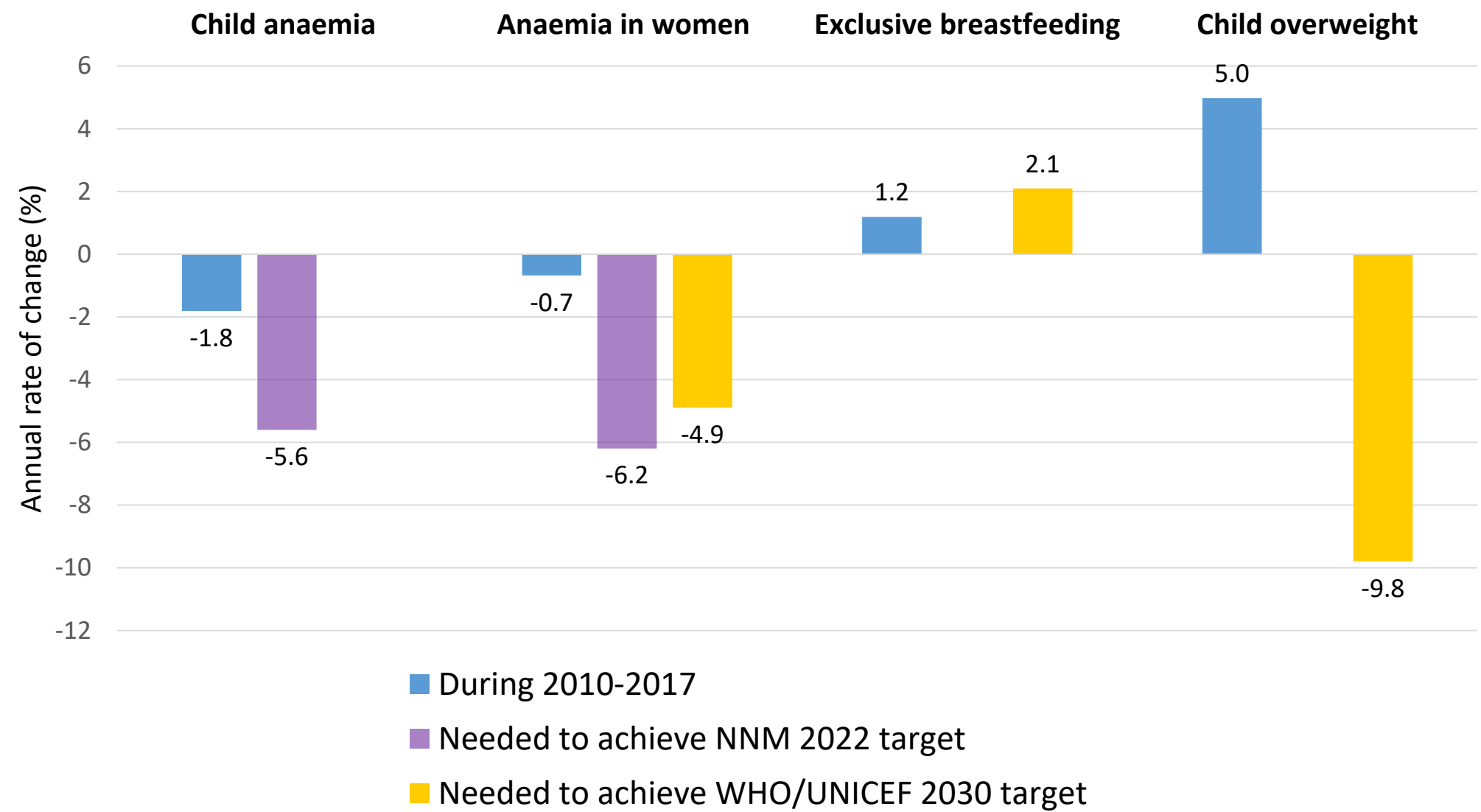
Low birthweight	<i>NNM 2022</i>	None
	<i>WHO/UNICEF 2030</i>	Maharashtra, Sikkim
Child stunting	<i>NNM 2022</i>	Goa, Kerala, Sikkim, Tamil Nadu
	<i>WHO/UNICEF 2030</i>	Kerala, Uttarakhand, West Bengal
Child wasting	<i>WHO/UNICEF 2030</i>	None
Child underweight	<i>NNM 2022</i>	None
Child anaemia	<i>NNM 2022</i>	None
Anaemia in women	<i>NNM 2022</i>	None
	<i>WHO/UNICEF 2030</i>	None
Exclusive breastfeeding	<i>WHO/UNICEF 2030</i>	Andhra Pradesh, Assam, Chhattisgarh, Himachal Pradesh, Jammu & Kashmir, Manipur, Odisha, Telangana, Tripura
Child overweight	<i>WHO/UNICEF 2030</i>	None

With POSHAN Abhiyaan efforts since last year the number of states that would achievement targets is expected to higher than projected above with past trends

Annual Rate of Change 2010-2017 in India versus Targets



Annual Rate of Change 2010-2017 in India versus Targets



Summary

- Child mortality attributable to malnutrition has dropped by two-thirds since 1990
- The proportional contribution of malnutrition to disease burden in all ages together has dropped by half since 1990
- However, malnutrition continues to be the predominant underlying risk for child mortality and the leading risk for disease burden in all ages
- The prevalence of malnutrition indicators varies considerably across the states, as does the rate of improvement
- Low birthweight needs particular attention because of its large contribution to child mortality and slow rate of improvement
- The trends reported in this paper enable understanding of the additional effort needed in each state to achieve the national and global targets for malnutrition reduction
- Using multiple sources of data to arrive at composite estimates of malnutrition trends is likely to provide more robust findings than obtained with use of single sources of data

India State-Level Disease Burden Initiative Malnutrition Collaborators

Indian Council of Medical Research, New Delhi; World Health Organization, Geneva; National Institute of Nutrition, Indian Council of Medical Research, Hyderabad; Public Health Foundation of India, Gurugram; Institute for Health Metrics and Evaluation, University of Washington, Seattle; Department of Paediatrics, All India Institute of Medical Sciences, New Delhi; Department of Paediatrics, Maulana Azad Medical College, New Delhi; Department of Community Medicine, Mahatma Gandhi Institute of Medical Sciences, Wardha; School of Health Sciences, Savitribai Phule Pune University, Pune; Ministry of Health and Family Welfare, Government of India, New Delhi; Centre for Maternal and Newborn Health, Liverpool School of Tropical Medicine, Liverpool; Department of Pediatrics, King George's Medical University, Lucknow; Nagpur INTERGROWTH-21st Research Centre, Ketkar Hospital, Nagpur; Indian Institute of Public Health—Delhi, Public Health Foundation of India, Gurugram; WHO India Country Office, New Delhi; Bodoland University, Kokrajhar; Regional Office for South-East Asia, World Health Organization, New Delhi



Department of Health Research
Ministry of Health and Family Welfare
Government of India



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