Epidemiological and Health Patterns in India and new policy responses

Arun Balachandran (University of Groningen, The Netherlands)

Aneesha Chitgupi (Institute for Social and Economic Change, Bengaluru)

Structure of presentation

- Health and epidemiological patterns in India
- Health financing patterns in India
- Policy initiatives

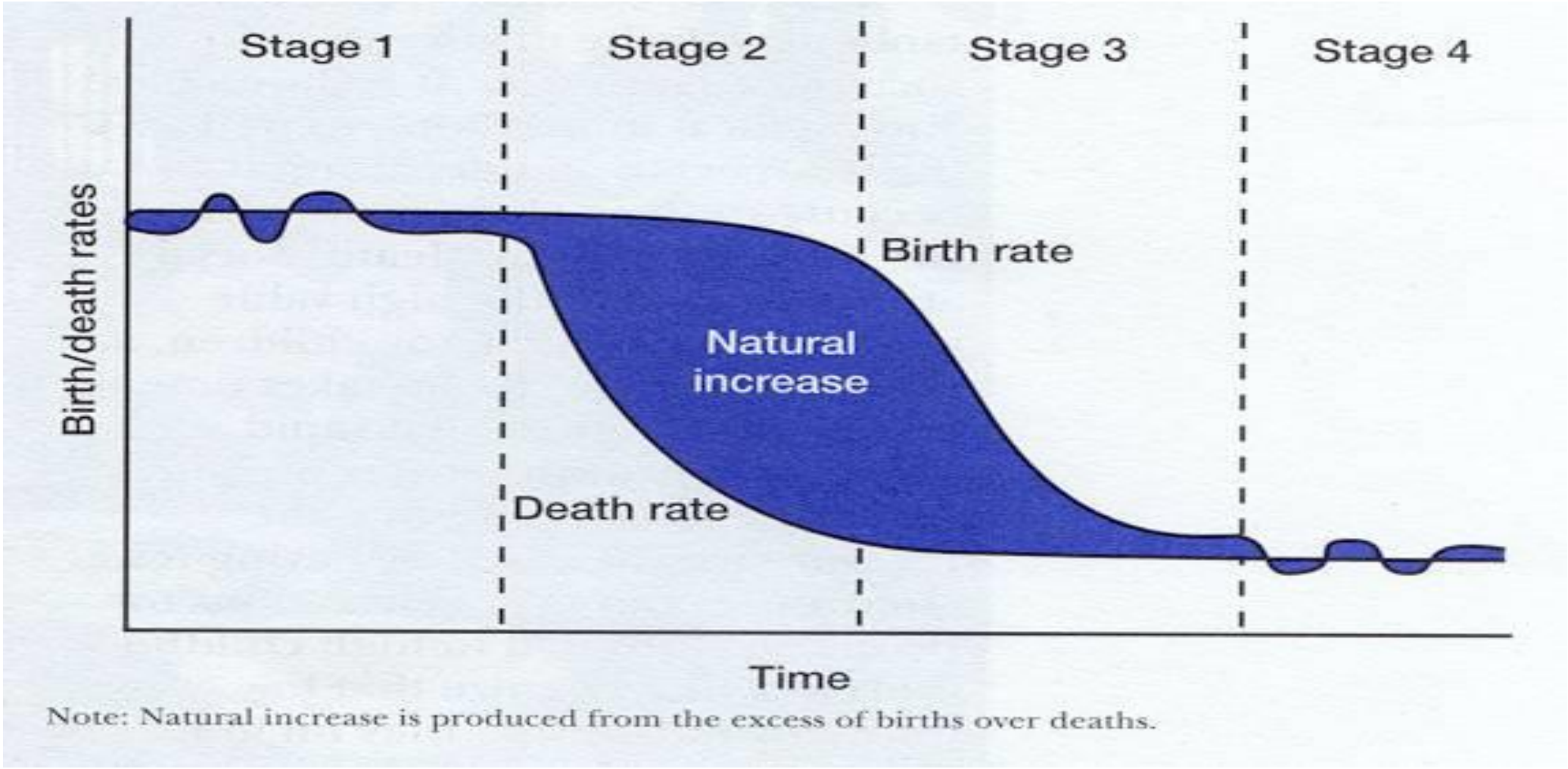
❑Motivation

❑Sources

Major health and epidemiological transitions

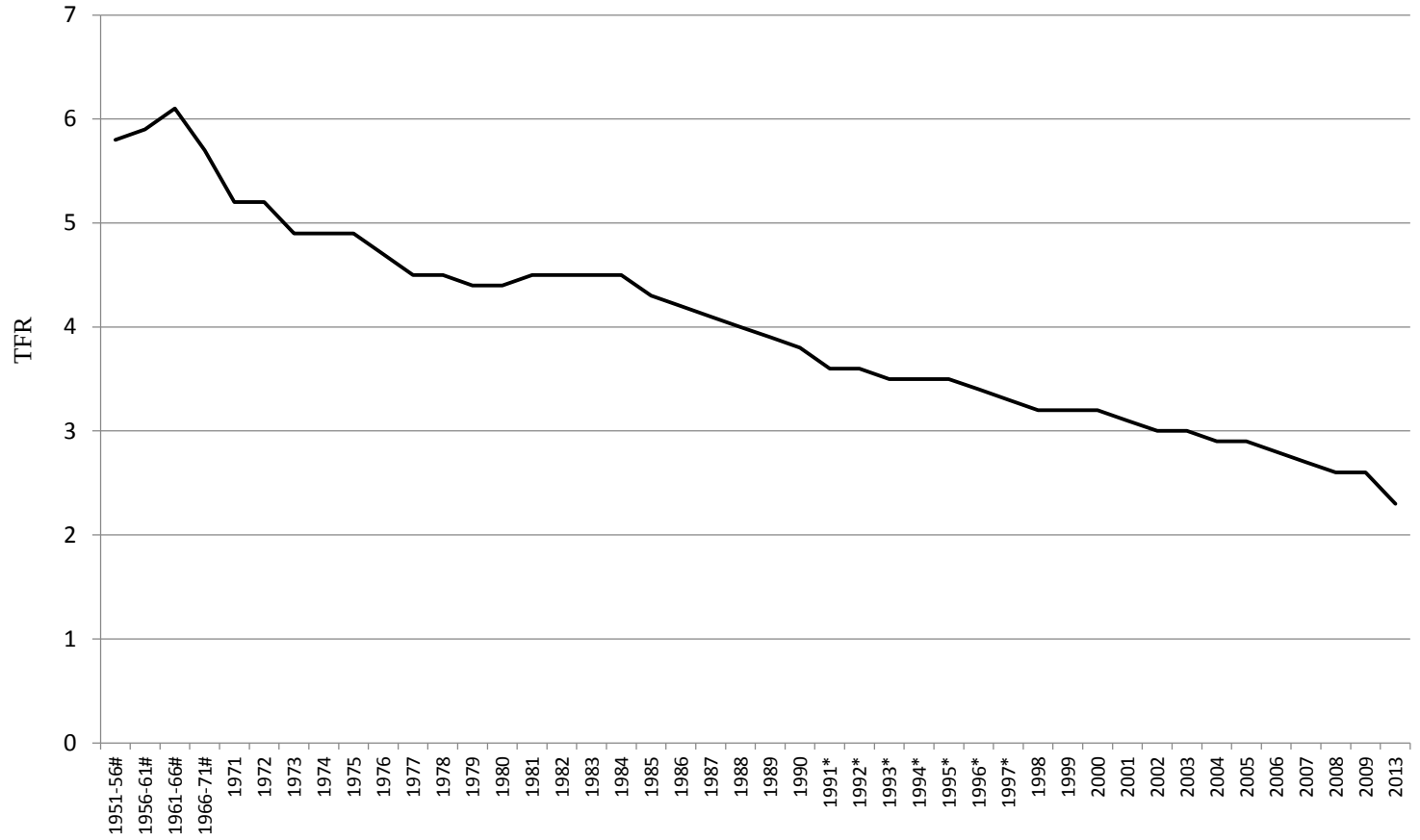
- DEMOGRAPHIC TRANSITION - changes in population size and distribution : birth and death rates and population pyramids
- EPIDEMIOLOGICAL TRANSITION - move from a disease pattern dominated by infectious diseases to one characterized by non-communicable diseases (cancers, cardiovascular and injury).
- HEALTH TRANSITION - changes in health status plus changes in economic, socio-demographic and environmental health determinants

The Demographic Transition



Source: Joseph A. McFalls, Jr. Population: A Lively Introduction. Third edition. Population Reference Bureau 53(3); 1998: 39

Total Fertility Rate, India (2.3 in 2016)

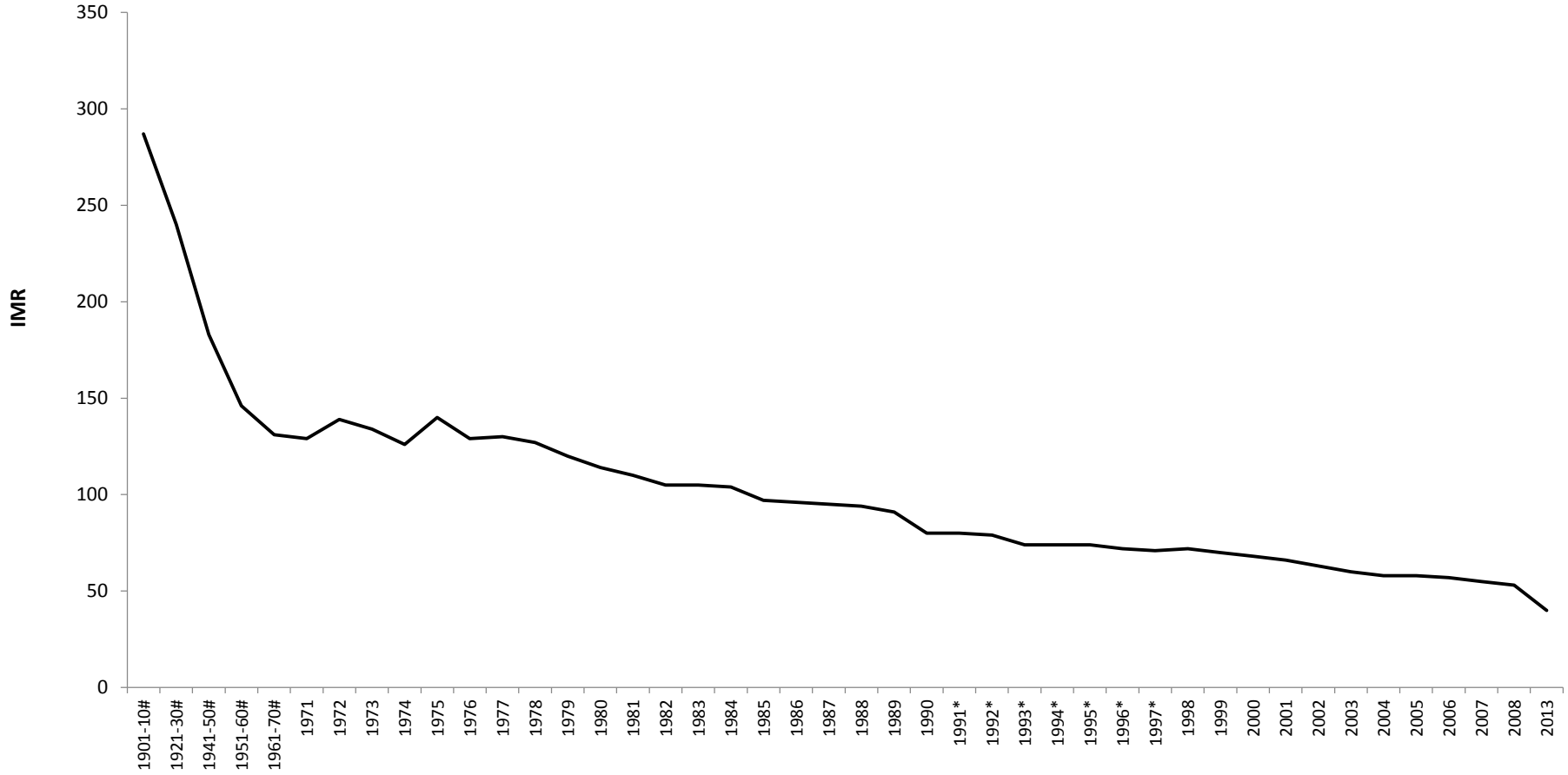


Total Fertility Rate in India- Across time and States

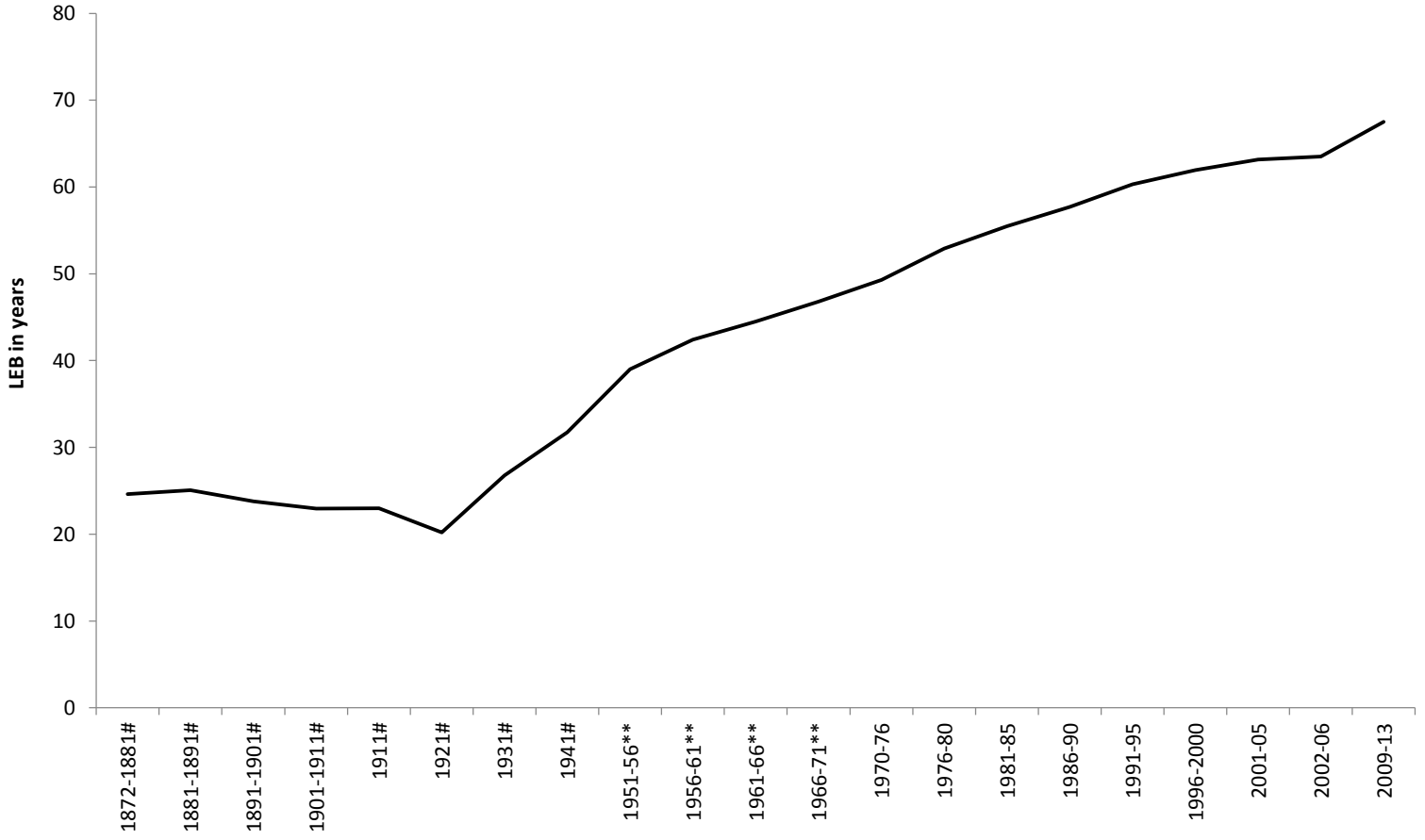
TFR range		1951-66	1971	1981	1991	2001	2011	2013
High	More than 6	Gujarat, Haryana, M.P., Orissa, Punjab, U.P., Rajasthan	Haryana, U.P.					
	5.1-6	A.P., Karnataka, Maharashtra, Kerala	Gujarat, Assam, M.P., Orissa, Punjab, Rajasthan	Bihar, M.P., Rajasthan, U.P.	U.P.			
	4.1-5	T.N.	A.P., Karnataka, Maharashtra, Orissa, Kerala	Assam, Gujarat, Orissa, W.B.	Bihar, M.P., Rajasthan,	U.P. Bihar		
	3.1-4		T.N.	A.P., Karnataka, Maharashtra, Punjab, T.N.	Assam, Gujarat, Karnataka, Orissa, Punjab, W.B.	Haryana, M.P., Rajasthan	Bihar, U.P. M.P.	Bihar, U.P.
Medium	2.2-3			Kerala	A.P., Maharashtra T.N.	Assam, A.P., Gujarat, Karnataka, Orissa, Maharashtra, W.B.	Assam, Chattisgarh, Gujarat, Haryana, Jharkhand, Odisha, Rajasthan	Assam, Chhattisgarh, Gujarat, Haryana, Jharkhand, M.P., Odisha
Below Replacement level	Less than or equal to 2.1				Kerala	T.N., Kerala	A.P., Delhi, H.P., J & K, Karnataka, Kerala, Maharashtra, Punjab, T.N., , W.B.	A.P., Delhi, H.P., J&K, Karnataka, Kerala, Maharashtra, Punjab, T.N., W.B.

Source: James and Goli (2018)

Infant Mortality Rate, India (32 in 2016)

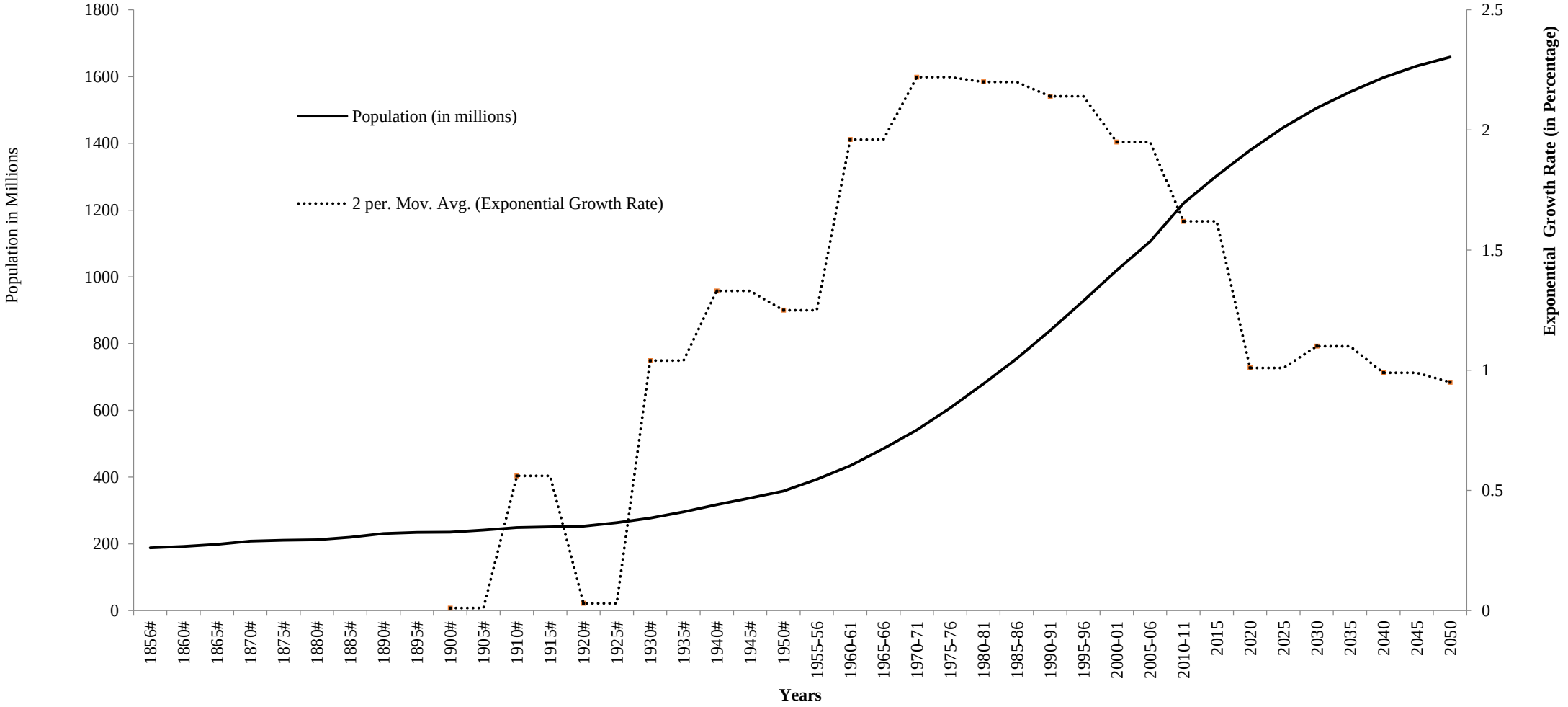


Life Expectancy, India
(66.9 for males and 70 for females in2011-15)

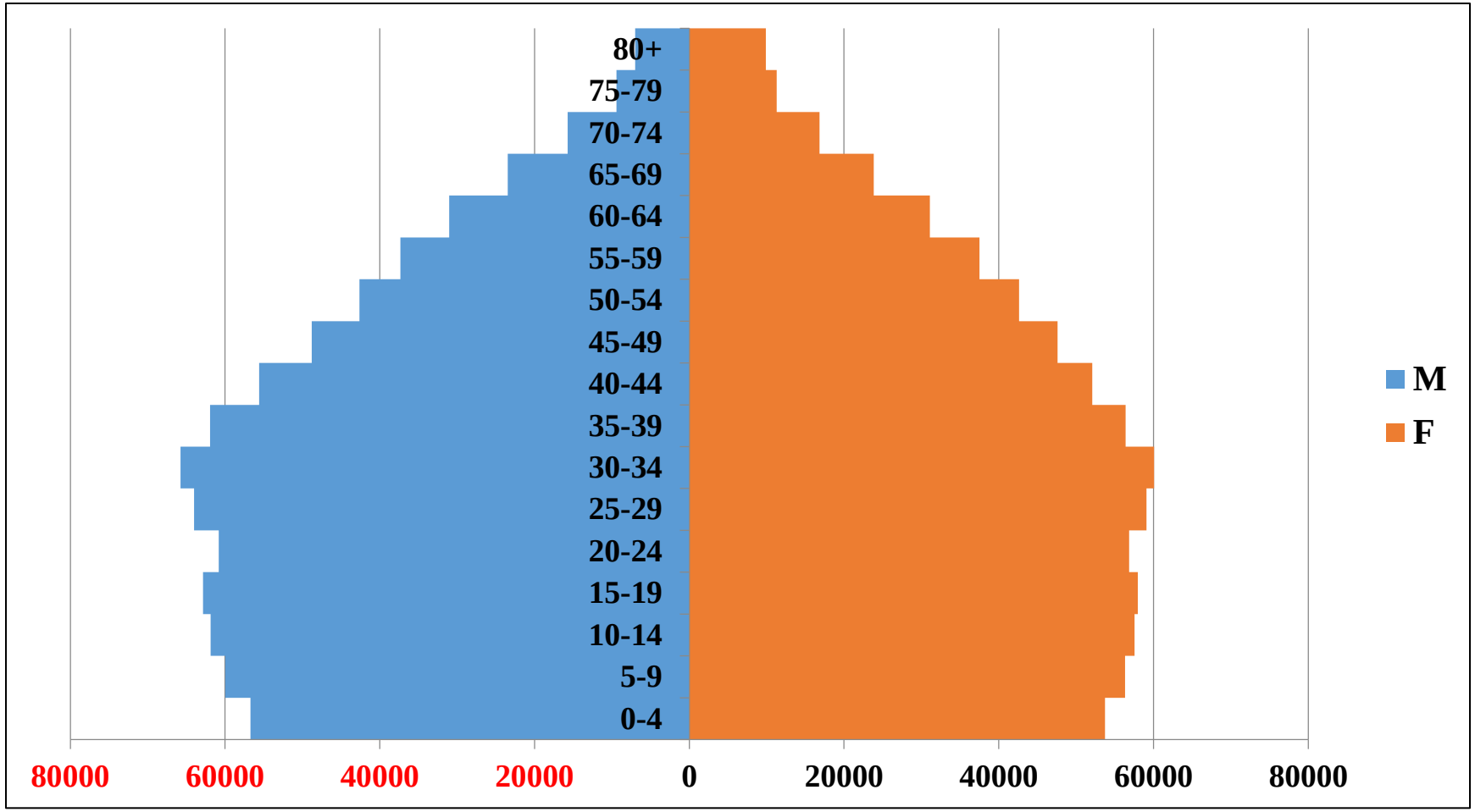


Age Structure Change, India

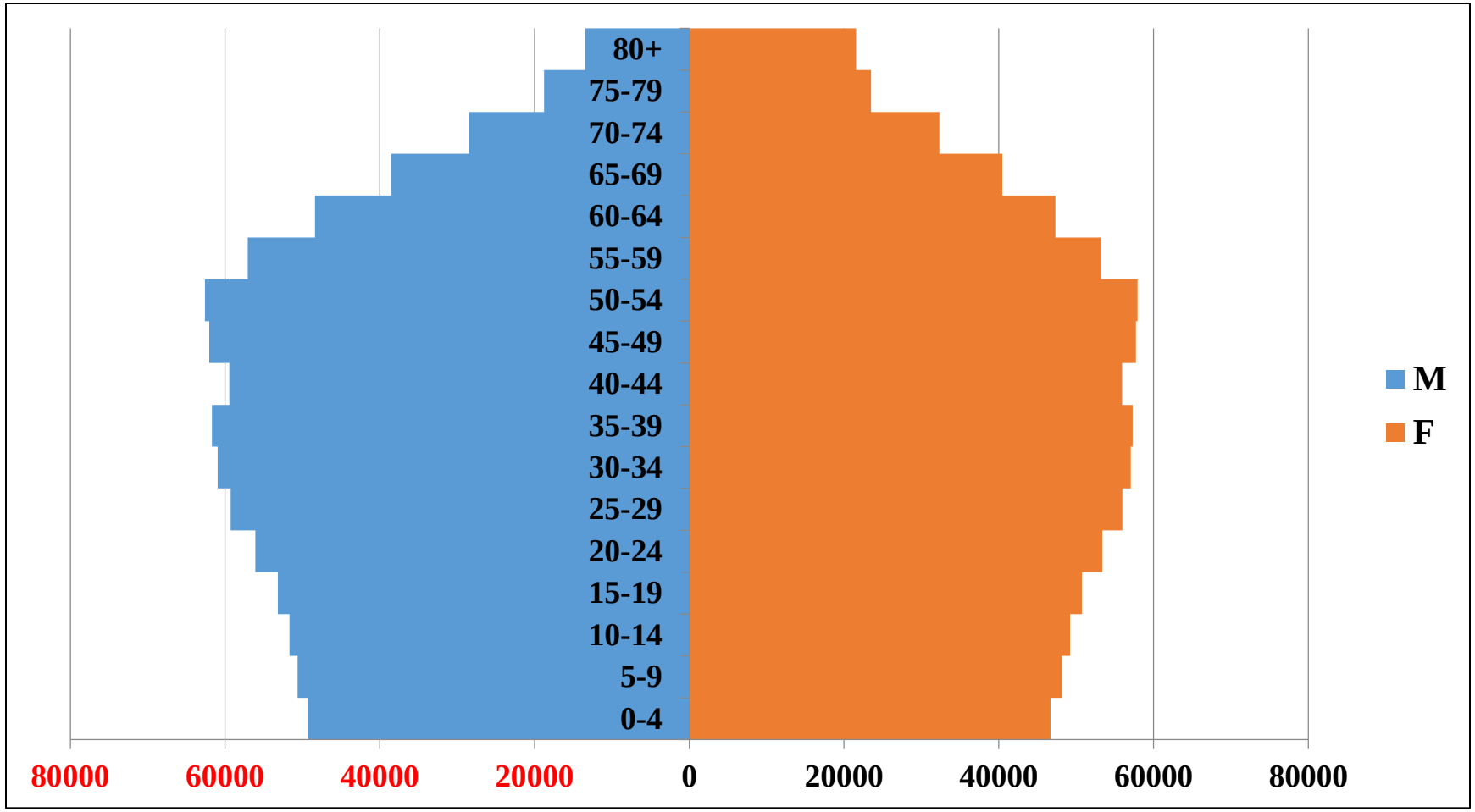
Indian Scenario



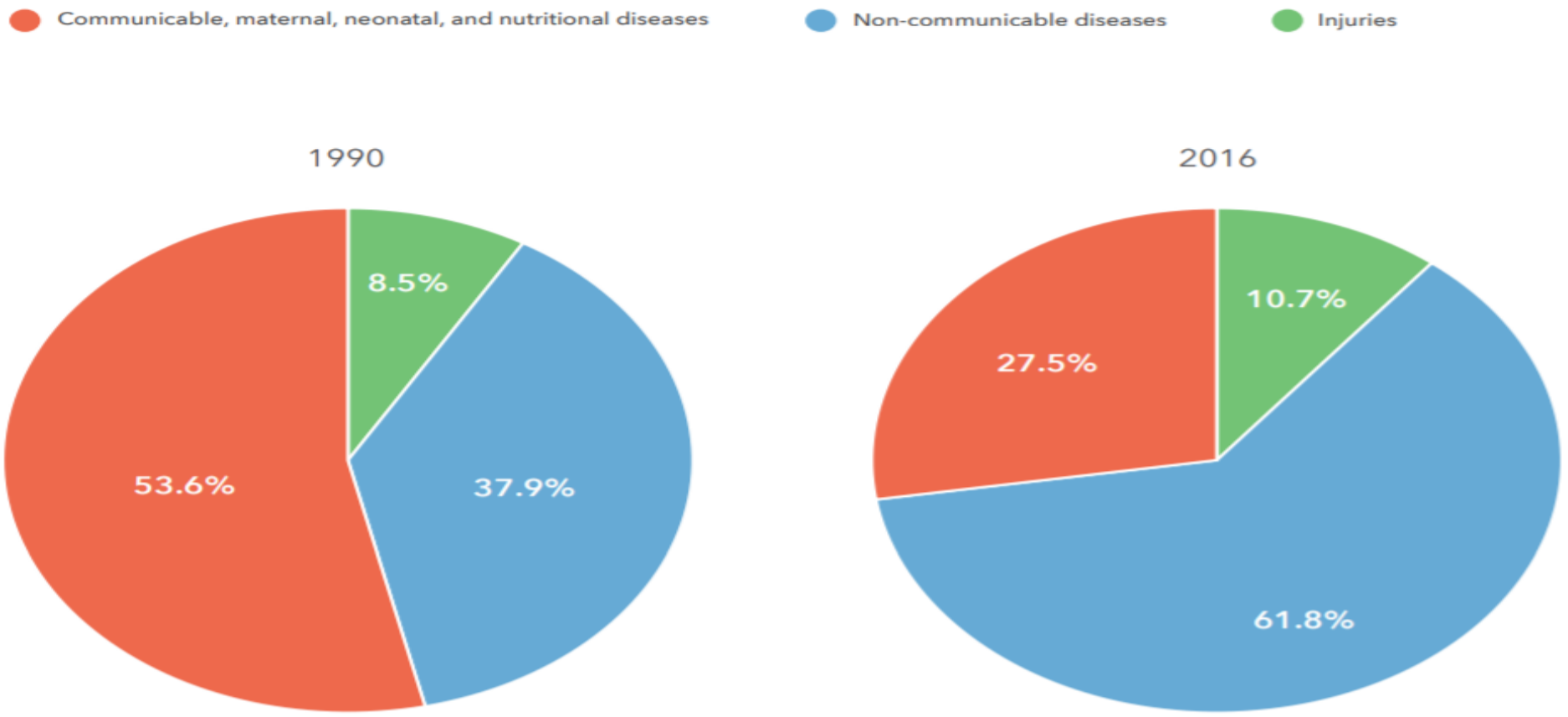
Population Pyramid, India, 2031, Projected *(population in thousands)*



Population Pyramid India, 2051, projected *(population in thousands)*

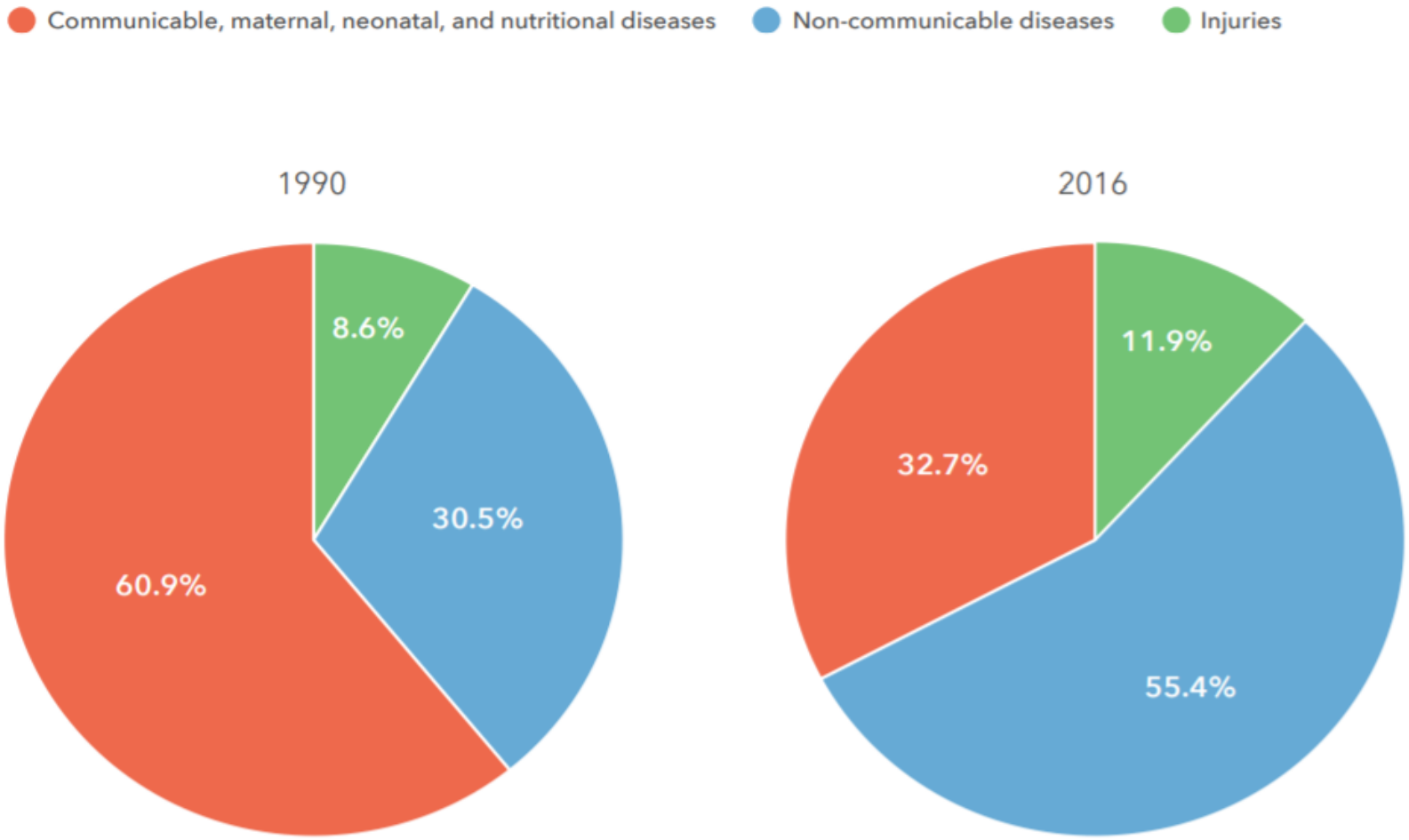


Contribution of Different Diseases total Deaths in India



The proportion of all deaths in India due to CMNNDs reduced from 53.6% in 1990 to 27.5% in 2016, those due to NCDs increased from 37.9% to 61.8%, and those due to injuries changed from 8.5% to 10.7%.

Contribution of Different Diseases total DALYs in India



India had 33% of the total DALYs from CMNNDs, 55% from NCDs, and 12% from injuries in 2016. In 1990, this was 61%, 30%, and 9% of DALYs, respectively.

Percentage contribution of disease categories to total deaths in each age group for all of India, 2015 (1)

		0-14	15-49	50-69	70+	All Ages
Communicable, maternal, perinatal and nutritional conditions		78.31	23.17	16.13	20.21	28.09
	Tuberculosis	0.98	9.13	6.16	3.32	4.92
	HIV/AIDS	0.52	2.88	0.30	0.00	0.70
	Diarrhea	9.65	2.16	3.32	4.62	4.51
	Other common infectious diseases	7.00	3.05	1.29	0.79	2.28
	Malaria and tropical diseases	1.10	1.48	0.63	0.43	0.79
	Other Infectious diseases	1.72	0.26	0.31	0.44	0.56
	Respiratory Infections	13.90	1.16	3.20	9.87	6.80
	Maternal conditions	0.00	2.44	0.00	0.00	0.45
	Neonatal conditions	42.59	0.00	0.00	0.00	6.30
	Nutritional deficiencies	0.84	0.60	0.91	0.73	0.78

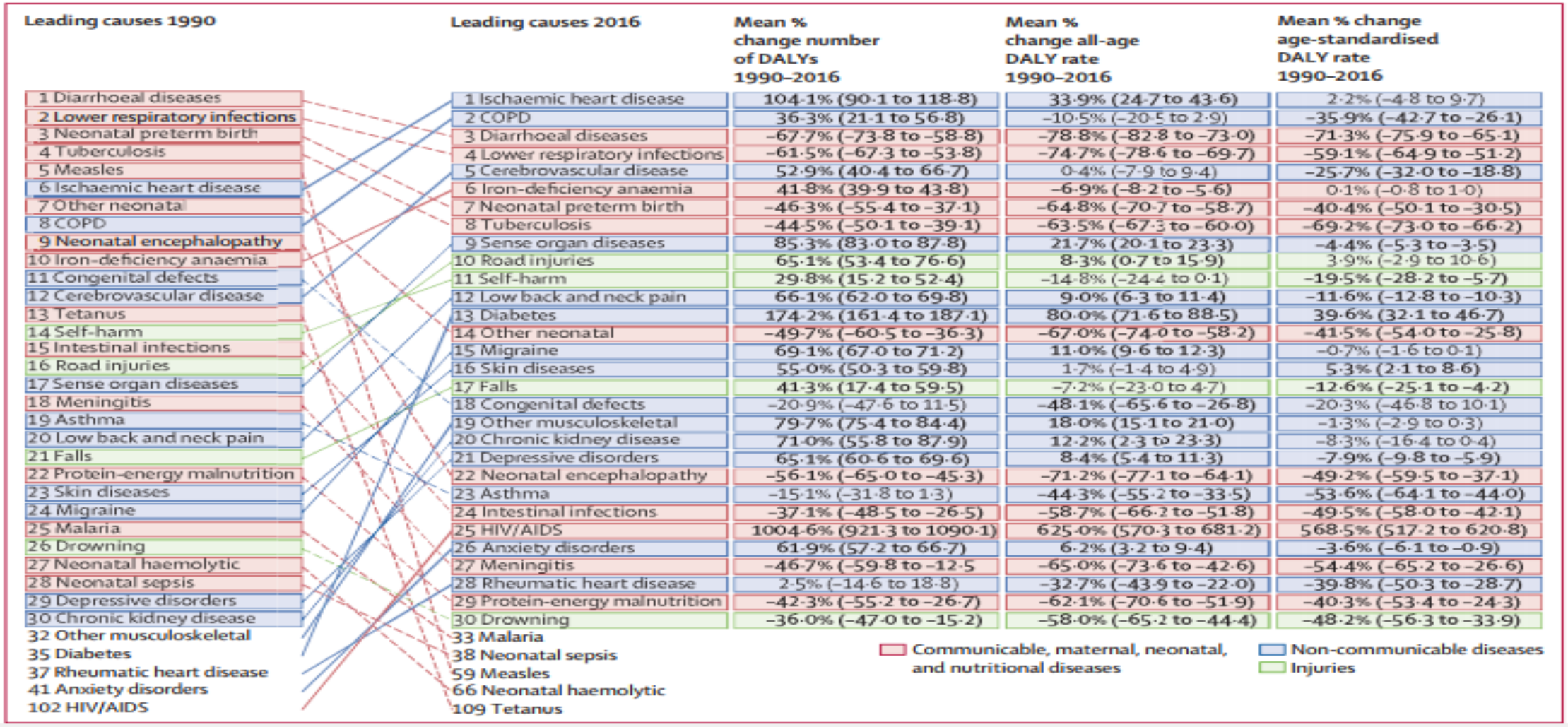
Source: Sobin George, Arun Balachandran et al. (2018)

Percentage contribution of disease categories to total deaths in each age group for all of India, 2015 (2)

Non-communicable diseases		**13.65**	**47.30**	**76.21**	**74.07**	**60.85**
	Neoplasms	0.71	11.25	13.08	5.63	8.24
	Cardiovascular diseases	0.57	17.48	35.75	32.16	25.89
	Respiratory diseases	0.68	2.18	11.66	18.85	10.87
	Digestive diseases	1.62	9.07	5.94	4.22	5.26
	Neurological conditions	0.84	1.62	1.01	3.49	1.99
	Diabetes and endocrine diseases	0.66	1.17	4.00	5.15	3.39
	Congenital anomalies	7.89	0.20	0.02	0.01	1.21
	Genitourinary diseases	0.44	3.12	3.86	3.48	3.08
	Mental and substance use disorders	0.00	0.97	0.23	0.10	0.29
	Skin diseases	0.04	0.09	0.11	0.17	0.12
	Musculoskeletal diseases	0.01	0.15	0.53	0.81	0.49
	Other Non-communicable diseases	0.17	0.14	0.08	0.07	0.03
Injuries		8.04	29.53	7.66	5.72	11.06

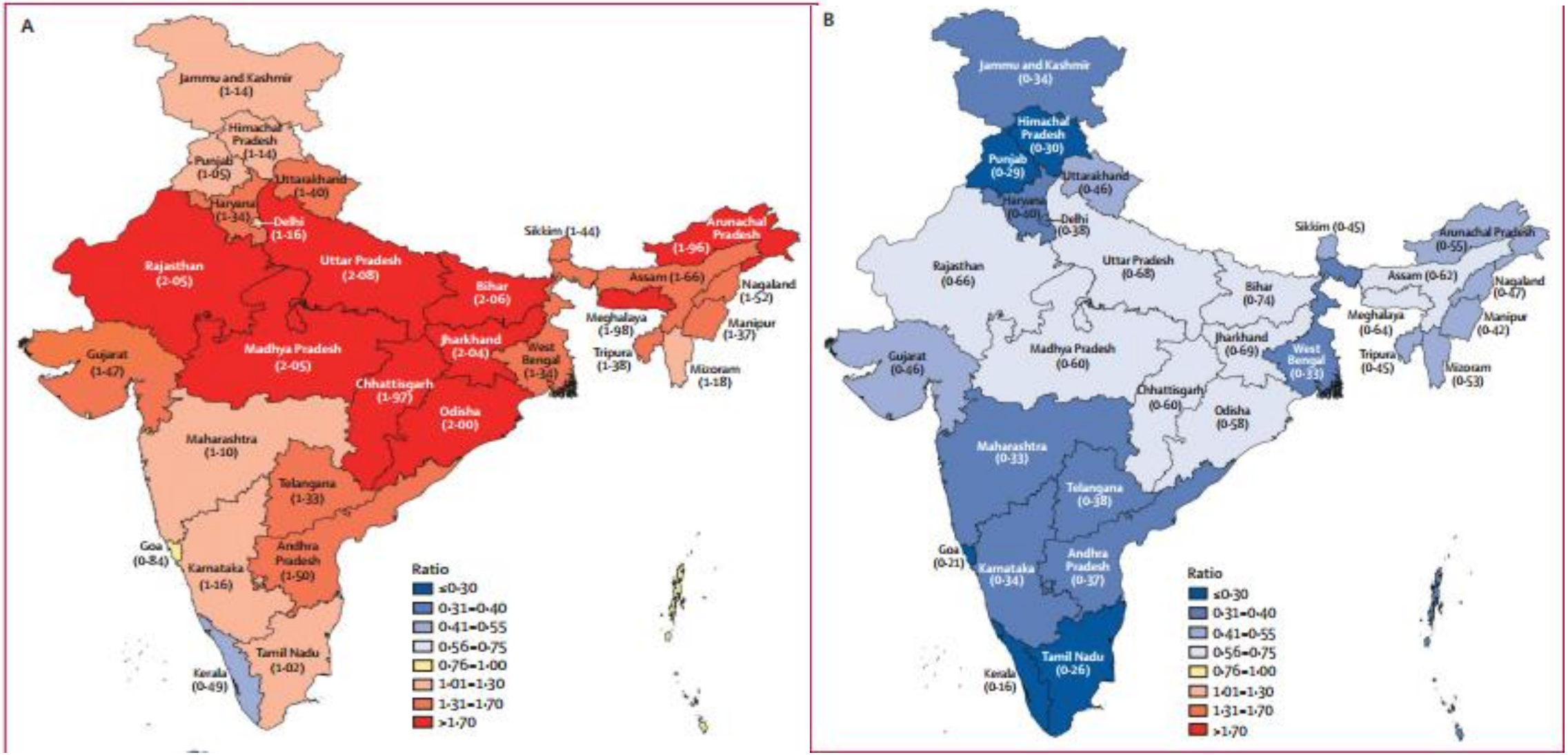
Source: Sobin George, Arun Balachandran et al. (2018)

Change in DALY number and percent change in rates for the leading 30 causes 1990–2016, India



Source: Nations within a nation: variations in epidemiological transition across the states of India, 1990–2016 in the Global Burden of Disease Study, LANCET, 2018

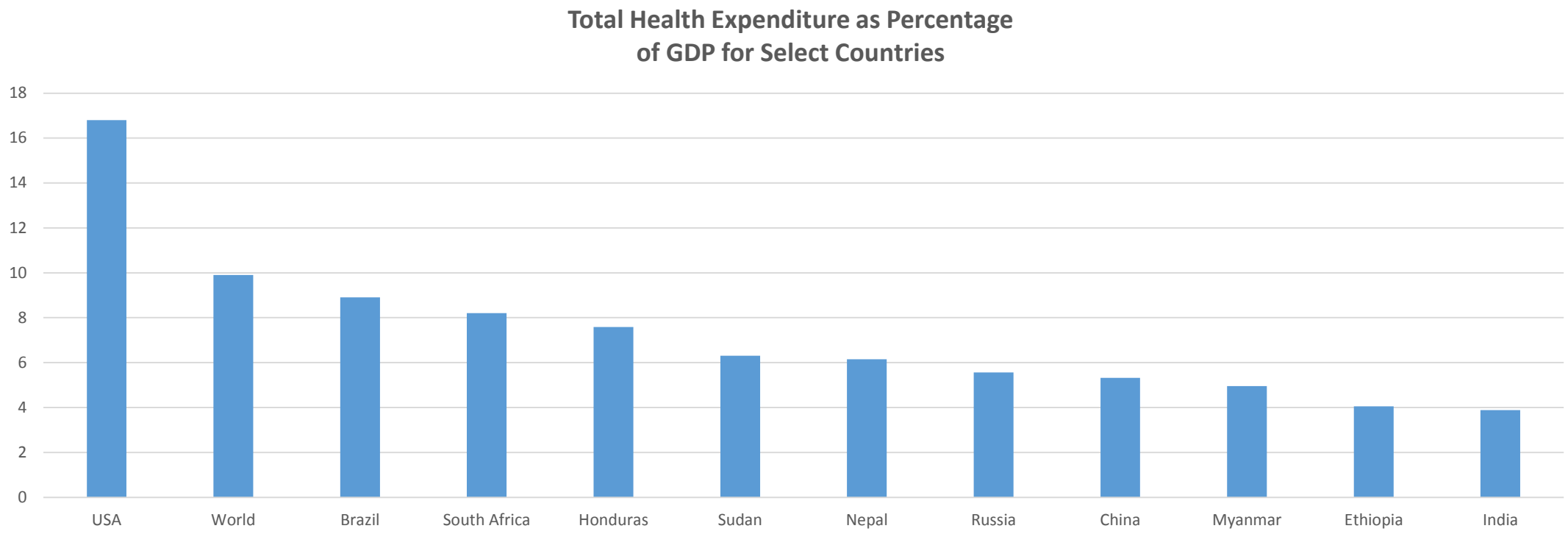
Disease Pattern- Region Wise



Source: Nations within a nation: variations in epidemiological transition across the states of India, 1990–2016 in the Global Burden of Disease Study, LANCET, 2018

- Demographic Transition- TFR, LE
- Double burden of diseases (triple burden for women)
- CoD and DALY- CDs and NCDs (Changes across age, time and space)
- Changing epidemiological and health transitions
- North-South divide

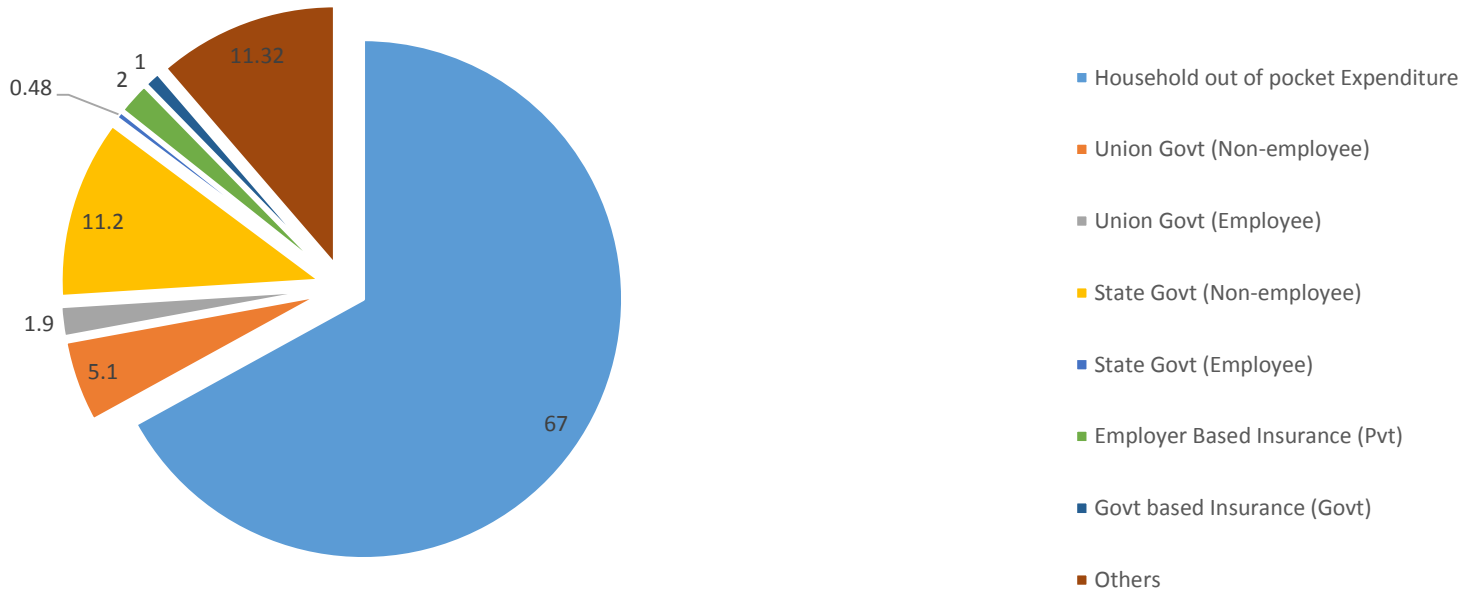
Health Financing in India



STATE SPENDING AS A PERCENTAGE OF GDP: **1.3%** (between 2008-15)

Source: WHO's Global Health Expenditure database, 2015

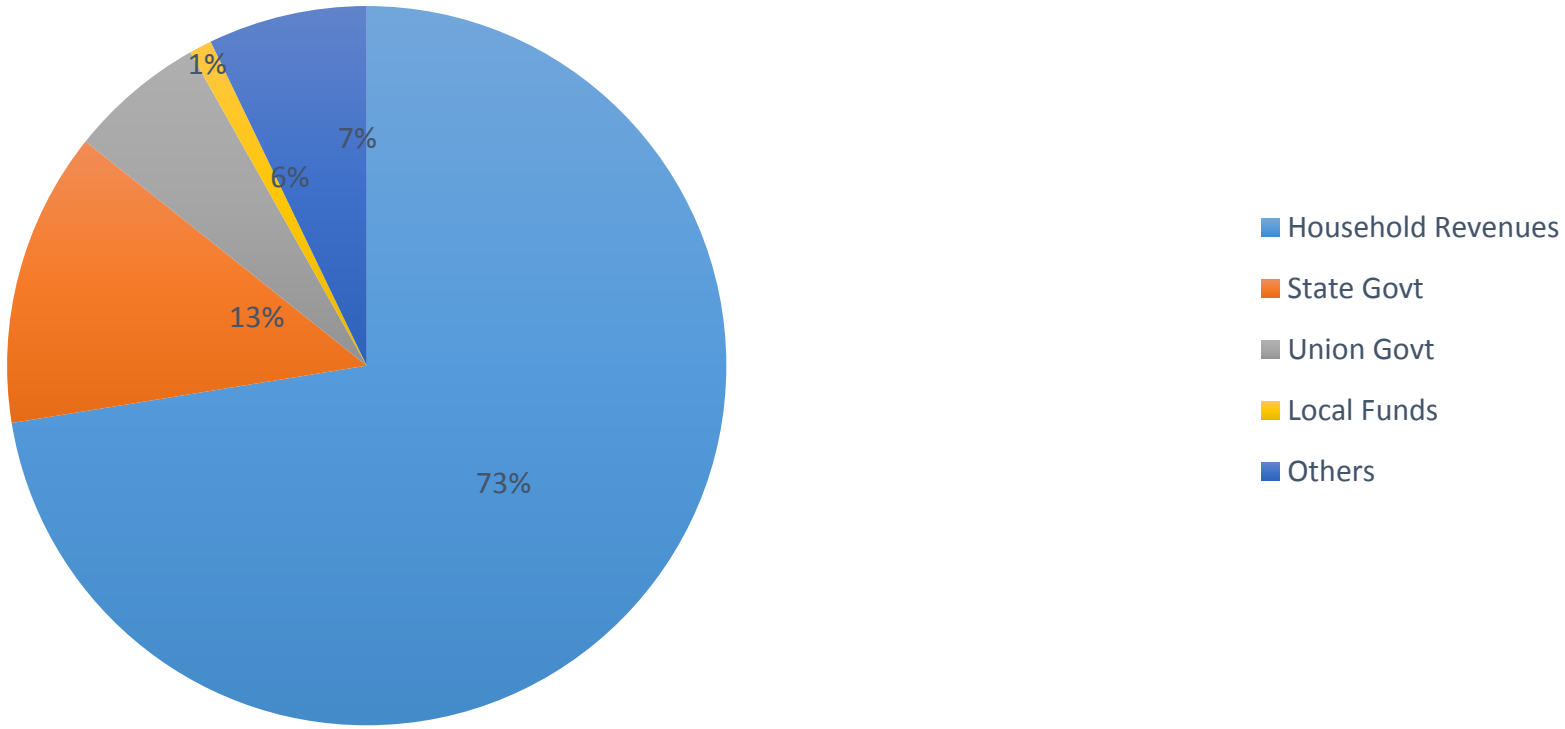
Health Expenditures by Healthcare Financing Schemes, 2015



Global Avg. OOPE= 18%

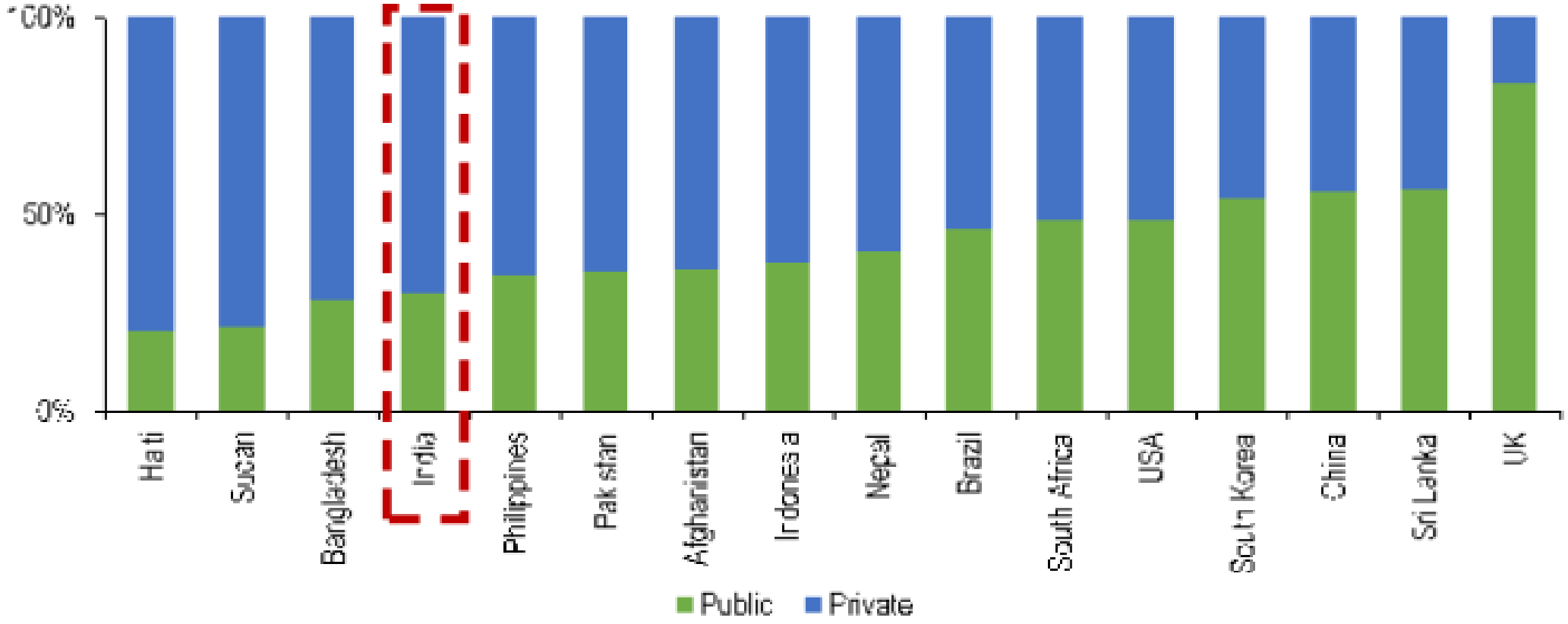
Source: NHA, 2015

Sources of financing health expenditure



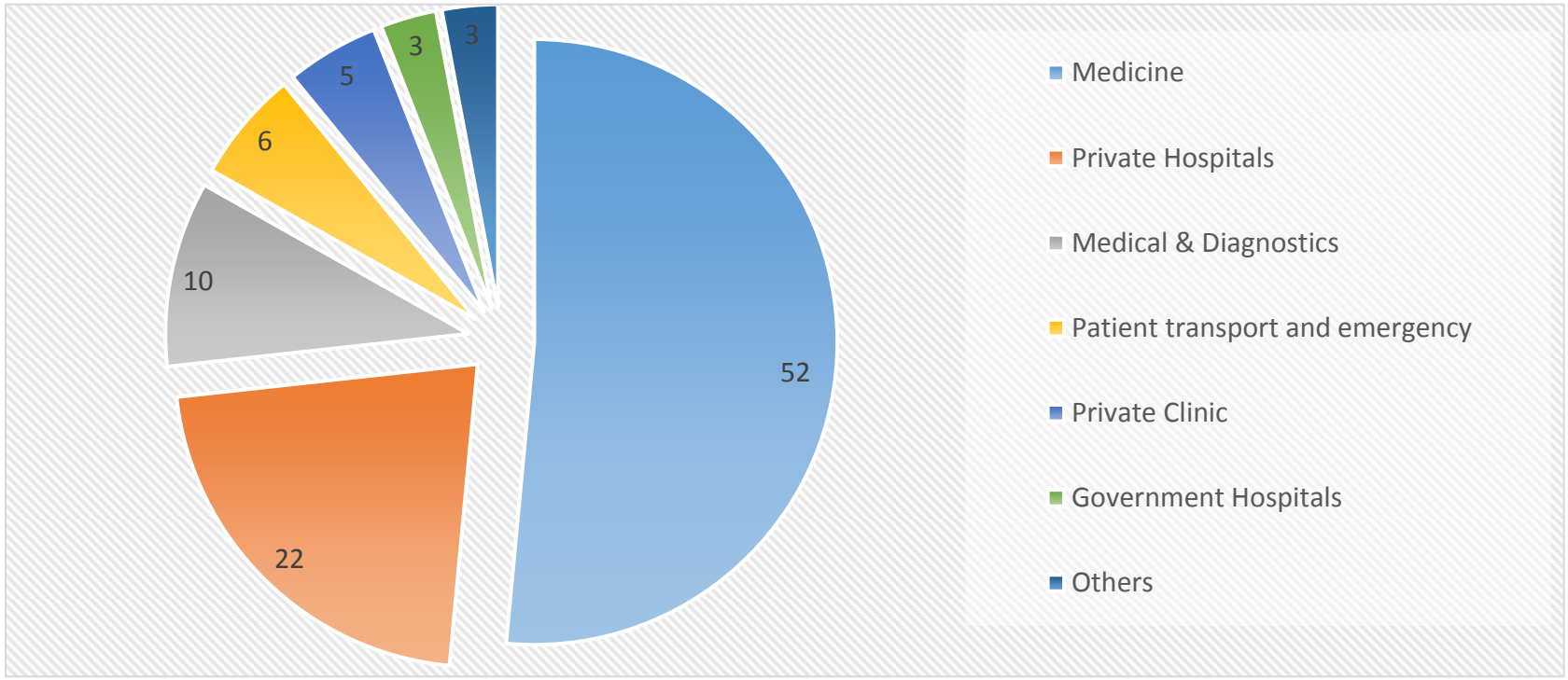
Source: NHA, 2015

Pvt. Vs Public Split in total Health Expenditure



Source: WDI, 2015

Major Heads of out of pocket expenditure

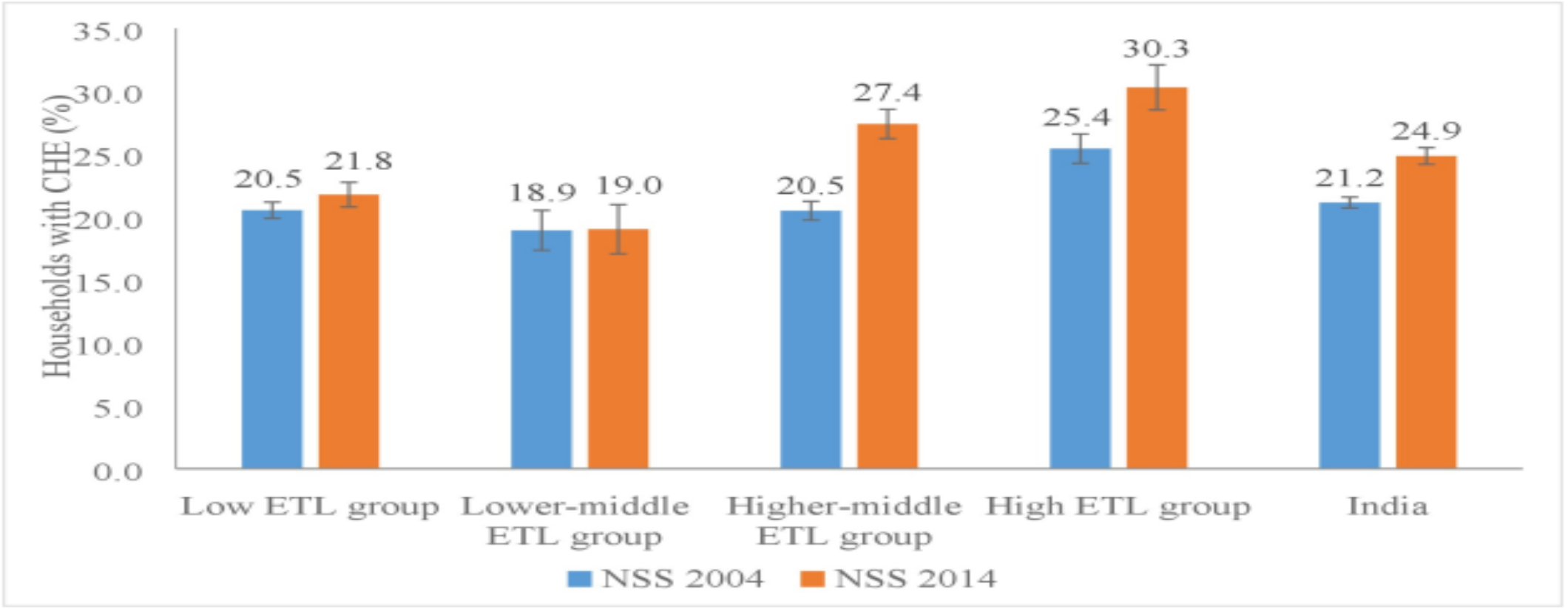


Source: “Household Health Expenditure in India (2013–14),“ December 2016, Ministry of Health and Family Welfare.

Private sector and healthcare

- Private sector holds:
  - 58% hospitals
  - 29% beds
  - 81% of doctors
  - Primary source for 70% HH in rural India and 63% HH in urban India (NFHS 3)
  - Continuous increase in pvt sector in last 25 years
  - Private sector also make patients stay longer in hospitals and conduct more diagnostic tests (Basu et al., 2012)
  - Mostly in urban areas
    - About 80% of doctors and 75% of dispensaries are serving urban India, which makes up only 28% of the country's population
  - Rural areas, lack of doctors in PHCs
  - Urban areas, number of super specialty private hospitals are on a rise

Percent of households with catastrophic health expenditure (CHE) in India and states grouped by epidemiological transition level (ETL), 2004 and NSS 2014.



Source: Anamika Pandey et al., Plos One, 2018

HE and Poverty

- Health Expenditure adds around 7 percentage points to India's poverty
- 4.66% people fell into BPL due to health payment (ie. 50.6 million people in 66 lakh households)
- In rural areas, this is 5.43% and 2.60% in urban areas
- Poverty deepening effect (Avg. amount by which people go BPL): MPCE of BPL reduced by Rs 27.8 & by Rs 2.86 for APL; Same was Rs 86for Rural and Rs 4.5 for Urban
- HH suffer less from catastrophic HE in states that allocate more funds to medicines and drugs compared to others

SOURCE: Shamika Ravi et al., Brookings Institute, 2016 & Shailendra Kumar Hooda, 2017

Policy Responses

- National Health Protection Mission (NHPM, 2017)
  - Pradhan Mantri Jan Arogya Abhiyaan/ Aysuhman Bharat/ ‘Modicare’/Independence day gift
  - “World’s largest healthcare scheme”
  - Creation of 150000 “Health and Wellness Centres”
  - Aimed at 10 crore households and 50 crore people
  - Coverage of Rs 5 lakh per year insurance that will be provided for secondary and tertiary healthcare; In RSBY, this was only Rs 30000
  - IT-enabled, free and cashless in-patient healthcare will be provided
  - Also expected to create an additional 200,000 jobs
  - No enrolment or payment of premium is necessary for households (Already chosen based on SECC, 2011)
  - The scheme will be merged with existing similar state schemes with a 60:40 contribution by Centre and states
  - Aims to cover 40% of population
  - Make a health spending of 2.5 percent of GDP by 2025

Given the Indian scenario.....

1. How sustainable is Ayushman? – “Is Ayushman ‘Ayushman’?”
    - Fiscal potential/Challenges of the govt

2. Is it the best long-term model to improve health and reduce OOP?
    - Is “Insurance” path the best for India to achieve Universal Health Care?

Is Ayushman ‘Ayushman’(1)

- Good initiative that thrust is given to health sector- In a pre-election year; and thus shows the public interest in health sector and potential of health being an election issue

1. “World’s largest healthcare scheme”-
    - Coverage?- China has universal health coverage
    - Budgetary allocation?- Budget 2018-19 allocates Rs 2000 crores (for 10 crore family and 50 crore population)- Which is Rs 40 per person; Together with state allocation, this becomes Rs 67
    - However, it is a great overall thrust for health
2. Creation of 150000 “Health and Wellness Centres”
    - Includes the existing PHCs-
    - Budget allocation for 2018-19 for this is Rs 1200 crores- Which is Rs 80000 per centre
    - New name for old PHCs?
    - But aiming at PHCs is a good initiative

Is Ayushman ‘Ayushman’(2)

3. Gradual Increase in allocation-
    - Niti Aayog suggests allocation for health insurance would increase to Rs.10000 crores for 5 years by 2022
    - Even if its done, with 50 crore potential beneficiaries, it becomes Rs.200 per person per annum
    - Govt. hospitals are subsidized, but this amount will only pay for a single private visit (even without medicines)
    - But..
4. Target of 2.5% of GDP for health by 2025
    - The target itself is low, as High-Level Expert Committee recommendation in 2010 was to raise it to 3 percent by 2012
    - It’s a reduction of the target
    - Union Budget allocation has not increased even with this reduced target- Central allocation to MoHFW declined (!) from 2.4 in 2017-18 to 2.1 in 2018-19 (BE)

Is Ayushman ‘Ayushman’(3)

5. Fiscal burden to state governments

- State govt. sharing has increased to 40% from 25%; This is will be fiscal burden, especially to poorer states, that has more poor people
- Problems with particular states- Goa, TN, Kerala

6. Dependence on Private sector

- Cost of pvt sector lower in areas where public sector well developed- Eg. TN
- So, especially northern states, cost of pvt hospitals can be very high; and AB may drive this hike
- No credible monitoring agencies to check mal-practices (by hospitals/Doctors)
- Many Pvt. Hospitals and even IMA has problematized the low package rates for various procedures and interventions
- Will it channel public fund to private sector?

2. Is it the best long-term model to improve health and reduce OOP?

Is “Insurance” path the best for India to achieve Universal Health Care?

International Experience

- USA-
  - Spends highest among OECD on health; lowest LE; decrease in cohort LE
  - Spends more than European countries, but lags in outcomes
  - Insurance company's highest annual expenses are towards law firms/lawyers
  - Lags in UHC among OECD countries
  - Quality of insurance is poor
  - Obamacare, which tried to universalize healthcare was critiqued
- Switzerland- (i) State regulation on private insurers is very efficient (ii) But its per-capita health expenditure is still high
- Germany- (i) Govt insurance managed by Pvt trusts (ii) But relies heavily on high formal employment (iii) High fiscal strain on exchequer (iv) State governance is good
- UK-

Experience of RSBY

- AB replaces all existing state and national insurance schemes
- Implemented by UPA in 2008
- Aimed to cover BPL HH
- Coverage of Rs.30000 for 5 members per HH
- Only 11% enrolment
- Half of them were actually non-poor (based on other assets)
- Increased hospitalization rate has increased, but failed to impact OOP or health related poverty; So, no clarity on whether it is demand created by the hospitals

- Source: Soumitra Ghosh and Nabanita Datta Gupta, 2017

Experience of RSBY (2)

- One of the reasons for not seeing significant reduction in the incidence of OOP could be that most patients treated under the RSBY and other state-sponsored schemes in empanelled hospitals **are often asked to buy medicines and diagnostics** though they are actually included in the benefit package (Rent and Ghosh 2015; Devadasan et al 2013).
- **Outpatient care,** the single largest contributor to OOP spending (S Ghosh 2011) has still not been included
- **Absence of strong and effective government regulations** for insurers and providers, well-recognised market failures such as supplier-induced demand will ensure that the eligible families exhaust full coverage with little improvement in their well-being and financial protection
- The experiences indicate that targeted health insurance coupled with a healthcare delivery system dominated by private providers **cannot be an efficient mean** to achieve universal healthcare.
- States/Regions with better public health system, decentralization showed better outcomes
- A path to UHC?

S.No.	Issue/Concern	Probable future solution
1	Too little allocation for ABNHPM	Allocation can be increased to meet the demands of the healthcare needs of people. Government is committed to increase public health expenditure to 2.5% of GDP and must not shy away from increasing allocation.
2	Too little coverage at Rs. 5 lakh per family per year	It is quite possible that Rs. 5 lakhs/family/year might prove to be less in case of prolonged hospitalization. While the limit of Rs. 5 lakh/family/year has been determined after studying average hospitalization expenses there must be means to provide higher coverage for a small percentage of families who might need it.
3	Inadequate package rates	Package rates can evolve in close consultation with the private sector and must be customized to differential rates in urban and rural areas. The government can use this mechanism to standardize rates, cap excess profits by private sector and make healthcare affordable.
4	No protection for OPD or medicine expenditure	ABNHPM must evolve to increasingly include OPD and medicine expenses. Improving medicine quality and making generic medicines more accessible must be part of the strategy.
5	Lack of preparation before launching ABNHPM	Government must rectify shortcomings of ABNHPM after launch in a quick manner to make up for the lack of preparation before launching ABNHPM.
6	Lack of public health infrastructure, work force, quality	This will be an ongoing task. However, presence of ABNHPM, with its additional injection of funds, might prove to be a catalyst that leads to improvement in public health quantity and quality. Continued increase and improvement of health workforce is also a necessary part of this.
7	Insurance frauds, excessive diagnostics and interventions by private sector, overcharging etc.	Effective regulation (coupled with price control) in all states of ABNHPM will be essential in preventing insurance frauds and malpractice by the private sector and keeping healthcare affordable

Source: Subhojit Dey, 2018

Conclusion

- AB has a lot of potential; an excellent emphasis
- Building of a narrative for healthcare is good
- But, has to be implemented carefully
- Healthcare is a confluence of inelastic demand, political sensitivity, economic consequences and ethical governance- Hence, State's role is pivotal
- Public Healthcare system should not be trivialized due to this and aim should be to strengthen it

Health and News

Coming soon: UP government reveals details of Ram statue in Ayodhya

The hurried announcement comes hours before VHP's Dharm Sabha in Ayodhya which is being backed by the Shiv Sena. Thousands of Shiv Sena and VHP supporters are in the city to push for the expedition of Ram temple construction.

Gorakhpur tragedy: 60 children die in Baba Raghav Das Medical College in a week amid oxygen supply disruption

At least 30 children died since Thursday in Gorakhpur's Baba Raghav Das Medical College due to shortage of oxygen supply.

INDIA Updated: Aug 13, 2017 10:23 IST

Abdul Jadid
Hindustan Times, Gorakhpur

Health

Govt seeks Rs 100cr help to deal with polio vaccine cost hike (after spending Rs 3000cr on showpiece statue)

Public health experts say the situation reflects India's poor budget allocation for health programmes

By G.S. Mudur in New Delhi

Published 16.11.18, 3:19 AM • Updated 16.11.18, 10:03 AM

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