COVID-19 in India – Public healthcare matters
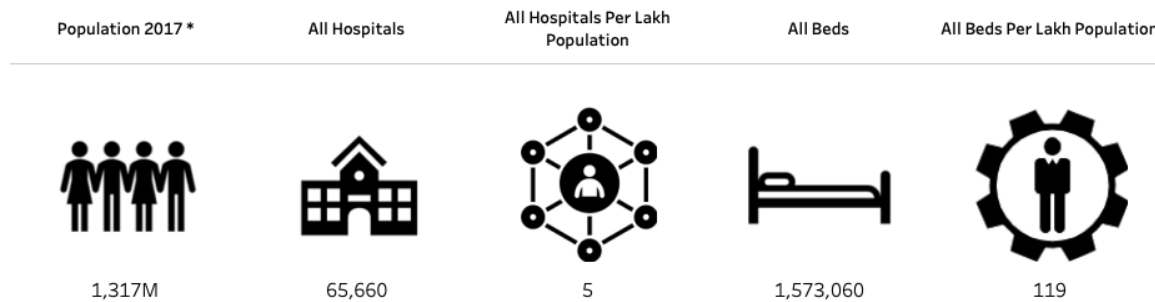
- *by Vrunda Bansode*

Over the last four months as we watched distant countries in the developed world get decimated by the invisible virus, we in India started getting worried. Now we have gone through different phases of the lock-down ourselves as a nation. The number of confirmed infections are rising – slowly on some days raising our collective hopes, furiously fast on other days bringing on collective despair. But the root cause of our panic and precaution lie in the fragility on two fronts – our public healthcare system and our public health itself.
How fragile is our public healthcare infrastructure exactly?

Number of Hospitals and Beds in India - 2018

◀IDI

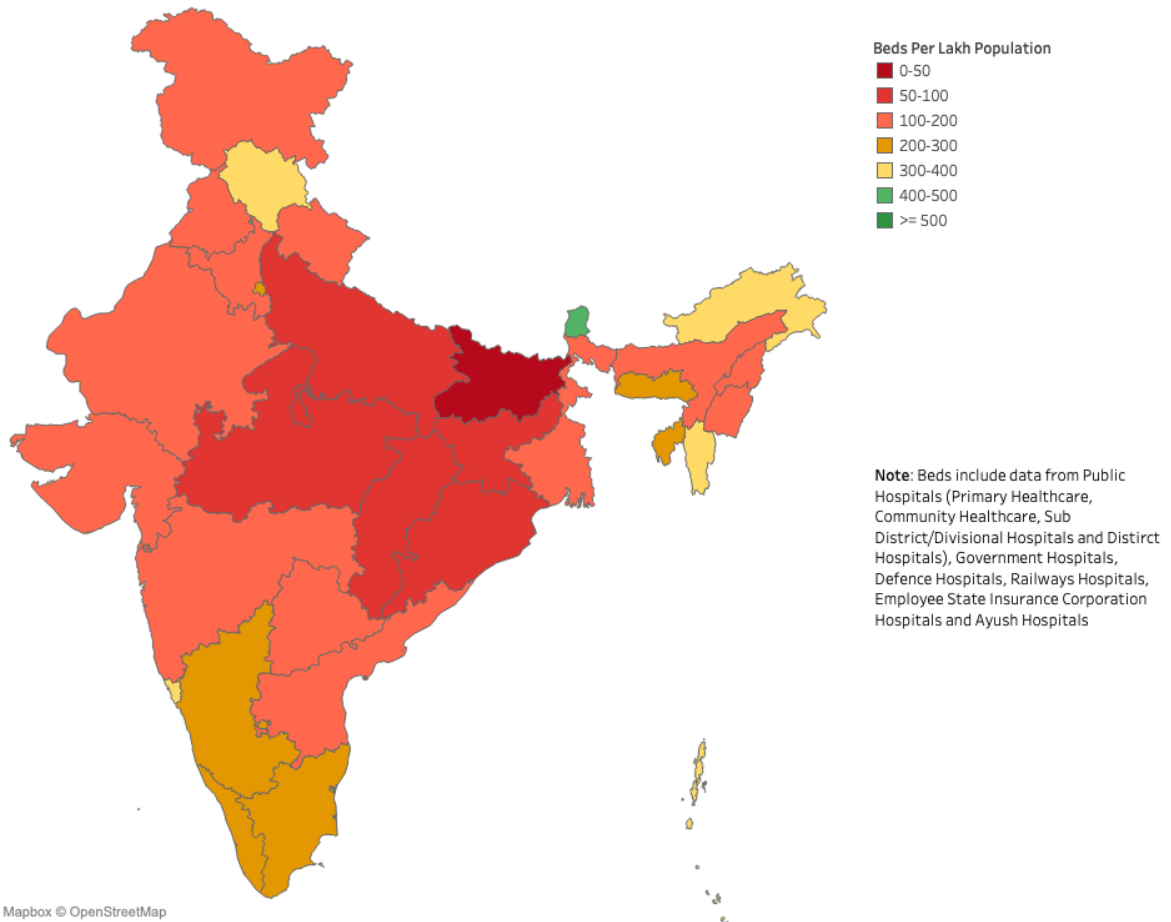| Population 2017 *	All Hospitals	All Hospitals Per Lakh Population	All Beds	All Beds Per Lakh Population
1,317M	65,660	5	1,573,060	119

* Projected Population
Hospitals and Beds include data from Public Hospitals (Primary Healthcare, Community Healthcare, Sub District/Divisional Hospitals and Distirct Hospitals), Government Hospitals, Defence Hospitals, Railways Hospitals, Employee State Insurance Corporation Hospitals and Ayush Hospitals

Excluding private healthcare facilities, we had 119 hospital beds per lakh population in 2017-18. Government hospitals alone in India had 53 beds per lakh population, the corresponding number for the same time period for Italy and Spain is around 300, and for Japan 1300. We are woefully short of infrastructure, more so in some states.

(This data can be freely accessed here : https://www.indiadatainsights.com/free-interact/public-healthcare-infrastructure/)

State-wise Beds Per Lakh Population (2018)

Beds Per Lakh Population
- 0-50
- 50-100
- 100-200
- 200-300
- 300-400
- 400-500
- >= 500

Note: Beds include data from Public Hospitals (Primary Healthcare, Community Healthcare, Sub District/Divisional Hospitals and Distirct Hospitals), Government Hospitals, Defence Hospitals, Railways Hospitals, Employee State Insurance Corporation Hospitals and Ayush Hospitals

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Some of the best ratios of hospital beds per lakh population in India are in small states and union territories :

1. Puducherry : 598
2. Lakshadweep : 550
3. Sikkim : 447

Worryingly the states with the worst beds to population ratios are also the most populous states :

1. Bihar : 27
2. Jharkhand : 53
3. Uttar Pradesh : 68

The other huge risk factor in the current pandemic situation is high density of population in some of these medically under-equipped states – as of Census 2011, UP had 828 inhabitants per square km, Bihar had 1102 and Delhi had 11,297!

Coming to the health of our population, we are marred by widespread malnutrition. Our India Hunger Index, built on the framework of Global Hunger Index, shows the extent of malnutrition:

District Level Malnutrition
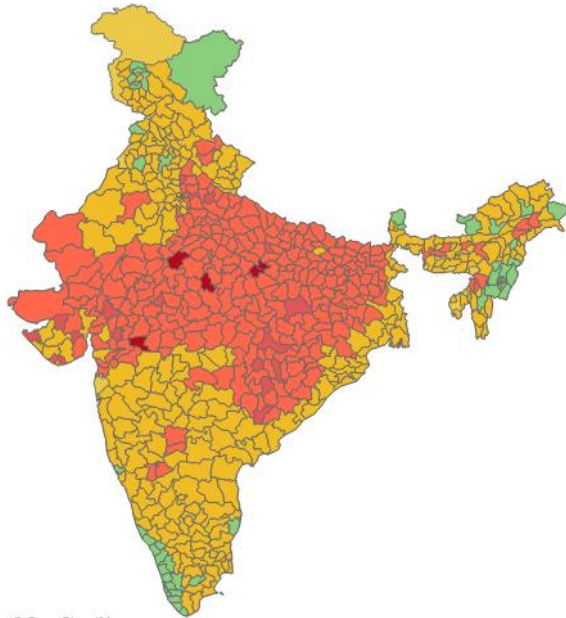
Level of Malnutrition
- Moderate
- Serious
- Alarming
- Very Alarming

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(This data can be freely accessed here : https://www.indiadatainsights.com/free-interact/india-hunger-index/)

The population thus disadvantaged by lack of good nourishment also suffers from other diseases known to affect the COVID outcomes. This combination of fragile healthcare system and fragile health of our population makes it imperative that we do all we can to prevent a large-scale COVID outbreak rather than treat and cure.

The following table makes our vulnerabilities clearer:

State of Public Health and Healthcare in India - Large States

State/ UT Name	Population 2017 *	Density (/km²)(6)	Health Centers Per Lakh Population	All Beds Per Lakh Population	Health Workers per Lakh population	% Women - Blood sugar level - high (>140 mg/dl)	% Men - Blood sugar level - high (>140 mg/dl)	% Women with High Blood Pressure	% Men with High Blood Pressure
India	1,317M	382	5	119	221	5.80	8.80	8.80	13.40
Andhra Pradesh	52.38M	308	4	162	405	8.20	9.80	10.00	16.20
Assam	34.07M	397	7	114	146	5.20	6.60	16.00	19.60
Bihar	117.15M	1,102	3	27	20	4.20	6.70	5.90	9.40
Chhattisgarh	28.13M	189	4	87	84				
Gujarat	63.00M	308	4	124	229	5.80	7.60	9.70	13.00
Haryana	27.44M	573	5	102	205	4.80	6.10	9.20	16.80
Jammu & Kashmir	13.48M	124	7	191	30	5.60	6.30	11.60	13.70
Jharkhand	36.67M	414	3	53	28	4.90	7.70	7.80	12.20
Karnataka	65.43M	319	9	213	453	6.30	8.40	9.70	15.40
Kerala	35.04M	859	8	238	762	8.70	13.10	6.80	9.50
Madhya Pradesh	80.89M	236	3	86	209	5.10	6.70	7.90	10.90
Maharashtra	119.58M	365	3	110	148	5.00	5.90	9.10	15.90
Odisha	44.91M	269	8	81	316	7.30	10.70	9.00	12.50
Puducherry	1.36M	2,598	5	598	52	7.30	7.50	9.10	15.10
Punjab	29.34M	550	5	120	358	6.10	6.70	13.20	21.80
Rajasthan	76.80M	201	5	114	426	3.50	5.70	6.90	12.40
Tamil Nadu	75.84M	555	5	204	426	7.10	9.70	8.30	15.50
Telangana	38.04M	0	5	107		6.80	6.00	10.10	18.20
Uttar Pradesh	224.56M	828	5	68	53	5.00	7.10	7.60	10.10
West Bengal	96.78M	1,029	4	141	141	7.40	11.40	10.30	12.40

Legend:

Population 2017 * — 1.36M to 224.56M

Population Density (/km²) — 0 to 2,598

Health Centers Per Lakh Population — 2.725 to 9.194

Beds Per Lakh Population — 26.6 to 597.7

Health Workers per Lakh population — 19.7 to 762.1

% Women - High Blood sugar level — 3.50 to 8.70

% Men - High Blood sugar level — 5.70 to 13.10

% Women with High Blood Pressure — 5.90 to 16.00

% Men with High Blood Pressure — 9.40 to 21.80

Note:
Hospitals and Beds include data from Public Hospitals (Primary Healthcare, Community Healthcare, Sub District/Divisional Hospitals and Distirct Hospitals), Government Hospitals, Defence Hospitals, Railways Hospitals, Employee State Insurance Corporation Hospitals and Ayush Hospitals
Heath workers: Governmental Physicians, Nurses and Midwives
High Blood Pressure - Systolic > 140 mm of Hg and/or Diastolic > 90 mm of Hg
Data: Health Center and Beds data as of July 2018. Population -2017, Healthcare Workers, Blood Sugar and Blood Pressure - 2015-16

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State of Public Health and Healthcare in India - Small States

State/ UT Name	Population 2017 *	Density (/km²)(6)	Health Centers Per Lakh Population	All Beds Per Lakh Population	Health Workers per Lakh population	% Women - Blood sugar level - high (>140 mg/dl)	% Men - Blood sugar level - high (>140 mg/dl)	% Women with High Blood Pressure	% Men with High Blood Pressure
India	1,317M	382	5	119	221	5.80	8.80	8.80	13.40
Andaman & Nicobar Isl..	0.41M	46	8	327	16				
Andhra Pradesh	52.38M	308	4	162	405	8.20	9.80	10.00	16.20
Arunachal Pradesh	1.51M	17	28	327	127	4.80	7.60	15.00	21.60
Chandigarh	1.11M	9,252	5	422	10	5.60	6.90	9.30	13.50
Dadra & Nagar Haveli	0.37M	698	3	152	30				
Daman & Diu	0.22M	2,169	6	248	22				
Delhi	18.11M	11,297	4	270	344	7.60	10.00	7.60	4.20
Goa	1.52M	394	6	396	42	8.90	12.30	8.50	13.20
Himachal Pradesh	7.25M	123	21	313	434	5.90	6.80	12.10	21.90
Lakshadweep	0.07M	2,013	19	550	42	12.00	13.30	10.90	9.90
Manipur	2.97M	122	5	137	344	7.60	9.30	11.40	20.40
Meghalaya	3.23M	132	11	291	192	4.30	6.40	9.90	10.40
Mizoram	1.19M	52	15	371	435	8.60	10.30	9.80	17.90
Nagaland	2.16M	119	10	196	19	7.20	9.70	16.00	23.10
Sikkim	0.66M	86	10	447	37	6.70	8.90	16.50	27.30
Tripura	4.00M	350	8	235	143	7.70	9.60	12.60	13.60
Uttarakhand	10.96M	189	11	170	44	6.10	8.80	9.60	17.20

Population 2017 *
0.07M — 52.38M

Population Density (/km²)
17 — 11,297

Health Centers Per Lakh Population
3.48 — 27.74

Beds Per Lakh Population
137.0 — 550.0

Health Workers per Lakh population
10.5 — 434.8

% Women - High Blood sugar level
4.30 — 12.00

% Men - High Blood sugar level
6.40 — 13.30

% Women with High Blood Pressure
7.60 — 16.50

% Men with High Blood Pressure
4.20 — 27.30

Note:
Hospitals and Beds include data from Public Hospitals (Primary Healthcare, Community Healthcare, Sub District/Divisional Hospitals and Distirct Hospitals), Government Hospitals, Defence Hospitals, Railways Hospitals, Employee State Insurance Corporation Hospitals and Ayush Hospitals
Heath workers: Governmental Physicians, Nurses and Midwives
High Blood Pressure - Systolic > 140 mm of Hg and/or Diastolic > 90 mm of Hg..

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Coronavirus has proven to be a great equaliser in some ways. Everyone is prone to infection and protecting only a few is of no consequence- universal protection and healthcare is the only way to control the pandemic. The need for a robust public healthcare system has never been more pressing. Hopefully, we will remember these lessons and invest in building resilient systems and infrastructure at the earliest.

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Powered by data from India Data Insights. Sattva Consulting has made all COVID-related data resources freely accessible here : https://www.indiadatainsights.com/theme/covid-19/)

We'd love to hear your thoughts and feedback on this topic. Do write to us: impact@sattva.co.in