PUNE INTERNATIONAL CENTRE

PPP (Private-Public Partnership) for Health: Policy Recommendations to Government of Maharashtra

January 2024

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I look forward to the opportunity to help PIC and the Government of Maharashtra translate this paper's suggestions into useful outcomes that benefit society at large.

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Executive Summary

The Covid-19 pandemic should prompt any government to completely re-orient its policy and implementation on the critically important subject of citizens' health. This paper attempts to suggest how.

To begin, let us understand the chief lessons of the pandemic:

- No government anywhere on the planet can protect its citizens.
- No geography is practically island-able.
- Only they survived who were already, essentially, healthy.

Two key changes therefore become self-evident. One, focus on health over medicine. Two, ensure that citizens take responsibility for their own health rather than holding solely the government responsible.

With this orientation change, the policy and action suggestions flow as follows:

1. Citizens must begin health care from birth. At that time and for the next two decades, primary responsibility to ensure the individual's health lies with the family, such as through immunisation (vaccinations, etc.) during infancy; followed by monitoring by the educational institutions in which the person is enrolled; post-school, emphasis should be placed on exercise, nutrition and at least annual health check-ups to monitor relevant health data.
2. Thereafter, the individual's employer, community, local, state and Central governments should shoulder responsibility as appropriate and as discussed in the paper.
3. The individual must first take care of her/his health and her/his children's health and as Plan B, s/he should ensure valid health and accident insurance.

The paper outlines Government of Maharashtra (GoM) initiatives to be taken in 2 phases. Specific (non-exhaustive) suggestions for Phase 1:

a. Mandate that every citizen has health and accident insurance coverage from birth to death, providing at least one option through a PPP health insurance entity.
b. Ensure schools provide courses on health and disease prevention in pre-school and until 8th standard.
c. Incentivise entities providing exercise, yoga, sports and meditation training and infrastructure for citizens from age 2 to 72.
d. Push for integration of jurisdiction on health, medicine, pharma and related activities

including education, water and sanitation by bringing all these subjects onto the Concurrent List in the Constitution, so legislation that can have comprehensive and country-wide coverage can be enacted and implemented at the earliest.

e. Create a Regulator and Standards creator in Maharashtra for the entire health promotion and medicine activities and give it teeth for implementation and enforcement of regulations issued by it.

f. Set up an Aadhaar-linked Health Data Registry with health and medical information of every citizen from birth to death, ensuring privacy and controlled access to the citizen and her/his doctor, as needed.

g. Set up an Information Access Service (Srot) for citizens, policymakers, and decision-makers giving data on environmental and disease related studies from locality, through district to state-level, and providing information on health promotion and disease redressal infrastructure.

h. Create 3 PPP Companies – Maharashtra Swasthya Vima va Mahiti Mahamandal (MSVMM) for providing the first option for a health and accident insurance policy to each citizen of the state; Maharashtra Swasthya Suvidha Mahamandal (MSSM/M2SM) to take over medical infrastructure from GoM and operate it as a commercially viable entity (taking GoM help for subsidising appropriate classes of citizens); and Maharashtra Swasthya Shikshan va Sanshodhan Mahamandal (MSSSM/M3SM) to promote medical and nursing education.

i. Set up a 'paid volunteers' Swasthya Sena, of which the ASHA regime would be a subset, as a low-budget support system across the state for people who are distant from the PHC network.

j. Award and incentivise sports achievements by Maharashtra citizens at various levels of sports participation.

k. Set up and run three pilot projects conducting all related activities to ensure creation of the basic foundation and so that all the above suggestions can be implemented on a micro scale to understand issues that will need to be addressed at macro scale across the state.

l. Prepare and implement the first 5-year plan for implementing scaled-up activities based on learning from the POCs (Proof of concept).

m. Involve PIC in all activities starting from PoCs to full plan development and implementation, as and where necessary.

The incoming GoM needs to take up these suggestions, keeping in mind that not doing so may well mean that the next pandemic could cause misery that will then largely be GoM's responsibility.

A. Where is Maharashtra today?

To begin, an assessment of the present status of public health in Maharashtra. We have used data, about Maharashtra, in the context of other states of the Union. Most of this data, from largely Central government sources, has been taken from a book titled 'South Vs North: The Great Divide', by data scientist Mr. Nilakantan R S (NRS)[1]. NRS's 'interpretation' of the data and 'conclusions'/opinions therefrom do not have a place in our discussion.

'Factfulness'[2], a 2018 book by late Dr. Hans Rosling, is our best guide for confirming veracity/usability or, otherwise, any statistics, especially when we consider the entire context of those statistics. For our purpose, we use NRS's collection of data to inform our discussion regarding the situation in Maharashtra and draw our own conclusions to help us set goals for Maharashtra (discussed in section B) and prepare plans to achieve them (discussed in section C).

There is significant evidence in the data presented by NRS to indicate that of all the states in the Union, Maharashtra is at place 2 or 3 or 4, most often behind Kerala, which has the best position/rank in almost all parameters studied by NRS. The specific tables from 'South vs North' that we have chosen to use for this paper are listed as below:

1. Table 4, U5MR 2015 (U5MR = Under 5 Mortality Rate, number of infant deaths per 1000 live births)[3]:

While Kerala is at No. 1, with only 9 such deaths, Tamil Nadu with 17 and Maharashtra with 18 are close at No. 2 and 3.

2. Table 5, MMR, 2015-17 (MMR = Maternal Mortality Rate, number of maternal deaths per 1000 live births)[4]:

Here again, Maharashtra's MMR was the second lowest in the country. At 55, it is just above Kerala, which is the lowest at 42. The 3rd in line is Tamil Nadu with an MMR of 63.

3. Table 6, institutional deliveries of babies, as % of total deliveries[5]:

As usual, at first place, Kerala has 100% institutional deliveries; Tamil Nadu is 2nd with 99%; Punjab is 5th at 91%; and Maharashtra is 6th at 90%.

4. Table 13, number of beds in public hospitals per million population[6]:

Kerala (1,076), Karnataka (1,065) and Tamil Nadu (1,049) are at the top. Maharashtra (426) is after West Bengal (804), Punjab (606), Rajasthan (601) and even Assam (496). This was the status in 2018.

5. Table 14, % of mothers who had at least 4 ante-natal care visits in 2015-16[7]:
Kerala tops with 90%, followed by Tamil Nadu at 81%, West Bengal and Andhra Pradesh at 76%, Telangana at 75% and Maharashtra at 72%.

6. Table 15, improvement in IMR, 1981 vs 2018 (IMR = Infant Mortality Rate, number of infant deaths per 1000 live births)[8]:
Here too, in 2018, Kerala is at No. 1 with 7. Tamil Nadu is at 2 with 15, and Maharashtra is at 3 with 19.

7. Table 16, number of registered doctors per million population[9]:
Here, Maharashtra is the undisputed No. 1, with 1,920 numbers. Tamil Nadu is a distant 2nd with 1,353, and Karnataka at 3rd with 1,275.

The key metrics on child and maternal health are items 1, 2 and 6. Maharashtra has achieved reduction of IMR below 25 a couple of decades back. On the other two metrics too, the performance is obviously improving. It is appropriate to say that with this metric, Maharashtra is doing adequately, and can do better over time.

Metrics that measure hospital/institutional infrastructure are at 3, 4 and 5. Here, Maharashtra clearly has a lot of distance to travel – if we assume that such infrastructure must only be made available by the state or Central government. This is neither a necessary nor a valid assumption. It is also the basic thesis of this paper that responsibility of health is with the citizen herself or himself. Thus, there is need for PPP initiatives in creating and maintaining the necessary infrastructure to provide not just relief to illness afflicted citizens but also to help un-afflicted or normal citizens acquire the wherewithal for increasing health and immunity.

The final one, at 7, is to measure medical manpower. While the absolute number of doctors at the count date are most in Maharashtra, it is worth noting that Karnataka is presently producing more doctors than other states. Also, the need for doctors in Maharashtra currently exceeds availability. For example, in BJ Medical College, Pune, and its attached Sassoon Hospital, there are currently 25%+ vacancies in sanctioned positions of both doctors and nursing staff. Here again, PPP initiatives should help citizens ameliorate the situation rather than sole dependence on the state government. The Government of Maharashtra has itself mooted this vide Medical Education and Drugs Department[10]. In Pune, this experiment has been tried with some success.

A 2019 study by Sudha Ramani et al. paints a dismal picture of the PHC situation in Maharashtra, as seen from the conclusions of this study, extracted from an article, 'Prioritising Primary Health Care in India', by Pavitra Mohan (IIC Quarterly, September 2023).[11] Last but not

least, it would be appropriate to also use here the Maharashtra SDG (Sustainable Development Goals) Report 2019.

All the above statistics are admittedly representative, not exhaustive. Also, all of them are dated to a lesser or larger extent. However, taken together they do present a picture of 'fair' performance by Maharashtra as compared to the rest of India. Admittedly, there is room for significant improvement, in the infrastructure and human resources areas – especially related to Primary Health Care. From goal setting, through planning and execution, to monitoring success, PPP initiatives are welcome across the board. We will discuss possibilities in the subsequent sections.

The second easy conclusion is that health data is very hard to come by and late in the coming. The tables refer to data from 2014 till 2018. Health data quality, quantity, regularity and frequency need to improve, so we can improve population health outcomes.

Dr. Hans Rosling's prescient words come to mind – "When you are called to action, sometimes the most useful action you can take is to improve the data." This is one of the crucial areas where the government can support in data gathering, database creation and distribution – most importantly, in areas where private initiative will be conspicuously lacking, such as epidemiological studies of various kinds – with support from the Central government and international agencies. Again, ideas will be discussed in the following sections.

B. Where do we want to be, including especially health focused Sustainable Development Goals?

1. No poverty
2. Zero hunger
3. Good health and wellness
4. Quality education
5. Gender equality
6. Clean water and sanitation
7. Affordable and clean energy

While all 17 SDGs are laudable and worth aiming for, in the context of 'health', we felt it would be most appropriate to focus on the first 7. Even among these, in this paper we look at the 14 goals in Goal 3, for Good Health and Wellness. Thereafter, in descending order of priority, we recommend 1, 2, 4, 6, 7 and 5. Goals 1 and 2 are 'necessary' for achieving health. Goals 4, 6 and 7 are critical to achieving environmental support or 'sufficient' to sustain and maintain health. Goal 5 will enable all of humanity to grow both mental and spiritual health beginning with the foundational requirement of gender equality.

While we believe the Government of Maharashtra must do a lot to achieve other goals, for this paper we focus on Goal 3 – health and wellbeing – and within it on the 14 sub-goals:

1. Reduce Maternal Mortality to 36 or below in the coming 5-year period
2. Bring the number of preventable deaths of infants below 5 years of age, to 5 or below, within the next 5 years
3. Fight communicable diseases
4. Reduce mortality from non-communicable diseases
5. Promote mental health
6. Prevent and treat substance abuse
7. Reduce road injuries and deaths
8. Access to Sexual and Reproductive Care, Family Planning and Education
9. Achieve Universal Health Coverage
10. Reduce illnesses and deaths from hazardous chemicals and pollution
11. Implement the WHO Framework Convention on Tobacco Control
12. Support R&D and universal access to affordable vaccines and medicines
13. Increase health financing and support health workforce

14. Improve early warning systems for global health risks

Metrics are clearly identified to measure achievement of goals 1 and 2 above. To achieve the remaining 12, the government will need to set up an agency to regulate all commercial and other activities relevant to health and medicine; set performance standards for practices therein; and incentivise health creation and maintenance. This agency would be tasked with creating and updating metrics for claiming achievement of the individual goals above. This agency will need to regulate activities in (and of) the state and co-ordinate with a national organisation with a similar brief. The state organisation could become a subset of the national organisation once health (along with education, water and sanitation) is brought on the Concurrent List of the Constitution. We suggest calling it the Maharashtra Wellness and Clinical Standards Board (MWCSB).

Secondly, to ensure performance by both government and citizens, with citizen participation and acceptance of responsibility, it would be best for the government to act as a partner to citizens by setting up and running entities to promote health generation and encouragement – as PPPs. To ensure that these entities achieve sustainability as a primary goal rather than the nebulous one of 'public service', which appears nobly altruistic but ends up being essentially loss-making and un-sustainable, viz., Haffkine Bio-pharma Ltd, they need to be surplus-generating by nature. These entities will, therefore, need to be commercially viable, not with a pure profit motive but with an objective of ensuring that the organisation makes enough profit on a continuing basis to stay effectively active for several generations. For example, in Pune, the Poonawalla group runs an activity to pick up garbage from the streets, which is an addition to the PMC's own activities of a similar nature. If the two entities could cooperate, there may be a joint effort with greater impact, at lesser cost to government.

It would be best to set up companies with 3 types of shareholders – GoM; at least one domain specialist private business; and citizens of Maharashtra. This last group could make tiny contributions through payment of tax and/or health (and accident) insurance premium. Any new insurance policy premium could be front-loaded with the dual requirement and right to acquire share/s in one of these corporations, like borrowers of cooperative banks become shareholders thereof. To ensure citizen ownership is not just decorative; the companies should be listed on BSE and/or NSE. Citizens would be well-informed about the activities of the corporations they are invested in and will see returns on their investment too. The corporations would not become bureaucratic fiefdoms subject to government rules and regulations that are not designed to promote performance excellence but become swiftly ineffective and inefficient and yet can go on surviving without providing any return on investment in terms of money or other parameters.

Thirdly, it is important to ensure the following:

Collection and use of data about citizens (individual health data) and about the environment in which we live (epidemiological studies). These must be done regularly, annually. While health and accident insurance companies will surely see the value of such data collection, they may not provide sufficient funding support. This needs to be a crucial goal of the GoM in the first 5-year period after the upcoming election. Linking this data collection to the individual's Aadhaar number would enable further utility. Beyond individual health statistics, other data could be sourced and synched with one or all of the following reliable sources:

- Births and Deaths register
- Ration cards database – to indicate economic and family status
- Voters Register – when the person crosses 18 years of age
- Department of Motor Vehicles (RTO) – on vehicle ownership
- Land records – regarding ownership of land as an asset and the person's residential address
- Land Revenue
- Property records in urban locations
- MSEB electricity subscribers
- Water utilisation meters
- Creation and regular updating of school courseware (at least every 2 years) about health as a compulsory curricular course in all schools operating in the state, whether state funded or not. This must start in the upcoming first 5-year period. This must be accompanied by physical exercises, especially including yoga and physical strength building exercises. Yoga is recognised globally as a physical and mental health development methodology, even capable of arresting auto-immune disorders. Padma Shri Nouf Marwaai's Yoga Institute, in Saudi Arabia, is an excellent example.

A sub-goal to make the courseware attractive could be: aiming for international sports achievements by Maharashtra students. PPP support for students who show promise could be a part of the activity, especially now that we are attempting to hold Olympics in Bharat in the near future.

Apart from incentivising citizens and their young progeny in sports, it would be great to encourage businesses to sell products and services to improve health and sports excellence. The state could implement PLI type schemes for producers of pharmaceutical, nutraceutical and related products and services. Obviously, this would need to be dovetailed with the regulators both in the state and across the country. This will ensure uniform national standards for both production and support of these offerings.

Creation and maintenance of a Swasthya Sena, along the lines of ASHA and/or the kind

of health monitors that Colombia has for ensuring they keep track of the health of especially elderly citizens. We also need to monitor the health of our un-supported children (below 18 years of age) in both rural and urban communities. This too will only be possible with specific budgetary support by government. This needs to be a goal for the second 5-year period, although the foundation could be laid in the first 5-year period itself. We have specific thoughts about this, but the first priority is creating 3 organisations, as detailed later in this report.

Ensuring adoption of multiple therapeutic methods for curing ills. Bring in the AYUSH approach to use each medicine system as is most appropriate. To start with, it would be best to expose medical students to allopathy and all the AYUSH methods, with a focus on one dominant 'pathy' as per the student's choice, while ensuring that there is sufficient exposure to the other methods to allow for appreciation of potential use thereof in practice – in say a 6-month period at the end of their primary chosen course. This will benefit both patients and practitioners.

Also, in tune with SDGs, monitoring and alleviating all kinds of water, air and sound pollution. In the first 5-year period, the government could start with setting up organisational infrastructure including regulators and standards bodies. These entities could then do data collection, continuous monitoring, and running specific programmes to target pollution reduction with time-bound goals. Implementation can begin, with rigour being brought in during the next 5-year period.

Finally, minimising road accidents through better transport and traffic management. As the state's overall economic well-being goes up, the number of personal vehicles will increase. While learning how to move their vehicles will come easy to new owners, imbibing and following traffic rules is difficult, as even the current scenario of the streets in the state shows. Rigorous enforcement of traffic laws will need to be started in right earnest during the first 5 years and continued in the next 5 years, so they become habitual, through inclusion in college education. Citizen traffic volunteers could become a normal extra-curricular activity for college youth. With appropriate police support, this could reduce incidents of traffic violations, resultant accidents and property and personal damage.

In brief, the government must see its responsibility as ensuring that the individual citizen, the educational system, the business community and the governance infrastructure at various levels, going right up to the GoM itself, understand their roles and responsibilities in respect of health and are encouraged to adopt necessary practices to achieve the goals set above. Also, simultaneously, it is important to dis-incentivise activities that cause movement away from goals – both positively and with penal outcomes as necessary.

C. How do we get there? Action Plan Phase 1

Data measurement, Concurrent List, budgets, regulation, non-government resources, corporations, environment, incentives and disincentives + short-term and medium-term PoCs (Proofs of Consept), long-term plans based on PoC learnings, designing and developing anti-fragile systems.

For this paper, we have focused on the steps needed to be taken during the first 5-year period after upcoming elections of 2024, keeping in mind the aim to achieve bulk of the SDGs by 2030.

1. The paper suggests a paradigm shift in policy orientation – towards health promotion and assurance rather than sickness removal, and research in health protection with like orientation of the state's and citizens' investment of energy and resources. From the state to the individual, responsibility for a person's health must go on increasing. As discussed earlier, no country can totally take care of the medical needs of its citizens. It is time our citizens were helped to take responsibility for their own health upon themselves. It may sound very bold to say this, but in our humble opinion it would be foolhardy to delay in doing so.

To quote Padma Bhushan Dr. Srinath Reddy, in the 'Introduction' of the IIC Quarterly Spring 2023[12]: "Very often, health challenges are viewed only as afflictions that affect individuals and need attention only at that level. There is inadequate recognition that health threats frequently operate at the population level... The task of promoting, protecting and preserving health at the population level is not that of the health sector alone. It requires an all-of-society commitment... We need people-partnered public health."

Since this has serious long-term implications, a fuller discussion on these issues is done below, in Part II of the paper. For now, let us speak about three critical issues to be addressed even with regard to the short and medium term.

Resources:

It is obvious that state government resources alone are insufficient to combat disease detection, tracking and amelioration. This is true beyond pandemics like Covid-19, and even with regard to diseases like TB and diarrhoea that have been around for much longer. Public Private or Private Public Partnerships need to be created for resolving many problems. We have suggested that the state create 3 different corporations under the PPP model for this purpose. Many more initiatives could well be taken up using this model, to bring in resources from the private sector for both services and products.

Incentives for Private Sector:

The Central government has created a 'Production Linked Incentive', or PLI, scheme to promote private sector investment in specific sectors. GoM could well think of creating such a scheme within the budgetary framework for health care. Another option could be reductions in state taxes, including reductions in the state's share of GST applicable to supply of services and products in the medical and pharma industry, even if they are for a limited period of time or for a specified set of offerings or for a particular part of the Maharashtra geography.

State Capacity Creation:

The track record of state governments in the health care domain has been sketchy at best, to be charitable. It is difficult to create capacity in a believable manner within the state apparatus. Still, among the few places where state capacity could be created is the area of monitoring health and collecting data regarding remote populations, especially in rural and forest areas, and supply of basic medical essentials, such as through 'ASHA' workers. Here, at minimal salaries and even more frugal supervision infrastructure, the state can create a volunteer force that could minimise the need for access to sophisticated or well-trained medical professionals. We have suggested the creation of the 'Swaasthya Sena' as just such a state capacity building exercise. Elsewhere, we are wont to suggest reduction in state capacity application to increase succour and effectiveness of use of resources.

2. Foundational requirement: Enactment of a Maharashtra Wellness and Clinical Standards and Establishments Act, 2021, and under this Act, setting up a Maharashtra Wellness and Clinical Standards Board (MWCSB) to finalise standards for wellness and clinical formulations, activities, facilities and processes. (Appendix 2) The Board will be an independent body responsible for licensing the creation and continued operation of establishments for wellness and clinical activity, including annual audit and certification for continuance of licence validity. It will be empowered to conduct all activities itself and through outsourced entities. It will have teeth, so non-compliance with its regulations will be penalised, so as to encourage compliance. It will need to be modelled on independent regulators like RBI, IRDA and SEBI. Its independence will give it strength far beyond what it could get if it were part of government. There are precedents in GoI, viz., the Energy Conservation Act, 2001, and the independent regulator created thereunder for standards setting, regulation and rigorous implementation thereof. GoM can do it here and help create a precedent for other states and the Union.

3. Empower the Maharashtra SSC Board or equivalent authority to develop and prescribe curricula in pre-school and primary school to ensure health education about both physical and mental health issues, with mandatory examination at the end of the 8th standard to enable students to move into career courses. Ensure implementation of these curricula across all schools in the state, regardless of funding by the state.

4. Form 3 companies with the GoM holding significant (not majority) shares to be listed on the BSE or/and NSE – Maharashtra Swasthya Vima va Mahiti Mahamandal (MSVMM), Maharashtra Swasthya Suvidha Mahamandal (MSSM/M2SM), and Maharashtra Swasthya Shikshan va Sanshodhan Mahamandal (MSSSM/M3SM). Other shareholders could include insurance companies, hospital companies, GoI, and the public – making them PPP enterprises.

The MSVMM will mandatorily provide health insurance to every resident in the state, from birth to death. Each citizen of Maharashtra to be encouraged – 'mandated' like Aadhaar was implemented – to acquire a health and accident insurance policy from the MSVMM. Acquiring the first policy at birth, or at any time later, will entitle the insured to receive an equity share in either of the 3 corporations. There would be a minimum cover – as in PM-JAY or the GoM's existing Mahatma Jyotiba Phule Yojana. For increasing cover and facilities/diseases, individuals could increase their premium.

Second, M2SM should be entrusted the entire medical infrastructure of hospitals, PHCs, ambulances, etc. currently belonging to the GoM. The idea is to ensure that the entire infrastructure area becomes self-sustaining and not overly dependent on state funding within the first 5 years of this pivot. During this period, GoM funding need not go up. It should be maintained, inflation neutral. M2SM to provide the backbone of necessary infrastructure (urban and rural) and services to promote wellness and address illnesses should they occur. Let private enterprise add further facilities as demand arises and they can sustain.

Third, M3SM should be entrusted the primary goal of growing the health workforce of the state and once it is brought to the level necessary, it should be tasked with ensuring that it stays that way – with a focus on health and not merely illness redressal. Courses needed to be designed and implemented accordingly. M3SM need not be the sole provider of these facilities. It will engage in collaborative efforts with private players. The secondary goal would be to invest in research on health improvement, immunity improvement, nutrition improvement with emphasis on locally available food alternatives, etc. M3SM will enhance current medical, nursing and related wellness personnel education and skill enhancement infrastructure along the lines earlier provided by GoM, and also conduct research into both wellness and medical formulations, equipment and processes for commercialisation within and outside the state.

These companies would action their mandates, with the responsibility to generate surpluses to ensure sustainability. Stakeholders will contribute their respective shares, and the companies would be managed with responsibility to stakeholders, starting with SEBI mandated reporting requirements for listed companies.

5. One key foundational activity of the MSVMM would be creation and management

of a Health Data Registry (HDR) to track health status of individuals, and health issues in areas within the state, as measured by them or by facilities operated by the MSSM or by educational institutions and employers with the help of MSSM or by outsourced vendors hired for the purpose. Data is the bedrock of all decisions. Prof. Gita Sen, in her 'Gender Inequality' article in IIC Quarterly speaks of "critical need for policy makers and programme managers to have enough appropriately disaggregated and transparent data..."[13] The HDR will help create aggregate profiles to aid in planning and managing the creation of healthcare infrastructure. This is one of the most important components of a truly proactive as well as responsive healthcare system. The GoM needs to ensure its creation in the first 5 years.

MSVMM and MWCSB would work together to standardise the IT and Communications infrastructure to be used by all participants in the wellness and clinical care sector to ensure easy and reliable data interchange between participants. Also, MSVMM and MWCSB, together with private entities, could create a PPP to be called the Maharashtra Swasthya Mahitee Srot (MSMS) – an easy and free-to-access web portal to supply all current science and facilities information on the health scenario in the state. As much as possible, standardise on technology platforms already available viz., India Health Stack or software tools developed by the National Health Mission (NHM). This will ensure smooth data interchange within the nation across states to ensure best interests of patients.

6. Covid-19 is the 4th pandemic in 20 years. It lasted for 3 years and looks set to continue. GoM must be prepared for at least one more pandemic during this decade. The best way to prepare for pandemics is to ensure a healthy population, with high levels of immunity. Also, to have in place systems for prevention, inhibition of spread, and treatment algorithms to be initiated in the event of a pandemic, under the National Disaster Management Authority (NDMA), 2005. Co-ordinating with GoI's NDRF, GoM should create a Maharashtra Swasthya Suraksha Sena (MSSS/M3S) headed by a Major General or equivalent rank officer of any of the armed forces' medical wings, and staffed largely with paid volunteers. This will ensure creation of necessary temporary medical infrastructure as may be appropriate for emergencies.

7. While personal health is primarily the individual's responsibility, GoM must own responsibility to create an enabling environment. All institutions in between, like family, school, employers, medical establishment, community and local self-government entities, will share government's responsibility. The individual will, of course, also play a role at each of these institutions.

One surrogate and positive method could be to aim for medals in every international sports competition that the nation participates in. GoM should provide incentives for medal winners. This will ensure health activity becomes income oriented, making it easy to adopt

rather than as a duty. Haryana sent 89 athletes to the recent Asian games and won the most medals of any state -- 45. Maharashtra sent 73 athletes but won 32 medals, like Punjab, who sent only 49 athletes. Maharashtra can do much better. GoM should provide monetary and other incentives to athletes at various competitive levels to make sports (and thereby health) a remunerative career option.

8. Although this may appear like a long-term suggestion, we are setting it here since it needs to be actioned at the earliest. The Government of Maharashtra must petition the Government of India to enact Constitutional changes through Parliament to bring health, water, sanitation and education into the Concurrent List, so cohesive nation-wide legislative and action initiatives are possible in these areas. This will ensure co-ordinated activity between the Union and state governments, not merely through financing but also activities that would enable inter-state interactions and regulations to enable formation and implementation of nation-wide clinical and wellness activity standards, and assurance of compliance with them.

9. One key area of concern where GoM and GoI need to act in concert with the Medical Council of India (MCI) is in creating systems and infrastructure for increasing supply of health-care professionals. Anup Karan & Sanjay Zodpey, in 'Health Workforce in India', in the IIC Quarterly (ibid.), speak of "a density level of doctors and nurses/midwives less than 20 per 10,000 population"[14] in Maharashtra, among other states. Further, they estimate a shortfall of between 2 and 3 million such professionals by 2030, assuming threshold density requirement of 34.5 and 44.5 health workers per 10,000 population. (Estimate of shortage (in millions) of doctors and nurses/midwives by 2030...)[15] Their estimates are akin to those in the PHFI-WHO report titled 'Health Workforce in India: Where to Invest, How Much and Why?', 2022.[16]

A public notice issued by the National Medical Council (NMC) on November 15, 2023, has extended the deadlines allowing states to open medical colleges even exceeding 100 seats per 10,000 population till the academic year 2025-26[17]. This leaves a window of opportunity for Maharashtra till then.

The current methods for adding to the supply of all 3 key components – allopathic doctors, nurses/midwives, AYUSH – of the health workforce are just not keeping pace. Also, there is little, if any, organised effort to correct the situation, starting from the simple non-availability of reliable and up-to-date data. The MWCSB in consultation with the MCI needs to ensure that educational facilities and teaching hospitals are permitted to be created with private initiatives, while the MWCSB strictly regulates them, rather than waiting for MCI initiatives. This would be action in continuance with the current assumptions regarding illness prevention/removal as distinct from our primary orientation towards health promotion. However, it is a Plan B, until such time as the number of healthy individuals in Maharashtra society has climbed past the

as yet unknown 'critical mass'.

To implement all these suggestions, GoM would need to constitute teams to identify specific actions, timelines and geographical locations in which to implement these suggestions.

We recommend involving PIC in these activities, starting with doing 3 PoCs – one each at a rural, semi-urban and urban location. Locations could be selected and plans could be prepared by December 31, 2024.

Let us start with 10 critical foundational activities to be completed in Year 1:

1. ensuring births and deaths registrations in the selected areas
2. school curricula creation for pre-school and at least up to 5th grade
3. drafting legislation in Maharashtra to support legislation for GoI to bring health, education, water and sanitation on the Concurrent List
4. drafting enabling legislation to create the suggested 3 companies
5. drafting enabling legislation and creating the MWCSB
6. designing the Health Data Registry and setting it up
7. setting up the 3 companies
8. finding alliance partners to participate in actioning the 3 companies viz., a health insurance company to ensure health insurance policy issuance in the selected areas
9. pilot handovers of medical infrastructure to selected partner/s in these areas
10. finalising with MCI and GoI the new mechanism to set up medical and nursing education institutions.

A lot needs to be done in a rather short time, but there is no other way for change to be wrought. Determine what needs to be done, plan to make the change/s happen, and execute the change with determination, energy and rigour. If the difficulty of the task looks daunting, let us remember that the lives of the entire citizenry of Maharashtra is at stake. If we want to avoid a repeat of the down-side of the Covid-19 pandemic scenario, keeping in mind that such a pandemic is almost certain to occur sooner than later, we must bite this bullet.

While developing new systems or revising old ones, the approach must be to develop anti-fragile systems – systems that not only survive and revive but thrive after they come out of pressure or distress – just like our muscles do when subjected to strenuous exercise.

D. Thinking 'Health of the Public' to become 'Developed Economy'

Our nation is already among the top 5 economies in the world. It is our stated aim to get into the top 3 within the short term.

Our aspiration is to be a developed economy before 2047!

People are the most critical resource available to any nation, and we are today the most populous nation in the world. To ensure we get 'developed', one of the biggest goals has to be making our population among the healthiest in the world if not 'the healthiest'. Only the healthiest population will ensure we are globally competitive and able to achieve global goals on multiple fronts.

This will mean setting and achieving goals for health of the population, rather than merely for reduction or redressal of disease and/or malnutrition.

That calls for a major paradigm shift in our approach – from 'Public Health' thinking to thinking about the 'Health of the Public'.

Changed Focus of Policy Thinking
Opportunity for Change from the Past
Focus 1 – Health, Immunity, Longevity, not Illness
Focus 2 – Responsibility of Individual, not Second Party

1. Opportunity for Change from the Past

The Covid crisis of 2020 is continuing even as late as this calendar year. It has challenged all assumptions about how humanity saw its own survival. Human cupidity (Martin, May 2023)[18] or mal-intention or negligence or error (multiple investigations have hinted at or directly held China responsible for a leak from a Chinese government laboratory in Wuhan) caused a global health disaster. The effects are still being felt and may continue to unfurl, for an unknown length of time. To put it succinctly, the title of a relevant paper will suffice – 'COVID-19 mortality is associated with pre-existing impaired innate immunity in health conditions'. (Lee, et al., 2022)[19]

Further, to quote another more recent article (CDC, 2023)[20]:

"A person with any of the medical conditions listed below is more likely to get very sick

with COVID-19....

The list below does not include all possible conditions that put you at higher risk of severe illness from COVID-19....

a person with one or more of these conditions who gets very sick from COVID-19 (has severe illness from COVID-19) is more likely to:

- Be hospitalised
- Need intensive care
- Require a ventilator to help them breathe
- Die"

As these papers attest, medicine still doesn't clearly know how exactly what caused the deaths or severe illnesses, or how to prevent them in future. Over time, and with sufficient study, causes and remedies may emerge.

However, this gives any thinking government that thinks itself responsible an opportunity to redesign how it addresses the crucial issue of the health of its citizens. Realising that no quantity of resources can ever be sufficient to fully tackle pandemic kind of emergencies, and that no government has infinite resources, governments cannot make unrealistic and dangerously deceitful promises that they will provide safety or even care, when they know they simply cannot. Governments must instead ensure that citizens clearly understand that their health is first and foremost in their own hands. No entity can protect the individual, more than herself or himself. Any other entity can merely help to reduce the impact of accident or disease, not provide any real remedy.

Governments must, therefore, change their health care orientation towards:

i) Trying to ensure health from birth, throughout life, with a focus on healthy longevity rather than disease amelioration. Columbia (a tiny South American country) has done well with a minuscule budget. It has a larger proportion of citizens in the age-group of 95+ years, who are living a more healthy, productive life, than in many countries with larger budgets.

ii) Creating awareness among citizens that taking responsibility for their own health is the only truly reliable way to protect themselves from accident or disease

iii) Addressing these with the most recent and authentic learning, technology and resources, changing (hopefully improving) over time

iv) Ensuring the legal environment is in support of citizens, not in favour of providers of products and services to them by creating and enforcing a common legal environment across the Union so producers cannot take specious short-cuts to the detriment of citizen health, and must compete to win business from them.

v) Creating a National Regulator and Standards body, with teeth for health and related activities to prevent state-specific imbalances.

2. Focus 1 – Health rather than Illness

स्वस्थस्य स्वास्थ्य रक्षणं ।
आतुरस्य विकार प्रशमनं च ॥

This is the foundational shloka in Ayurveda.

First, focus on ensuring that the health of the healthy is protected. Then ensure that the diseased (आतुर) are rid of their illness.

The direction is clear. Human society must focus on creating and maintaining health. With this approach, the requirement to address disease will itself reduce, and the ability to redress diseases will increase.

Based on the unstated assumption that diseases can only be addressed, not prevented, and another again unstated assumption that governments can cure all ills, governments in India have provided disease remedying facilities as the best approach to citizen health care. They created a network of PHCs, secondary and tertiary care hospitals, and related infrastructure. As became painfully obvious during the Covid-19 pandemic, globally, not just in Maharashtra or even India, state infrastructure – even when coupled with cooperative or commandeered private infrastructure – cannot suffice in the face of a true calamity/pandemic.

The individual is on her/his own. Her/his prior personal good health and immunity is the sole source of solace.

Disease addressing mechanisms can at best cope. They can help people survive and revive. Not everyone, only those who are healthy enough to respond to medication. Covid-19 pandemic proved this on a global scale. The inescapable conclusion: any attack on human health can best be combated by the person herself/himself. Medicine can only help a healthy or 'immune' individual.

Governments must promote basic health and increase immunity, more than any other activity. This must be their approach to health care policy and implementation. Singapore, a much smaller nation, has a 'dictum' worth quoting – 'Policy is implementation and implementation is policy.' (Kwan, 2018)[21]. India too demonstrated will and ability to implement needful urgent policy response – expeditiously deploying Co-WIN type of digital tools, developing vaccines within the nation, delivering them to the bulk of our 140 crore population and in world-record time like no other nation, while simultaneously shipping vaccines to help several other countries. This must continue.

Ensuring health of citizens is arguably the single most important concern of any government. What use do law and order, defence, etc. have for a citizenry that doesn't reliably possess the most basic requirement of good health? With health assured, the citizen can aspire to achieve anything in her life. Without health, almost everything is difficult. Policy thinking must therefore move away from an illness-removal or medicine focus to a health and immunity creation and maintenance orientation.

But, to begin with, it should be said that the government's budgetary allocations need to be oriented towards health maintenance facilities rather than only towards PHCs, ambulances and hospitals. The government could spend on health generation and maintenance activities viz., gyms, yoga classes, health volunteers, worthwhile nutrition, even PLI for entities that provide all of these. This will help both government and citizens spend less on illness and more on health. It is apparent from recent statistics (NSO, 2023)[22] that spending on illnesses in the household budget of over 90 million Indians exceeds 10% of their total spend. This kind of spending has increased significantly over the last 6-7 years, most likely occasioned by the Covid-19 pandemic. If both government and households spend more on health promotion, going forward, it may help citizens improve their life and help both government and citizens manage their finances, and more importantly health, far better.

3. Focus 2 – Health is basically the individual's responsibility, not any other entity's.

The primary responsibility for a person's health lies with her/him. Any other entity can at best play a secondary or supplementary role. This message and its implications must become the focus of government, to ensure that citizens are helped to appreciate this fact and adopt relevant practices for their own good.

Emphasis, therefore, must be on individuals spending on health maintenance and improvement and on health and accident insurance, as back-up for unforeseen accidents and illness. The government must make insurance a compelling requirement by providing both incentives and disincentives, like was done for implementation of Aadhaar. The Central government provides low-cost insurance under the PM-JAY. GoM should extend the reach of the scheme, in conjunction with its own schemes, with some modifications as suggested in this paper.

E. Responsibility Hierarchy

Individual, family, educational institutions, employment institutions, the community (village or similar-level group), local and state and Central governments, global institutions

1. The Individual

In 'Our Health in Our Hands'[23], the pioneering work puts "the stress (is) on health... the focus of the book is on inculcating lifestyle and behaviour that are conducive to better health." In 2023, a similar book, 'Hacking Health'[24], by Mukesh Bansal, prescribes the following key tenets of a healthy lifestyle:

1. Get 7 to 8 hours' sleep every night
2. Be physically active every day, doesn't matter how
3. Eat locally sourced raw and cooked food
4. Cultivate mindfulness
5. Pursue goals that have meaning for you
6. Nurture healthy relationships

Mukesh emphasises that 'the pursuit of good health requires making healthy choices almost every day, year after year, and that is why it is challenging'.

A third book, '*Outlive*'[25], written by an American medical doctor, Dr. Peter Attia, provides similar guidance for ensuring not just life longevity, but improving quality of life, even in the later years. Dr. Attia is emphatic about the importance of exercise above all else, including nutrition, and he is helpfully prescriptive about exercises an individual can engage in.

The key message from all the books is: responsibility for an individual's health is with herself/himself.

The human infant is the most helpless of all mammalian (or any animal) infants. We are 'altricial', born under-developed and needing parental care from birth till more than two decades after. The human brain at birth is roughly 30% of its eventual size and will grow till almost 25 years of age. Why? Multiple reasons. "Narrow hips" for evolutionary reasons is one. A second, more researched, key reason is that mothers can't provide as much energy as is needed to grow a 'full' brain. In the last trimester and even while nursing, a mother's Basal Metabolic Rate (BMR or energy consumption at rest) is roughly 2.1 times her pre-pregnancy BMR. At 9 months of a foetus' age, the baby's demand for nutrition starts going beyond the mother's ability to supply, and so, the baby must be born. This, the Energetics of Gestation and Foetal Growth (EGG) hypothesis, is one of the main reasons for human babies to have

only 30% of their full brain size. Research is on to understand all the other reasons. The need for caring is an automatic must-have. (Wong, 2012)[26]

2. The Family (starting with parents)

Language and social skills and the need for family and society follow. For this paper, family, minimally parents, are thus the first set of people that a human needs to depend on besides herself/himself. They are the next highest responsible for an individual's health. They start by registering the birth and taking the first health insurance policy of the individual's life. We are not talking about 'Life Insurance', rather of 'Health insurance', which should also include 'Accident Insurance'. The concerned insurance company will also provide inputs for infant care based on known medical 'facts'.

During the first few years of its life, parents keep the infant from harm and train it in life skills, simultaneously ensuring that the infant receives nourishment and immunisation inputs. The immune system is a person's internal doctor taking care of most ailments from even manifesting. Like with anything else, here too, that which is measured gets done. Children's growth, including immunisation, needs to be measured and tracked to ensure that "the minima" is met. The family must begin inculcating appreciation of the importance of health data collection and maintenance, throughout life, beginning with measurement of physical metrics of the baby at birth. This is the first responsibility of the family to the newborn. The now-'ubiquitous' DigiLocker or equivalent alternative on the Web will allow the family to found the person's Personal Health Data record for her/his own use as and when needed.

The family is also responsible for ensuring appreciation of the importance of exercise, good food, rest and other health and immunity increasing inputs.

3. Educational Institutions

Schools today do not have any place for health in their curricula. This must change. They are 3rd most responsible for the individual's health. They must also have group health and accident insurance for their students, and include the individual child's insurance premium – separately identified as such – in the fees payable to the school. The concerned insurance company will provide inputs to the school to help minimise collective premium by organising school facilities and surroundings in a manner that will reduce its risk and thereby the school's premium for students and for faculty and staff.

All state government funded schools must have well-designed courses – at least one for each year, from the 1st to the 8th year of school. Also, there should be sex education basics that will enable young adults to approach sexual activity with proper information. Along with health theory, each class will also need one physical exercise class – surya namaskars or yoga

or gym, including basic first aid and trauma care. Children must achieve at least 60% marks on both these courses to be eligible to enter the next standard. Each year, each child must undergo an annual (and as necessary bi-annual/quarterly) health check-ups. The results of these check-ups must be stored in the child's DigiLocker (or equivalent) and in the school's DigiLocker, for the duration of the child's presence there. A child's medical records should be transferred to any other school the child transfers to, if this happens. Access to such records must be available only to the school's authorised medical and senior administration personnel. One qualified medical professional must be on duty for the entire school day for every 200 students, with appropriate medical aid facilities. They will ensure health awareness and understanding for each child in school. Children will then, hopefully, leave school with a clear understanding of the basics of health, immunity, and how to maintain them, themselves. The GoM's SSC Board should devise courses in consultation with Ayurvedic and Allopathic doctors of Armed Forces Medical Corps & state disaster management forces. The courses should be routinely updated every second year.

One key component of school curricula must be education about nutrition. An article, 'Nutrition Care: Simple Facts for Healthy Generations'[27], says: "At schools, children need to be informed of the importance of a healthy diet and side effects of junk food.... Junk food needs to be actively discouraged, especially in schools.... To improve overall nutrition of our children, adolescents and women, mass awareness of dietary care during pregnancy, appropriate infant and young child feeding practices, wise selection of foods, and discouraging junk foods is essential." Impact is real, immediate and long lasting. Personal anecdotal evidence – our son came home one day and told us that Colas are harmful, resulting in removal of aerated drinks from our diets for the last 20+ years.

हमारे बचपन से ही हमारी जवानियाँ प्रभावित हैं
हमारी जवानियों से ही हमारे बुढ्ढापे प्रभावित हैं
तो बचपन में अगर आपने बीज़ सही लगा दिया
तो सब कुछ अच्छा हो जायेगा!
- Dr. Kumar Vishwas

Asking people like him to participate in writing school text books would be a great idea. They have the desire and the ability, and they don't need to be paid to do it. They will do it for the joy of doing this good work.

Beyond basic school courses, there needs to be a separate course providing a degree, 'Doctor of Health', designed and delivered at medical schools in the state, beyond the basic MBBS course. Medical education not just for disease redressal but more importantly for health creation and perpetuation. There must be separate courses, not just for physiotherapy, but

for promoting health as distinct from addressing disease. Just like the Doctor of Medicine or MD qualification is a postgraduate course for medical professionals desirous of specialising in Medicine as distinct from surgery or anaesthesia, there should be a course designed to help doctors practice as health professionals, as Doctors of Health or HDs. This course would enable the HD to run facilities to ensure or maintain health to protect from diseases, rather than prevent or cure diseases. They would advise schools, employers and local communities and authorities on how to ensure the health of their constituents, for appropriate fees or retainerships.

Make it an 'EduCare' system not just an education system for doctors. Let there be two streams of graduates: practitioners of healing activities and practitioners of wellness assurance activities.

Also, rather than single 'pathy' teaching, we could advocate composite multi-pathy teaching. Medical and health professionals must have knowledge of multiple therapies, especially the evidence-based aspects of chiefly Ayurved and TCM, apart from the traditional focus on allopathy. They can then apply relevant approaches in appropriate circumstances. No one 'therapy' or method has all the answers, all the time, anyway.

4. Employment Institutions (including self-employment)

This is where the individual acquires serious personal responsibility for her/his own health. S/He starts employment and starts paying for her/his own health + accident insurance. S/He gets instructions from the insurance company on how s/he can keep her/his insurance premium down by taking care of her/his health, keeping in mind her/his job/specific role. One key positive action for her/him is the annual health check-up -- or more frequent ones as her/his health situation demands. S/He may require to share this data with the employer and/or with the insurance company to keep her/his and their costs in check, as well as to ensure proper response mechanisms are put in place in case of special needs.

Her/His employer gets input from the insurance company for ensuring they create a low-accident, high-safety workplace. Also, they get input for data collection, not just about employees, but about the environment within and outside (in the immediate neighbourhood of) the workplace.

The insurance company is creating a good, long-term utility database from the compilation of data from the birth of the individual, throughout their entire work-life, and into retirement. This will help them provide insurance premium reduction or improve their inputs to both employees and employers to reduce accidents or possible dangers to health and improve well-being of their insured clients, while simultaneously helping them improve their income.

5. Immediate Community of Village/Taluka/District Place

This paper attempts to look at two types of human habitations – rural and semi-urban/ semi-rural small communities, and large towns or cities. This section looks at how citizens in the first type of habitat take responsibility for the health of their citizens.

Given below are quotes extracted from a TED talk given by Padmashri Dr. Ravi Kannan, who runs Cachar Cancer Care Hospital, set up by lay people, who voluntarily put up the resources for creating it at Silchar Assam, (Kannan, 2019)[28]:

"How a society can take care of its sick is an important parameter to judge how civilised a society is...

(In parts of India's North East region, cancer is very prevalent largely due to life style reasons, possibly excessive tobacco consumption. These are not his words; they are based on our conjecture.)

Traditional screening is institution focused. You have to go to an institution in order to get screened for any cancer or serious disease. Research all over the world has established that this kind of screening will benefit only between 5-40% patients who will go to institutions for screening. Most others will simply not go for screening, check-ups and therapeutic care.

We are training Accredited Social Health Activists (ASHA) to look for diabetes, oral/breast/ cervical cancer with screening in the homes of patients. Initially there was hue and cry that this cannot be done... we have now screened more than 17,000 people at their homes and they are doing a remarkable job...

We (realised that we) can involve the community to take care of its own kind. If we don't, we can't take care of any disease...

A cervical cancer patient and a colon cancer patient are together the Patient Support group for Kohima...

We realised that people are doing things on their own, so we thought if we link all of them together on a common platform — North East Alliance Against Cancer....

Prevention, tobacco control, early disease detection, palliative care, patient support, rehabilitation... all this has to be community based

This cannot be done by any other agency, like a hospital or the government or the Tatas, or anyone else...

The community has to take responsibility...

does not require a doctor...

Equitable...accessible... quick... affordable... – inclusive health care...

Create communities for health.

Only home visits will be able to address illnesses before they acquire seriousness.

This is as patriotic as the job of a soldier standing on the border protecting us..."

Hopefully, the staccato starkness of the quotes highlights the thought: The community

must take responsibility, for everything that it possibly can.

Insurance to the extent feasible, data collection, fund raising from within and outside the community, depending on outsiders to be minimised totally.

Nagaland has had a positive experience, as shown in the attached extract from Pavitra Mohan, again.

"The communisation of Public Institutions and Services Act was established in Nagaland to legalise community empowerment and delegate powers to the local authorities for all public utilities, including the health institutions. The value base of this Act was: 'Trust the community, Train community members, and transfer government assets and powers to them.' The communitisation of health was ensured through formation of committees (two for rural and two for urban) with representatives from a cross-section of the population in the respective villages and towns.

The villages in Nagaland are administered by Village Councils comprising members chosen by villagers: the traditional councils (gaon buras) are part of the council. The health communitisation committees include members from this council, sub-centre health workers, members from mahila sangha, pastor from the village church and a few other community members. These local health committees take ownership and management of the health centres, including funds management and planning.

An evaluation reported that the decentralisation resulted in better reach and utilisation of services and improvement of infrastructure, especially in places where community involvement was strong and where they were able to generate resources through local NGOs, the church, women's groups and students' groups."

6. Local Government – Neighbourhood/Town/City

Community involvement in creating community health is an idea mooted by the pioneering Dr. Noshir Antia, Founder Trustee, Foundation for Research in Community Health (FRCH), in Pune. The FRCH's 2004 paper, 'Developing an Alternative Strategy for Achieving Health for All'[29], provides the basis for the very idea of ASHA. Their experiment called the lady health associates, "Tais", based on their experience in Parinche village, Malshiras Taluka. They were able to validate the idea that a non-doctor well-trained ASHA (for want of a better term) could eminently address most major health and illness issues in rural Maharashtra. The same paper also showcases plans for enabling the same Tais to address even major diseases. Dr. Ravi Kannan has now demonstrated the success of the approach in India's North East, as the previous sections shows. This is the first ever sincerely successful attempt at PPP in health care on a modest scale. We should rely on the experience of both FRCH and Dr. Kannan to replicate their approach at scale, to help the state and its citizens in times of disease, big and small. In essence, the government should help the community take care of its own, by participating at

scale, in a supportive, non-critical and low-budgetary-support idea like ASHA, working with government's health infrastructure from the PHCs to District/Teaching hospitals. This will be discussed in greater detail later.

7. State Government

Apart from enabling communities to contribute, the state government must try to take responsibility for providing some foundational infrastructure -- both physical assets and databases. Defining the goals to be met, devising many PPP projects, and implementation thereof to achieve the goals is all to be taken up by the government as will be discussed later in this paper.

To quote from an article, 'The Evolution of Health Policy over 75 years'[30], from a book 'Public Health for All-IIC Quarterly', "the crisis generated by the unaffordability of health care for all countries, climate change and experience of the Covid-19 pandemic, all point to the unsuitability of the 19-20th century Euro-American doctor-hospital-centred vision of health care." We need to ensure responsibility acceptance at the level of the individual and the community for health outcomes. There is realisation already in the population, as is visible from the individual's increased share of Out of Pocket Expenses (OOPE) across the nation. Reference, table in Rajeev Sadanandan's 'Health Systems in the Federal Framework in India'[31]. The need for financing cannot be fulfilled by any government, whether state or Union. It needs to come from the most affected party/ies – the individual and her/his family.

क्षमावान् आप्तोपसेवी च भवति अरोगः ।।

"If you can treat and help everyone in this world as your near and dear ones, good health will be the reward (for all)", according to Prof. Dr. B M Hegde, in 'Happiness: What is it anyway?' (Hegde, 2012)[32].

While it cannot be anyone's case that a state government must assume or accept responsibility for the health of its citizens in entirety, it does behoove the state government to ensure an environment where health will thrive and disease will be checked and eliminated. To do that, the chief requirement is a regulator who will ensure that medical professionals, pharma companies, pharmacists, exercise equipment manufacturers, gym operators, yoga training schools, etc.

All such entities are properly and rigorously regulated, and even penalised, as necessary. This is the key responsibility of GoM in the health care area.

The second one is data and the third one is making health insurance available and 'mandatory' at clearly affordable prices.

Fourthly, the state government should try to provide monetary support to the poor citizens of the state, provided they are totally bereft of any resources to acquire health insurance on their own, or their insurance is seriously deficient.

Finally, citizen ownership of state government enterprises in the areas of medical supplies, hospitals, and educational establishments should be encouraged.

8. Union Government

Since, under our Constitution, 'Health', like 'Education, Water and Sanitation', is a state subject, the Union government does not officially have a role to play. Given that it is the government of India (GoI) funding that pulled the entire nation out of Covid's unholy grasp, it is time GoM and states realised the need for formalising GoI's role and created an official method to obtain Central government financial and other support – apart from depending on NHM funds as they already do. To that end, it would be good to intercede with other states to propose and pass in both Parliament and in the State Assemblies, legislation to bring, Health, Education, Water and Sanitation, on the Concurrent list. This should be targeted to be achieved soon after the new Lok Sabha is elected in 2024. A beginning could be made in the Maharashtra Assembly at the earliest after the new Maharashtra government is in.

We see support in the Executive Summary of the Report of the High Level Group (HLG) on Health, Fifteenth Finance Commission of India Report, 2019, which says: "HLG recommended that public health and hospitals may be brought under the Concurrent List of the Seventh Schedule of the Constitution of India from the existing assignment under State List."[33]

9. Global Organisations such as WHO

Since 2019, the World Health Organization (WHO) has not exactly covered itself in glory. WHO behaviour and pronouncements are not independent of influence from its larger funding sources. How reliable is the WHO? The jury is currently out on that question. Dr. David Martin's March 2023 presentation to the European Parliament is a clear indication of how much in the dark the WHO is. Having said that, let us not write off the organisation entirely. However, let us, for Maharashtra, content ourselves with building reliable resources within our state and nation. WHO's desire and ability to take responsibility for any global health concern is today not a well-answered question. This is very likely to be the case with almost any other international agency. In any event, as discussed earlier, this level of organisation carries the least responsibility for our citizens.

One key concern international agencies need to address is with respect to the impact of Adverse Drug Reactions (ADR), which occur largely in only-allopathy geographies. We need to participate in studies together with such geographies, to ensure that our state does not have

ADR as one of the leading causes of death or morbidity.

"Adverse drug reactions (ADRs) are estimated to be between the fourth and sixth most common cause of death worldwide...

The public health implications are profound....

Consequently, medicines risk management must be integrated within a broader global public health vision. To accomplish this, we need to develop the new tools and methodologies critical to assessing these public health imperatives."[34]

F. Action Plan Phase 2

Phase 2 is for scaling the actions taken in Phase 1 to apply them to the entire state in a series of steps of increasing implementation difficulty. There will be multiple learnings from Phase 1, which will lead to changes in implementation at the various locations. Should other states join in implementing similar plans in their geographies, so as to make it a national reality, that would be great.

Apart from purely health and medicine related activities, this is the phase where GoM would require to integrate other related activities such as water and sanitation management, pollution control (air, water, noise, etc.), road safety and traffic management, etc.

Before simply dovetailing these activities into one another, it would be good to develop metrics for success measurement in terms of outcomes such as:

- Medals won in international sports competitions
- Improved quality of life in terms of longer average work lives and more holidays enjoyed
- Improved longevity with lower spends on medical facilities in the last decade of life.

If the above and more such metrics could become part of manifestos of political parties contesting elections in the 2040s, that would be a serious vindication of the effectiveness of the measures taken in the immediate term and also the success of the scaling efforts in the next decade and a half.

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