

Beyond shelter, dweller needs within the four walls

In the interim Budget 2024, Finance Minister Nirmala Sitharaman announced the construction of two crore additional houses over the next five years under the Pradhan Mantri Awas Yojana Gramin (PMAY-G) and the introduction of a new housing scheme for the middle class. This is a commendable step towards realising the goals of the ambitious 'Housing for All' initiative and builds on the success of the PMAY scheme, which has facilitated the construction of nearly three crore rural and 80 lakh urban affordable houses since 2015.

The announcement also prompts us to critically think about the potential trade-offs with quality of life and environmental concerns as a result of the rapid expansion of the housing sector. This is evident in the case of affordable housing, where the emphasis is on mass production, prioritising speed, cost, and ease of construction over factors such as thermal comfort and the implementation of low-carbon infrastructure.

Modern technologies in affordable housing

Within the framework of the PMAY mission, Light House Projects (LHPs) are underway as part of the Global Housing Technology Challenge (GHTC), spanning six sites across six States. These LHPs leverage modern technology and innovative processes so as to reduce construction time and build more resilient and affordable houses for the underprivileged. Additionally, there are ongoing efforts to utilise alternative construction technologies such as Mivan. This technology utilises advanced aluminium formwork, which is recyclable and reusable, to cast and construct various building elements. This approach surpasses traditional construction methods in terms of speed and quality and has a relatively lower environmental impact due to reduced wastage in the construction phase.

Though construction technologies such as Mivan offer higher efficiency and reduce the overall duration and cost of the project, they present a conundrum. The extensive use of cement and steel without proper insulation



Sarah Khan

works in the area of climate mitigation at the Center for Study of Science, Technology and Policy (CSTEP), a Bengaluru-based think tank



Sweta Bhushan

works in the area of climate mitigation at the Center for Study of Science, Technology and Policy (CSTEP), a Bengaluru-based think tank

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results in increased heat gain from the building envelope, causing thermal distress. Consequently, occupants resort to increased use of cooling appliances such as air conditioners. This reliance on cooling appliances triggers a surge in electricity consumption, thereby contributing to elevated greenhouse gas (GHG) emissions. Further, the predominant use of lower efficiency appliances (despite the availability of high efficiency appliances) owing to lower purchase costs leads to higher electricity consumption and resultant greenhouse gas emissions. This underscores a critical paradox, wherein a technology deemed to offer a low-carbon alternative inadvertently contributes to elevated emissions during the operational stage.

Prioritising thermal comfort

The escalating heat stress worldwide is anticipated to affect various population segments, leading to a substantial increase in the demand for cooling. However, the impact of this rising demand will be pronounced among communities belonging to the low-income strata with limited access to cooling amenities.

Therefore, to make vulnerable communities resilient to heat stress, it is imperative that building houses go beyond provisioning basic amenities by integrating passive design strategies for thermal comfort. Such steps would help align the 'Housing for All' vision with broader environmental and climate goals.

The pathway to achieving a harmonious balance among multiple goals lies in the obligatory implementation of guidelines embedded within building codes, as demonstrated by initiatives such as Eco Niwas Samhita. This framework directs attention towards refining building envelope characteristics pertaining to specific climate zones, thereby facilitating a thermally comfortable environment within built spaces. The Smart Ghar III project in Rajkot, an affordable housing initiative under the PMAY Untenable Slum Redevelopment project, serves as a prime example of achieving indoor

thermal comfort through passive design implementation. As various construction technologies are being tested for LHPs, there is no better opportune time than now to incorporate detailed passive design aspects in building design mandating the adoption of codes and guidelines.

However, the challenge lies in their implementation because of the multi-stakeholder nature of the building value chain. This involves architects, engineers, contractors, material suppliers, and end-users, each with their own priorities, constraints and levels of awareness regarding sustainable practices. One major hurdle in promoting the adoption of passive designs is the lack of tangible benefits perceived by the end-users owing to a lack of awareness. While passive designs offer long-term benefits such as reduced energy bills and improved comfort, these advantages are not always immediately apparent to homeowners.

Therefore, an ecosystem change is needed across the entire value chain to encourage the adoption and rightful implementation of the codes. This requires raising awareness and fostering collaboration among stakeholders and incentivising developers to prioritise passive designs.

Buildings for tomorrow

Considering the growing significance of the building sector and its contribution to GHG emissions, the need to address the environmental impact of construction activities is imperative. With an increasing number of building stocks on the horizon, it is important to analyse the trade-offs between embodied and operational emissions. By weaving environmental consciousness into the fabric of housing initiatives, we can ensure that the homes we build not only shelter individuals but are also robust structures that make residents resilient to a warming climate. This approach ensures that our collective housing aspirations contribute positively to the environment and serve as models for a sustainable and inclusive future.

EVA STALIN

Electoral season and restructuring the health system

With the electoral season on, it is going to be raining manifestos. Manifestos are useful documents as they reflect the thinking and priorities of the political parties, besides enabling people to hold the elected party accountable. Given the high stakes and the trend towards current competitive welfarism, the manifestos for 2024 are expected to contain wild promises. It will be interesting to see what space will be accorded to health, education and jobs in the current discourse blinded with temples and distributing consumer goods.

The political outlook

The health section in the 2014 and 2019 manifestos of the Bharatiya Janata Party (BJP) and the Indian National Congress showed commonalities and differentials. Both mentioned revamping the primary health system, ensuring universal health care, expanding human resources, increasing use of technology and so on. The differential was with the Congress underscoring health as a public good that citizens are entitled to as a right and the States' obligation to provide, while the BJP saw health as a commodity, provided through public private partnerships with market based pricing moderated by social health insurance.

After years of stagnation, the United Progressive Alliance (UPA) and the National Democratic Alliance (NDA), have pushed the needle forward. Under the UPA, the National Rural Health Mission, with three times increased funding, aimed to strengthen the delivery capacity in rural India. Five thousand technical personnel and a million community health workers were deployed and the first large scale pay for performance introduced alongside the first social health insurance programme covering 80% of the population in Andhra Pradesh rapidly expanding to another 13 States.

The NDA ensured continuity of policy by scrapping the Medical Council of India (MCI) and establishing the National Medical Commission (NMC), further strengthened the rural health infrastructure with capital investment, expanded social health insurance and established the National Health Authority to undertake strategic purchasing of services from the public and private sector. The NDA also set up an additional 317 medical colleges and doubled medical seats to 1,09,948. While in gross amounts Budgets increased, in terms of proportion to GDP, public spending under the UPA and NPA hovered around an average of 1.2%.

As can be seen the measures, though impressive, were incremental and did not address the serious issues of reforming the very architecture of the health system that had over years become distorted and dysfunctional. Twenty years is a long time. Other countries of



K. Sujatha Rao

is former Union Health Secretary, Government of India

Achievements during 2000-20

A look at country outcomes

Country	IHR/1000 births	MMR/1 lakh births	Household expenditure (%)	Expenditure on health (% of GDP)
Turkey	30.9 to 8.1	42 to 17	28.6 to 16.9	2.84 to 3.64
Thailand	18.7 to 7.4	43-27	34.2 to 8.7	1.71 to 3.07
India	66.7 to 27	370-103	71.7 to 53.3	0.83 to 1.08

Source: World Bank. The lower the figure, the better it is to reduce requiring strong delivery capacity at secondary levels.

similar economic strength achieved significant outcomes within half the time span. Thailand for example, introduced Universal Health Coverage in 2000, drastically reducing peoples' financial burdens; reduced disease incidence, maternal and infant mortality and consolidated the dominance of the public delivery system, particularly for primary and secondary care. Turkey too introduced, in 2003, its Health Transformation Program under which dual practice (where a government doctor could also do private practice) was banned, strengthened public health infrastructure by adding 50,000 hospital beds and doubling the number of nurses and doctors, and the private sector presence restricted to 20%.

With India's maternal mortality three times more than the global average of 38 per one lakh births, India has a long way to go. The primary and secondary health infrastructure is weak with severe shortages of human resources. States such as Bihar still have one doctor serving per 20,000 population. While so, policy focus seems to be shifting towards medical care in tertiary centres, though 95% of ailments and disease reduction can be handled at the primary and secondary level.

Resilient integrated primary health care

Strengthening the base is critical as it is here that community surveillance and demographic data alongside the disease profile of the designated populations get integrated which then enables planning for the right skill mix required to address current and future health needs of the populations. Mapping and accrediting good health facilities enable expanding access points. Spelling out the package of services and making communities aware of their entitlements helps increase accountability. Undertaking such actions in a coordinated and appropriately sequenced manner requires strong local capacity to regulate patient flows and continuity of patient care.

Successful examples of such reform processes show deliberate intent executed to a plan. Thailand's launch of the Universal Health Coverage in 2000 was the end of a planned strategy. For years Thailand had a strong HR

policy in place. For five years prior to 2000, Thailand dedicated three quarters of its Budget to building the provincial level health infrastructure with a capacity to provide quality care.

Compared to that, India's strategy for UHC has hinged on purchasing services from a private sector operating on the inflationary a fee for service model within the backdrop of severe supply shortages in the system, particularly of specialists and nurses. Due to extensive market failures, worsened by poor capacity to govern, looking to the private sector to deliver is not smart.

Given our political economy, reforming and restructuring our health system is not easy. Not only do we need a strong political leadership that is willing to shed its preoccupation with high-end hospitals, hi-tech diagnostics and digitisation but also have the courage to bite the bullet to undertake reforms in a synchronised fashion starting from the base. Designing and putting in place a system 'fit for purpose' would imply bringing about changes in the medical curriculum, so that doctors work in teams and in rural areas (a recommendation that Musaliar made in his report of 1969). Having more equitable admission policies and HR policies, such as banning dual practice, delegating functions, creating new cadres and building teams with clarity in their functions will ensure a community/patient outcome-based health system. Establishing IT and monitoring systems that evaluate performance based on outcome data linked to financing will enhance efficiencies and optimise investment. The implication of such a system is that it is predicated on the concepts of decentralisation and operational flexibilities within a proactive, accountability framework that respects the values of equity, human dignity and trust.

The challenge ahead

The challenge is to understand the current system of health care and have the imagination to design the process of reform while building the implementation capacity at the district level by training and upskilling existing staff. Simultaneously, there must be an infusion of new institutional and organisational capacities and resources. Building such a process will take time as every State has a different level of capability. Done well, it can reduce demand for hospitalisation by at least 30%, disease incidence (by bringing in lifestyle changes in the diets we follow and exercises we do), and out-of-pocket expenditures that are likely to increase due to more than 20% of young Indians suffering from multimorbidities and an ageing population – together consuming more drugs and diagnostics.

Can our political parties commit themselves to such a process in their manifestos? Or, is that a big ask, is the question.

India needs a strong political leadership that is not only willing to shed its preoccupation with 'high-end' and 'hi-tech' but is also courageous to undertake reforms in a synchronised way

EVA