

COSTING OF HWCs: A CASE STUDY OF GUJARAT

*Indrani Gupta**, *Mayur Trivedi[#]*, *Vishal Jani[#]*, *Kanksha Barman**, *Avantika Ranjan**, and *Manas Sharma[#]*

Objective

The National Health Policy 2017 recommended the establishment of Health and Wellness Centers (HWC) as the primary platform to deliver comprehensive primary health care in India and also emphasized that about two-thirds of the health budget of the government should be invested in primary care. Since then, HWCs under Ayushman Bharat have been the focus of government policy to strengthen primary care in the country. HWCs are envisaged to deliver Comprehensive Primary Health Care (CPHC), with a broad range of services that go beyond maternal and child health care to include care for non-communicable diseases, palliative and rehabilitative care, oral, eye, ENT care, mental health and first-level care for emergencies and trauma, including free essential drugs and diagnostic services. This research aimed to estimate the recurrent and incremental costs of running HWCs across different models of conversion in the state of Gujarat. The objectives of the study are:

- Literature review of functional models of primary care globally with a focus on costs
- Analyze the different HWC types functioning in the state of Gujarat based on a sample of HWCs
- Estimate the total and per-unit costs for each type of HWC, using a suitable indicator for measuring output, and analyze the differences across types of HWC, for pre-conversion and post-conversion costs
- Estimate the incremental unit costs — the difference between the pre- and post-conversion unit costs to understand the cost implications of the conversion
- Based on the results, indicate an estimate of the total cost of scaling up HWCs in Gujarat

Gujarat has been implementing various reproductive, maternal, neonatal, child, and adolescent health (RMNCH+A) programs along with a focus on prevention and control of non-communicable diseases, mental health problems and malnutrition. Gujarat has also been a front runner in the response to the Government of India's announcement to create HWCs by transforming existing primary health care

KEY MESSAGES

- The HWC initiative was intended to improve primary comprehensive care in the country.
- The model has been a low-cost initiative so far, though the costs vary across the type of conversion.
- The incremental costs for conversion based on target number of HWCs in 2020-21 were INR 3-4 crores for the UPHCs and CUPHCs and between INR 35-52 crores for SCs and PHCs.
- However, all the services envisaged have not yet been added; incremental costs will increase once these get added and footfalls also increase.
- For scalability and replicability, the government needs to be aware of the likely costs of expansion and make the requisite budget allocations.
- The results of this study can serve as a benchmark for comparing with other similar studies.
- A longer time horizon for the cost data would strengthen the robustness of the results.

facilities in urban and rural areas. Thus, the state has undertaken upgradation of building and facilities of existing sub centers and primary health centers in rural and urban areas, and initiated training of mid-level healthcare providers, also known as community health officers (CHO).

Methodology

Evidence from existing literature was examined for costing and included countries such as Burkina Faso, Pakistan, Indonesia, Haiti and Ghana. Within India, the costing studies examined were based out of the states of Haryana, Punjab and Himachal Pradesh. Approaches to estimating costs in healthcare have been broadly categorized into two categories: top-down and bottom-up. In the case of HWC, the costing is done from a programmatic point of view and not from a societal perspective and there have been no gifts and donations involved in the HWC initiative.

Finally, since the transition to HWC has been from existing primary care facilities, there has not been any significant capital costs involved except the initial start-up costs that are quite nominal. However, the most important methodological addition has been to include costs of resources used that come from outside the HWC programme but help in the running of the HWCs. Thus, the recurrent costs of running the HWC becomes more relevant in this context.

The aim was to compare pre-conversion and post-conversion cost data for each of the HWCs. This required one full year of cost data for each of these two phases and a suitable indicator for measuring performance of the facility. The performance indicator data is available from the (Health Management Information System (HMIS) as well as the HWC portal. After much deliberation, it was decided to use OPD attendance data or total OPD visits from the HMIS as the denominator to total costs, to obtain unit cost data. Expenditure data of three financial years, i.e. 2017-18, 2018-19, and 2019-20 was collected. Annual costs were estimated by taking the date of conversion for each center and calculating expenditure at each center for one year before, and one year after this date of conversion.

In the first phase of the conversion of existing facilities into HWCs, 1,656 facilities were selected for transformation during 2018-19. The sample sites were selected from these phase-1 facilities to ensure a full year of data before and after the operationalization of the HWCs. For the data collection purpose, eight HWCs were selected, one of each kind, from two districts. This ensured representation of all four types of facilities, a comparison across the districts, and ease of data collection. The criterion of having all four types of HWCs in a district resulted in the selection of Gandhinagar and Rajkot districts, as only those two districts could fulfill the requirement. The data collection involved several visits to various offices and facilities, and interactions with officials at various levels. Once all the data was collected and checked for gaps and errors, it was compiled for analysis. This stage required a thorough scrutiny of data across various line items, and data sources. Ultimately, the data was classified into five major categories viz. a) Human Resources, b) Drugs, vaccines, and consumables, c) Infrastructure, d) Training and outreach activities, and e) Miscellaneous expenses.

Findings

- Total costs differ widely even within a category: apart from the Primary Health Centers (PHC), where costs seem quite similar, in all other cases, the costs differ significantly for each type of facility.
- Across districts and for all types of centers, costs have gone up after conversion to HWC. The maximum increase has been in the Sub Centers (SC) in both the districts and the least increase has been in the PHCs. Rajkot district has seen a higher increase in costs as compared to Gandhinagar for all types of centers except for the PHCs.

- Since total OPD visits have been taken to arrive at unit costs, a variation in such visits is an important indicator of demand. OPD visits differed significantly across the different facilities, with SCs witnessing the lowest OPD visits. Visits were largely comparable at both SCs, PHCs and UPHCs (Urban Primary Health Center). Only at the two CUPHCs (Corporation Urban Primary Health Center), the number of visits differed to quite a large extent. However, the point of interest is to see whether the footfalls increased post conversion, and it does seem as though it did for all the facilities, but especially for the SCs. This is because the position of a CHO (Community Health Officer) was created with the intention of giving a boost to OPD where previously regular OPD services could not be availed.
- While cost per catchment population has gone up for all the facilities post-conversion, costs per OPD footfalls has actually come down significantly. This is especially true of the SCs. So, while there has been the most expansion of HR and services at SCs, the additional footfalls still end up lowering costs. In most cases, there has been a fall in the incremental costs indicating that the conversion to HWC has actually been quite economical. For the two SCs, the incremental costs are significantly lower indicating possibly significant gains in the conversion of the SCs to HWC.
- Rajkot CUPHC, UPHC and PHC resulted in lower per OPD patient costs compared to their counterparts in Gandhinagar.
- Human resources were the main component of costs for all the centers. The share of human resources in the total cost was highest for SCs, coming to about 85-88% for both SCs, while for UPHCs it was 58-60%.
- The share of drugs, vaccines and consumables was at a much lower second place for all the facilities, being between 11% and 26%. Importantly, there was hardly any change before and after conversion. Across the eight centers, drugs accounted for almost 50% of the cost-share out of the three sub-categories, both pre- and post-conversion to HWC. Vaccines were a close second at over one-third of expenses in this component, and consumables accounted for 16% of the cost pre-conversion and 12% post-conversion.

Policy Implications

The HWC initiative is a novel one, with several operational layers. For scaling up and replicability, it is imperative for the government to know how much the HWC initiative is going to cost the exchequer and what additional burden will be placed on the state health budget, so that there are no interruptions in the smooth flow of services.

The HWC model runs along the lines of NHM in terms of Center-State financing in a 60:40. However, operationally, the States end up spending more than 60% on total costs, especially for rural HWCs. The shares are somewhat lower for the urban HWCs.

In all, a total of about INR 713 crore will be spent on running 1,500 HWCs in the year 2020-21.

However, the incremental costs of scaling up would be significantly less at about INR 94 crore. The incremental costs are the most relevant information for the state government because it indicates the additional budgetary requirements.

With a target of 1,000 SCs to be converted in 2020-21, the total cost of running these converted SCs would be considerably lower at INR 187 crore, compared to INR 472 crore for running 403 converted PHCs. The incremental costs would be much lower at INR 52 crore and 35 crore for SCs and PHCs respectively. The incremental costs are lowest for CUPHC, followed by UPHC, PHC and SC, respectively. Based on the revised estimate, the total and incremental expenditure on HWCs would be around 7.9% and 1% of the revised estimate for 2020-21, respectively. The additional allocation of 1% of total budget of the department towards HWC expansion thus seems a very reasonable allocation.

The results indicated that in terms of total costs, PHC-converted HWCs were most costly to run, followed by CUPHC-converted facilities. SC-converted HWCs were the least expensive.

While the results are encouraging and point to a possibly successful program launched by the Central government, an important caveat needs to be stated. One year each of pre- and post-conversion data and attributing the modest incremental costs to the success of the HWCs initiative alone with a small sample size is not sufficient to fully understand the equilibrium costs of different types of HWCs. There could be other incidental reasons for the increase in footfalls like changing disease burden and other epidemiological causes. Also, since these are early days, the number of services has not been fully scaled up yet; mental health, dental health, ENT and ophthalmic services are yet to be initiated fully, and once these are started, it can be expected that the total costs, as well as footfalls, may change substantially, and the final effect on incremental costs would have to be estimated from fresh data.

Another important point to note is that only fully functional facilities could be included in the study for methodological reasons. There are areas in Gujarat where the functionality of health facilities could be sub-optimal and the costs may look different. More research with additional data points would be required to confirm these tentative findings. However, being the first costing study on HWCs in India, this study could provide a baseline for future such studies.



The India Health Systems Collaborative (IHSC) is a growing network of health systems researchers in India. IHSC is envisioned to be an integrated ecosystem of researchers that work in close collaboration with decision-makers, public, donor as well as big philanthropic organizations.

Founded in 2018, the collaborative was built with the dual purpose of responding to policy questions that are critical to India's health system and fostering a well-connected community of health system researchers in the country and strengthening research capacity in the process. IHSC aims to provide an interdisciplinary platform for collaborative research to generate evidence for policy interventions on challenges confronting the country's health system.

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The authors are associated with *Institute of Economic Growth, Delhi and #Indian Institute of Public Health, Gandhinagar

The corresponding author can be reached at indrani@iegindia.in

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For any query, please contact us at maulik.chokshi@accessh.org or tushar.mokashi@accessh.org

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