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Editorial

Manpower calculation using scientific tool: A step toward self-sustainability and maximizing operational efficiency in healthcare setting

Naveen Bansal[1], Shivani Choudhary[2], Ashish Gulia[3], Charu Singh[4]

[1]Department of Transfusion Medicine, Homi Bhabha Cancer Hospital and Research Centre, New Chandigarh, Punjab, [2]Department of Anatomy, Manipal Tata Medical College, Jamshedpur, Jharkhand, Departments of [3]Surgical Oncology and [4]Microbiology, Homi Bhabha Cancer Hospital and Research Centre, New Chandigarh, Punjab, India.

Manpower is the most crucial factor for proper healthcare delivery in any hospital setting.[1] Self-sustainability of a healthcare institution can ensure wide coverage and augmentation of healthcare facilities in India. An important factor in achieving self-sustainability is optimum manpower and optimum operational efficiency of the healthcare manpower.[1] Efficient use of healthcare staff, including doctors, nurses, technicians, and support personnel, can significantly impact patient outcomes, reduce wait times, and optimize resource allocation. Overstaffing can result in increased financial burden and decreased operational efficiency of staff. At the same time, understaffing can result in poor healthcare delivery.

Healthcare administrators have to rely on crude methods like population ratios to decide on manpower requirements. The World Health Organization released the Workload Indicators of Staffing Need (WISN) tool in the year 1998.[2] The latest version of the WISN tool has been released in the year 2023.[3] The WISN tool is a powerful approach for hospitals to ensure that their staffing levels are aligned with the actual demand for services. The tool can be particularly valuable for resource-limited settings, where staffing levels have a significant impact on health service delivery.

The WISN method follows a structured approach for the manpower calculation which involves eight major steps:[3] (i) Determining priority cadre(s) and health facility type(s); (ii) Estimating available working time; (iii) defining workload components; (iv) setting activity standards; (iv) allowance standards: category allowance standards and individual allowance standards; (v) establish standard workloads; (vi) calculating allowance factors; (vii) determining staff requirement based on WISN; and (viii) analysis and interpretation of WISN tool.

Finally, a WISN ratio is derived from the calculations which can assess the work pressure that health workers experience in their daily work in a health facility: WISN ratio of 1 shows that current staffing is in balance with the staffing demands of a health facility's workload; >1 is evidence of overstaffing in relation to the workload; and <1 indicates that the current number of staff is insufficient to cope with the workload. Rout used the WISN tool to calculate the manpower requirements at blood center of an apex tertiary care institute for all cadres of staff employed and found that WISN ratio for all medical cadres varied from 0.2 to 0.85 indicating understaffing and overburden.[4] Hagopian *et al*. deployed the WISN tool on midwifes cadre employed in primary healthcare setting and found a WISN ratio of 0.57, concluding staff shortage to meet the service guarantees of the National Rural Health Mission, India.[5] Farrasizdihar *et al*., in Indonesia, used the WISN tool in a radiology setup and found a WISN ratio of 1.0 indicating adequate manpower.[6]

WISN tool can be an excellent tool for policy makers to define minimum manpower, which is government by law for standardization of manpower norms.[7] In addition, WISN tool can help define job description of a specific medical cadre, which is especially useful in a primary healthcare setting.[2] WISN tool also indirectly provides information about operational efficiency of a healthcare cadre.

However, implementation of WISN tool has few challenges as well: (i) accurate workload data are crucial for the success of WISN. Hence, poor record-keeping can result in erroneous calculations; (ii) staffing needs are dynamic and can change with new diseases, population growth, or changes in hospital

*Corresponding author: Naveen Bansal, Department of Transfusion Medicine, Homi Bhabha Cancer Hospital and Research Centre, New Chandigarh, Punjab, India. drnaveenbansal87@gmail.com

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capacity. Therefore, WISN should be part of an ongoing workforce planning process rather than a 1-time exercise.[8]

The WISN tool is a powerful approach for hospitals to ensure that their staffing levels are aligned with the actual demand for services. By providing a structured method to assess the balance between workload and staff capacity, WISN helps optimize workforce distribution, enhance patient care, and support better resource allocation.

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