SPECIAL ARTICLE

Empowered Nurses: A Win-Win Situation in Pediatric Critical Care

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The atmosphere of a pediatric intensive care unit (PICU) is charged, fast paced, stressful, and tiring with emphasis on precision of care. Pediatric critical care nursing is still in its infancy stage in India and other low middle income countries. The lack of resources, staff shortage, migration and brain drain are persistent issues in India. There is lack of career advancement as well as exposure to research activities. Keeping these barriers in mind, over the years, we have adopted certain multipronged strategies in our PICU with the objective of empowering, and motivating our nursing personnel. We have been able to 'build a horizontal team' where each member feels wanted and works to his/her maximum capacity. This model of nurse empowerment may be reproduced by other institutions especially in low middle income countries that are also struggling with similar problems.

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Nursing is the backbone of any healthcare system and nurses constitute about 60% of the global health-care work force [1]. They are the first point of contact for health-care service seekers and often the first responders for health emergencies. Working on the front lines, nurses play an important role in the delivery of high-quality care and bringing about favorable patient outcomes. Among the various nursing disciplines, pediatric nursing is extremely challenging given that they attend to patients belonging to a wide range of age groups. The pediatric nurses balance both the uncooperative children and their anxious families. Within pediatric nursing, the subset of pediatric critical care nursing is more demanding and challenging. Pediatric intensive care unit (PICU) environment is charged, fast paced, stressful, and tiring with emphasis on precision of care. Attention to details cannot be over emphasized as the smallest of errors can be life threatening. Globally the concept of pediatric critical nursing has evolved significantly [2]. In India, pediatric critical care nursing is still in its infancy, although the sensitization about its need is catching up fast.

In developed countries, nurses have evolved from being subordinates to doctors into independent health-care professionals practicing technology guided and evidence-based care. There are clear laid down policies and legislations for minimum recommended nurse- patient ratios. Key organizations like World Health Organisation (WHO) and International Council of Nurses (ICN) are voicing the need for nurses to become more involved in leadership, advocacy and policymaking [3,4].

The scenario in low- and middle-income countries (LMICs) is different. India is amongst the most populated countries with growing health care needs. Public sector hospitals are overcrowded and have myriads of challenges and barriers [5]. These become impediments to nurse empowerment and their autonomy to work as independent stake holders.

PROBLEMS

Staff shortage: A lower nurse-patient ratio results in lower mortality rates, shorter hospital stays, and decreased readmissions [6]. However, there is disparity in the availability of nurses in different regions of the world, including India, with only 6.0 active nurses/midwives per 10,000 population, that is far below the expected [7]. In India, the deployment of nursing personnel is as per the Staff Inspection Unit (SIU) norms that were framed in 1991-92, and are obsolete in the face of changing patient needs and complexity of treatment [8].

The ideal nurse:patient ratios according to SIU norms, should be 1:4 and 1:2 for pediatric general wards and neonatal nurseries, respectively; but even in tertiary referral multispeciality hospital like ours, with no cap on admissions, the ratios are dismal (1:15 for wards and 1:30 for emergencies). Similarly, for the pediatric ICUs, the recommended nurse:patient ratio of 1:1 is seldom

achieved, challenging the ability to care with precision [9]. Adverse events related to medication errors, needle stick injuries and breach in care bundles compromises patient safety, results in healthcare associated infections (HAI), and prolongs hospital stay [10].

Migration and brain drain: Excessive work load coupled with meagre salaries and lack of incentivisation for specialised nursing care in neonatal and pediatric critical care units, result in poor job satisfaction [11,12]. Better salaries and higher standard of living in developed countries attracts nurses towards job opportunities overseas [11,13]. There is a passive acceptance of health care worker migration by the policy makers [14,15]. Lack of policy, guidelines or legislation to check migration of nurses or other health care workers only adds to this brain drain.

Non-existent concept of specialty nurses: Nurses are rotated from one specialty to another and are expected to perform with the same acuity, passion and commitment in each random rotation. Nurse administrators with no clinical experience of the particular specialty are expected to lead and produce results. The importance of specialty nurses as an asset for an ICU is lost, while striking a balance between individual interests and hospital needs [4,5,16].

Non-nursing jobs: Nurses in India are required to perform a host of non-nursing jobs which include maintenance of drug inventory, central sterile supply department (CSSD) inventory, medical equipment log-books, linen stock, admissions and discharges, supervising ward and sanitary attendants. Performing these non-nursing jobs curtails time for actual patient care, and can lead to exhaustion [15].

Lack of career advancement and recognition: Our health care systems are predominantly doctor driven and nurses are usually considered subordinates to the doctors. The intellectual capabilities of nurses are rarely recognized. The idea of team concept seldom gets translated to practice, and due credit and recognition to nurses is denied [16,17].

Concept of lateral entries for promotions in nursing administration is missing; promotions in clinical nursing, appraisals or salary raise are seniority based and not performance based. There are limited opportunities for career progression and in-service education [5,17].

Research exposure and opportunities: Research opportu- nities are confined to the academic nurses who are usually not directly involved in patient care. The clinical bedside nurses lack knowledge and awareness about research methodology and nursing research is barely utilised to improving the nursing care. Lack of nurses' involvement in parental counselling and communication barriers within heath care team are other issues which need to be addressed.

A PICU MODEL OF NURSE EMPOWERMENT

The above barriers can only be addressed by empowerment of existing nurses. Empowerment has a positive impact on employees; it motivates them to perform better and deliver quality care. A healthy work environment is important to achieve this empowerment. An intensive care unit is a good place to practice nurse empowerment and inclusiveness.

Our PICU is a 16 bedded level 3 ICU with a nurse-to-patient ratio of 1:2 for ventilated and 1:3 for non-ventilated children. However, the ratios exceed to 1:3 for ventilated patients many a times. Nurses provide comprehensive care to the critically sick children, which involves attending to personal hygiene needs, assessing, monitoring, assisting doctors for various procedures, preparing for admissions and discharges, indenting medications or surgical supplies, supervising the jobs of hospital and sanitary attendants, performing and supervising the cleaning and disinfection procedures, parent education for parental participative care etc.

Over the years, we have adopted certain strategies with the objective of addressing the shortage and empowering our nurses, thus circumventing some barriers over time.

Nurse as a primary driver: We identified certain core areas where nurses can be primary drivers. The tasks that require stringent supervision and monitoring are better executed by nurses as they are in a position to ensure continuity and adherence to established protocols like infection control. Our nurses were made the primary drivers for infection control program and one PICU nurse is re-designated as infection control nurse (ICN) by rotation. This nurse in addition to his/her other nursing tasks is responsible to maintain good hand hygiene compliance, check adherence to all preventive bundles, and assess the daily need for an invasive device. Low-cost simple device reminders (colorful balloon) are pasted at the head end of a patient's bed once the duration of an indwelling catheter exceeds 7 days. He/she is given autonomy to ensure that strict aseptic techniques during various procedures and device maintenance bundles are followed religiously. Cohort nursing is practiced for children infected with multidrug resistant organisms to avoid cross-contamination. A separate sepsis board was created to keep a count of hospital acquired infections (HAI) in real time. Appreciation for '0' count of HAI and best hand hygiene compliance are acknowledged on unit pin up boards. However, breach in hand hygiene compliance or infection

control bundles are communicated to the concerned healthcare providers on individual basis.

The autonomy to handle infection prevention and control measures gives our nurses a better sense of belonging to the unit, and increases their overall morale.

Nurse driven unit huddles: All health care workers posted in PICU gather for about 15-20 minutes daily morning for an update regarding the PICU patients. Daily unit huddles are conducted by the PICU nurses by rotation. The whole team is apprised about the last 24 hours patient census, new admissions, shift outs, critical incidents, planned procedures and patient transport for the day, count of HAI, number of children on antibiotics and devices, reminder for de-escalation of antimicrobials and removal of devices, and reinforcement of hand hygiene and care bundle compliance. A separate huddle board has been created to put all summary points that need attention during the unit huddle. The unit huddles help plan their activities in advance and provide an opportunity to introspect critical incidents or HAIs.

Parental participative care: Parents being natural care providers to their child at home are allowed to stay with the child and help in patient care activities like feeding, cleaning, measuring urine output, changing diapers, providing emotional comfort etc. They are counselled and educated by the PICU nurses to perform these familiar tasks in unfamiliar setting through daily morning small group sessions, printed pamphlets and videos in vernacular languages. Repeated rounds of reinforcement are done. Parental participation in care decreases the workload of nurses and enables them to focus on more important tasks like assessment and monitoring, and preparation and administration of drugs and medication.

Resource persons for capacity building: Our PICU nurses are actively involved in capacity building of nurses working at district level hospitals in the State of Madhya Pradesh as a part of the Integrated Module for Pediatric Acute Care Training (IMPACT), a collaborative project between our institute, UNICEF and State National Health Mission. The nurses trained in these workshops, visit our institute as observer for further skill training. Grassroot level nurses gain precious skills and knowledge while our nurses find this collaboration meaningful and motivational for their professional growth. The IMPACT program was awarded the Innovation in Education Award for 2021 by the Society of Critical Care Medicine (SCCM),USA.

Simulation training: It has been seen that only 50% graduating nurses could perform basic nursing care skills and less than 10% independently practiced few of the advanced nursing skills [18]. Learning critical care skills through simulation is a safe, less time-consuming method to avoid harm to patients. In our unit, new entrants (doctors and nurses) are trained on simulators before they perform procedures on patients. Nurses are amongst the first to be trained in simulation and participate as a team to practice scripted scenarios. Many procedures are videographed and shared with other team members, for a continued learning experience.

Nurse driven quality improvement initiatives: As bed-side care providers, nurses are the best for identifying quality improvement opportunities [19]. A number of bedside nurse-driven quality improvement initiatives have been conducted in our PICU like implementation and adherence to VAP and CLABSI bundle care, critical incident reporting, sepsis and equipment audit, and device reminders. Maintenance of equipment in the absence of a full time ICU technician is a tedious task that was streamlined with the involvement of nurses.

Ongoing education and research activities: Nurses from our unit actively participate in various conferences and workshops as faculty members. Many are certified Basic and Advanced Life Support instructors. They are contributors in pediatric critical care nursing and Advanced Life Support manuals and also involved in conducting research projects on parental participation in patient care activities, reducing HAIs and use of simulation.

A one-year fellowship program in pediatric critical care nursing has been started at our institute. This program entails recruitment of three nurses biannually for training in pediatric critical care. This will encourage more nurses to get formally trained in the discipline of pediatric critical care.

CONCLUSION

Nurses call for active participation and leadership roles from the medical team. The traditional vertical leadership and hierarchical team is outdated in today's scenario [20].

Box I Recommendations for Empowered Nurses in the Pediatric Intensive Care Unit (PICU)

- To shoulder responsibilities beyond their usual subordinate roles.
- To lead health care teams looking after infection control and critical incidents.
- To minimize out-of-PICU rotations for specialty nurses.
- To participate in capacity building of grassroot level nurses (PHC/CHC) while working in tertiary hospitals, for nurse empowerment and addressing staff shortage.
- To involve nurses in research collaborations for them to understand local problems and gain professional satisfaction.

PHC-primary health center, CHC: community health center.

Through our multipronged interventions, we have endeavored to build a horizontal team, where each member feels wanted and works to his/her maximum capacity despite the shortage of nursing staff. Participation in the process of decision making provides a sense of responsibility. Our model of nurse empowerment has created a healthy work environment and interpersonal relationship between doctors, nurses and other health care workers. A team that has respect, trust and care for each other survives longer.

This model of nurse empowerment (**Box I**) may be replicated in other institutions, especially in LMICs, which are also struggling with similar problems, especially shortage of nurses and brain drain of skilled staff.

REFERENCES

1. State of the world's nursing 2020; investing in education, jobs and leadership. Current status of evidence and data on the nursing workforce. World Health Organization. 2020;35-66. Available from: *https://www.who.int/publications-detail-redirect/9789240003279*
2. Foglia DC, Milonovich LM. The evolution of pediatric critical care nursing: past, present, and future. Crit Care Nurs Clin North Am. 2011; 23:239-53.
3. Global strategic directions for nursing and midwifery 2021-2025. World Health Organization. 2021.
4. Turale, S. and Kunaviktikul, W. The contribution of nurses to health policy and advocacy requires leaders to provide training and mentorship. Int Nurs Rev. 2019;66:302-4.
5. Sharma SK, Thakur K, Peter PP. Status of nurses in India: Current situation analysis and strategies to improve. J Med Evid. 2020;1:147-52.
6. McHugh MD, Aiken LH, Sloane DM, et al. Effects of nurse-to-patient ratio legislation on nurse staffing and patient morta-lity, readmissions, and length of stay: a prospective study in a panel of hospitals. Lancet. 2021;397:1905-13.
7. Karan A, Negandhi H, Hussain S, et al. Size, composition and distribution of health workforce in India: why, and where to invest? Hum Resour Health. 2021;19:2-14.
8. Sharma SK, Rani R. Nurse-to-patient ratio and nurse staffing norms for hospitals in India: A critical analysis of national benchmarks. J Family Med Prim Care. 2020;9:2631-7.
9. Chen YC, Guo YL, Chin WS, et al. Patient-nurse ratio is related to nurses' intention to leave their job through mediating factors of burnout and job dissatisfaction. Int J Environ Res Public Health. 2019;16:4801.
10. Driscoll A, Grant MJ, Carroll D, et.al. The effect of nurse-to-patient ratios on nurse-sensitive patient outcomes in acute specialist units: A systematic review and meta-analysis. Eur J Cardiovasc Nurs. 2018;17:6-22.
11. George G, Rhodes B. Is there a financial incentive to immigrate? Examining of the health worker salary gap bet-ween India and popular destination countries. Hum Resour Health. 2017;15:74.
12. Singh M, Varkkey B, Maheshwari SK, et al. "A study for comparing salaries / Emoluments in the Government Sector vis-à-vis Central Public Sector Undertakings/Private Sector in India,". 7th Central Pay Commission. Government of India. 2015;58-64.
13. Oda H, Tsujita Y & Rajan SI. An Analysis of Factors Influenc-ing the International Migration of Indian Nurses. J Int Migr Integr. 2018;19:607–24.
14. Walton-Roberts M, Runnels V, Rajan SI, et al. Causes, consequences, and policy responses to the migration of health workers: key findings from India. Hum Resour Health 2017; 15:28.
15. Chhugani M, James MM. Challenges faced by nurses in India-the major workforce of the healthcare system. Nurse Care Open Acces J. 2017;2:112-4.
16. Kalyan G, Vatsa M. Neonatal nursing: an unmet challenge in India. Indian J Pediatr. 2014;81:1205-11.
17. Mishra S. Respect for nursing professional: silence must be heard. Indian Heart J. 2015;67:413-15.
18. Sharma SK, Arora D, Belsiyal X. Self-reported clinical practice readiness of nurses graduating from India: A cross-sectional survey in Uttarakhand. J Health Educ Promot. 2020;9:125.
19. Elegant, Jacqueline, Sorce LR. Nurse-driven care in the pediatric intensive care unit: A review of recent strategies to improve quality and patient safety. Curr Treat Options Pediatr 2017;3:236-45
20. Linnen D, Rowley A. Encouraging clinical nurse empower-ment. Nurs Manage. 2014; 45:44-7.