Task shifting in dermatology: Nurses' role

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Burden of skin and subcutaneous diseases

Disability due to skin and subcutaneous diseases has reached an enormous magnitude world over. In 2017, skin conditions contributed 1.76% (95% uncertainty interval (UI) 1.27%–2.41%) to the total global burden of disease measured in disability-adjusted life years (DALYs) across 359 diseases and injuries.[1] In India, years lived with disability (YLD) due to the skin and subcutaneous diseases has increased from 4.07 million (95% UI 2.65–6.19) in 1990 to 6.26 million (95% UI 4.12–9.35) in 2017, making them one among the top ten causes of non-fatal disease burden in India and globally.[2] Most dermatologic disorders are associated with psychiatric conditions such as depression, anxiety and body image problems which significantly impact patients' quality of life and well-being. Even though, skin diseases are common and are associated with lot of psychosocial morbidity, they are often not regarded as significant health problem, especially in developing countries.

Human resource for health

Globally, the human resource deficit in health care is pervasive and the situation in India is no different. As per the World Health Organization report, India is one of the 57 countries facing a critical crisis in human resource for health.[3] The current global shortage of physicians, nurses and midwives is 7.2 million and it is estimated to reach 12.9 million by 2035.[4] There is also a considerable variation in health workforce distribution in different states in India. The rural-urban distribution of the health workforce is also skewed. In India, 69% of the population lives in rural areas, whereas most of the health infrastructure and workforce are concentrated in urban areas.[5,6]

The greater need for dermatological care and deficient human resource poses a significant challenge to provide care to millions of people with skin conditions. There are 3.2 dermatologists/100,000 population in the USA,[7] whereas, in India, there are approximately 12,000 dermatologists (registered with the Indian Association of Dermatologists, Venereologists and Leprologists) for a population of 1369 million which means less than one dermatologist per 100,000 population.

Some of the possible solutions to address this deficit include increasing production capacities to meet human resource shortage, mainstreaming of Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homeopathy (AYUSH) doctors, employing task-shifting, tele-dermatology and strengthening nursing and paramedical cadres.[6] However, considering the high unmet need for dermatologic care, task shifting is a priority to meet the immediate need. The world health organization defines task shifting as transferring clinical tasks from physicians to trained non-physician health workers. Task shifting can be an effective means of increasing access to dermatological care, especially in resource constraint settings. Although task shifting can be done with various categories of health workers, nurses are the ideal choice because they are among the largest trained/skilled health workforce in any health care institution.[4] The World Health Organization has declared 2020 as an international year of nurses and midwives. The World Health Day theme for this year, "support nurses and midwives", highlights the importance of strengthening the nursing workforce.[8] Partnering with nurses in managing patients with common skin diseases with appropriate training and standard protocols will allow dermatologists to focus on high-risk cases, resulting in quality care and increased health-care resources efficiency.

Evidence suggests that task shifting is a feasible and cost-effective method to deliver health care in HIV/AIDS and

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non-communicable diseases.[9,10] Large randomized controlled trials have shown that community health-care providers can effectively implement psychological therapies for depression and alcoholism. Nurses' role in managing skin conditions is well established in the western world where they are working as nurse practitioners in both independent and dependent roles.[11] In a cost consequence study from the United Kingdom, nurse-led care was equally effective in improving psoriasis and eczema severity as physician-led care.[12] However, there is lack of good quality evidence on task shifting in dermatology from the developing countries.

The available evidence favors task shifting as an approach to address the deficit in human resource for health and manage the high need for dermatological care. In a study for the diagnosis of Kaposi's sarcoma using skin biopsy done in sub-Saharan Africa involving physicians, clinical officers, nurses and technicians, task shifting led to enhanced patient access to skincare.[13] Another study from Mali concluded that training primary health care workers might represent a reasonable solution to the neglected component of dermatological care in primary health care set up.[14] Nurses have also played a crucial role in implementing the national leprosy elimination programme as well as reproductive and child health program in India for the past 3–4 decades which is a good example of task shifting.[15] Under the Ayushman Bharat scheme, mid-level health-care providers, who are primarily nurses, are trained to work independently in health and wellness center and are the main providers of care.[16]

Role of nurses in dermatology

Majority of the skin conditions such as eczema, psoriasis and urticaria are chronic and require resourceful caregiving, counseling, continuous monitoring and adherence to treatment for better health outcomes. Nurses can also be gainfully involved as part of the dermatology team to modify behavioral and psychological risk factors of diseases such as psoriasis, eczema, acne, hidradenitis suppurativa and other chronic dermatoses [Table 1]. They can play an important role in designing and implementing patient education programs for common dermatoses such as eczema and psoriasis. In developing countries like ours, the focus can also be on early diagnosis and proper management of infections and infestations by the nurses at the community or primary health-care level.[17] The nursing staff involved in national programs and peripheral health centers can be trained for diagnosis and early treatment of common skin disorders to save the patients from misdiagnosis and mistreatment by quacks.

However, we need to develop structured protocols that combine non-pharmacological interventions such as patient education and counseling along with pharmacological therapy to manage dermatological diseases for this task shifting to be effective.[16] These interventions may encourage lifestyle changes, enhanced self care, improve compliance and thereby lead to better symptom control which may greatly benefit majority of chronic dermatoses such as psoriasis, atopic dermatitis and eczemas.

Challenges

In India, there are postgraduate courses in nursing for medicine, surgery, gynecology, pediatric and psychiatric nursing, but there is no specialization for dermatology nursing. Most of the nurses working in dermatology outpatient or inpatient care are trained in medicine or surgery and have minimum or no training in dermatology. For effective task shifting and provision of quality care, dermatologists must adequately train the nurses involved in care of dermatology patients. Readiness and mentorship by dermatologists will be the key pillar for the successful task shifting. It is also important that cadre who is undertaking the tasks must understand the basic principles of skin diseases and their care. They must be aware of their limitations and should know when to seek further advice, as necessary. To keep up the motivation and support nurses in their practice, there should be a legal cover for the services they provide. The law should govern the scope of practice, prescription authority and requirement of collaboration with dermatologists.

Table 1: Task shifting responsibilities of nurses in dermatology practice

S. No.	Dermatoses	Task shifting responsibilities of the nurses
1	Common infections and infestations	Diagnosis and primary care of scabies, dermatophytosis, bacterial skin infections
2	Psoriasis	Comorbidity assessment, education, counseling, lifestyle advise, stress reduction techniques, phototherapy
3	Atopic dermatitis	Wet wrap dressings, counseling, education about proper use of topical medications
4	Vitiligo	Diagnosis, education and counseling of the patients and their family members, phototherapy
5.	Chronic infections like leprosy	Counseling the patients, care of trophic ulcers, physiotherapy educating them about self-care and the importance of adherence to treatment and ensuring that they complete the treatment course recommended by the dermatologist, follow-up
6	Sexually transmitted infections	Diagnosis, counseling, contact tracing and syndromic management
7	Autoimmune blistering diseases	Skin care and dressing, home care, counseling and ensure adherence to treatment
8	Epidermolysis bullosa	Skin care, dressing, advise about nutrition, counseling of the parents
9	Contact dermatitis	Patch testing, education about the results and measures to avoid the allergens
10	Dermatosurgery and procedural dermatology	Assisting in procedures like chemical peeling, dermabrasion or operating lasers for hair removal, surgical procedures like hair transplantation

Conclusion

The morbidity due to skin and subcutaneous diseases is high, and there is an urgent need to address this disability due to skin diseases. Meeting this high need is a challenge for many reasons, one among these is the inadequate number of dermatologists which is further compounded by rural-urban differences. Task shifting can be a means of improving access to quality dermatological care and bridging treatment gaps. However, clarity about qualifications, skills, experience and assigned roles and duties is essential for an effective and safe transfer of tasks and functions.

Declaration of patient consent

Patient's consent not required as there are no patients in this study.

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Conflicts of interest

There are no conflicts of interest.

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