

A Study of Physiotherapy Practices and Perspective among Doctors in Intensive Care in India

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Abstract – Physiotherapy plays a major role in rehabilitating a patient. A physiotherapist's role is to apply physiotherapy skills and knowledge to evaluation, design, implementation and evaluation of physiotherapy treatments for various conditions of acute or chronic disability or disability. After an epidemic of poliomyelitis, India had a history of physiotherapy in 1952. In India, physiotherapy has slowly and steadily established a firm basis with many new developments, but in large measure physiotherapy remains a secondary reference profession not only in our home country but elsewhere as well. The further development of physiotherapy would depend on the physicians' awareness. Literature shows that general practitioners and doctors students are not aware of the situation. The study was therefore conducted in order to assess the physiotherapists (doctors)' perspective on how important physiotherapy is for them, their perception of the physiotherapist's role and their need for the physiotherapist to interact in an efficient treatment result.

Key Words – Hospitals Across, Intensive Care Units, Physiotherapy Practices

INTRODUCTION

Physical therapy is concerned with identifying and maximizing quality of life and movement potential within the spheres of promotion, prevention, treatment/intervention, habilitation and rehabilitation.[1] A physiotherapist assesses, plans and implements rehabilitation programs aimed at improving or restoring human motor function, enhancing the ability to move, reducing pain syndrome and treating, or preventing, injuries, diseases and other physical challenges. [2] [2] [2]

A specially designed and equipped hospital department for the management of patients with life-threatening diseases, injuries or complications is an Intensive Care Unit (ICU). In the ICU, physiotherapist roles and responsibilities were poorly defined. They were mentioned as part of the ICU team. [3] According to EESICM recommendations, standardizing pathways for the making of clinical decision making and education are required and a more detailed definition of the professional profile of ICU physiotherapists are necessary. [1] In accordance with EESICM recommendations. The objective of each critical physiotherapy program is to implement advanced, cost-effective therapeutic approaches in order to decrease a patient's fan dependence, enhance residual function, avoid new admissibility's and enhance the quality of life of a patient.

Including awareness of techniques, equipment availability, physiotherapist training, patient physiotherapy training, the presence of respiratory therapists, culture differences, the attitude of other professionals towards physiotherapy, evidence-backed practice considerations (EBPs), patient health management (e.g., physical management)

Positions and mobilization, manual hyperinflation, chest manipulation, suction, breathing, limb and postural drainage have historically been included in ICU physiotherapy.

When started early, physiotherapy prevents delay of weaning, restricted mobility and complete ventilator dependency. Weaning and physiotherapy are therefore two main interventions to accelerate the recovery of the patient.

The results of ICU physiotherapy can vary according to the degree of available physiotherapy services and the specific tasks performed in ICU by physiotherapists. Current physiotherapy practices in ICU must be established. The aim of this study was to evaluate the qualifications of physiotherapists, physiotherapists' hospital infrastructure, and current practices in ICUs at Indian hospitals.

MATERIALS AND METHODS

Study design

An exploratory cross-sectional survey was carried out in multispecialty hospitals across Maharashtra state.

Participants

- Physiotherapists working in ICUs in the hospitals having more than 10 ICU beds were recruited for the study. Physiotherapist with <1-year of experience in ICU were excluded.

Procedure

The study was approved by Tilak Maharashtra Vidyapeeth Pune's Institutional Ethical Committee. Experts were consulted and a questionnaire was prepared in the field of cardiorespiratory physiotherapy. 10 physiotherapists in multiple hospitals conducted a pilot study. Some changes have been made to the post-pilot study and a questionnaire with appropriate amendments has been completed.

The National Hospital Accreditation and Healthcare Providers National Accreditation Board and Indian Medical Council have randomly selected 50 multispecialty hospitals from 10 towns across Maharashtra. The Head of Physiotherapy of the short-listed hospitals was sent questions. Questionnaires The questionnaire was requested from physiotherapists working at ICU and re-addressed via mail. In the cover letter attached to the survey, the objectives and objectives of the study were clearly stated. The interviewees were clear that the identity of the participants would not be disclosed and the data collected would be used for research and the participating institutions obtained informed written consents. The questionnaire included hospital information and the role of physiotherapists in ICU (number of hospital beds and ICU beds), the therapist profile (qualification, expert knowledge, work hours) (chest manipulation, positioning, mobilization, and postural drainage, application of nebulizer etc.). For 4 weeks, a questionnaire was completed in a bid to ensure good response rates.

RESULTS

Table 1 shows the details of the response, such as a total number of ICU beds and the physiotherapist's availability at night. Included in this survey were private and semi-state hospitals. 68% of respondents included private hospitals, 27% government hospitals and 4% semiconductor hospitals. 63% of the physiotherapists were found to be available in the night, 49% as a resident, and 13% as a "on-call physiotherapy" and 36% as a physiotherapist replied that nighttime therapists were not available. Table 2 shows the profile of the physiotherapist including age, skills, years of experience, time of work, average number of treated patients and attended workshops.

Table 1 Responders' details

	Total n (%)	Male	Female
Age			
20-30	57 (78)	24	33
30-40	13 (17)	4	9
40-50	3 (4)	3	0
Qualification			
Diploma	6 (8)	6	0
Bachelors	56 (76)	18	38
Masters	11 (15)	7	4
PhD	0	0	0
Specialization			
Cardio respiratory	3 (4)	2	1
Musculoskeletal	6 (8)	4	2
Neuroscience	2 (2)	1	1
Experience as a physiotherapist			
1-5 years	56 (76)	25	31
6-10 years	10 (13)	3	7
> 10-20 years	6 (8)	2	4
>20 years	1 (1)	1	0
Experience in ICU			
1-5 years	60 (82)	26	34
6-10 years	13 (17)	5	8
Daily Hours of working			
5 hours	16 (21)	1	15
8 hours	57 (78)	30	27
Daily Hours of working in ICU			
0-4 hours	38 (52)	12	26
4-8 hours	35 (47)	19	16
Average no of patients treated			
5-10	37 (50)	10	27
10-15	13 (17)	9	4
15-20	9 (12)	7	2
20-25	14 (19)	5	9
No of seminar attended last 2 years			
More than 5	9 (12)	8	1
Up to 5	5 (6)	3	2
Up to 3	45 (61)	16	29
Not at all	14 (19)	4	10

Table 2 Physiotherapists' profile

	Private	Government	Semi-government	Total n (%)
Gender				
Male	19	11	1	31 (42)
Female	31	9	2	42 (57)
Qualification				
Diploma	0	6	0	6 (8)
Bachelors	43	12	1	56 (76)
Masters	7	2	2	11 (15)
PhD	0	0	0	0
Total no of beds				
100-200	10	5	0	15 (20)
201-300	9	4	3	16 (21)
301-400	16	6	0	22 (30)
401-500	10	5	0	15 (20)
>500	5	0	0	5 (6)
Total no of ICU beds				
10-20	16	5	0	21 (28)
21-30	7	4	3	14 (19)
31-40	15	6	0	21 (28)
41-50	10	5	0	15 (20)
>50	2	0	0	2 (2)
Physiotherapist during night				
Yes				
(resident)	22	13	1	36 (49)
(on call)	10	0	0	10 (13)
No	19	6	2	27 (36)

The physiotherapy practices that include patient screening and evaluation, ventilation, physiotherapy and the role of physiotherapeutic agent during extinguishment are shown in Figure 1. Most (80%) participants performed chest wall techniques, 86% positioning, 61% joint mobilization, 27% posture drainage, 5% manual hyperinflation, 19% closing aspiration, 50% open suction, 12% pre- and post-

treatment nebulizing and 56% bedsor management. It was noted that 91% of physiotherapists always receive medical/research reports and 95% of physiotherapists assess vital parameters prior to treatment. In patient and family education, only 44 per cent of physiotherapists participated in the condition and forecast of the patient.

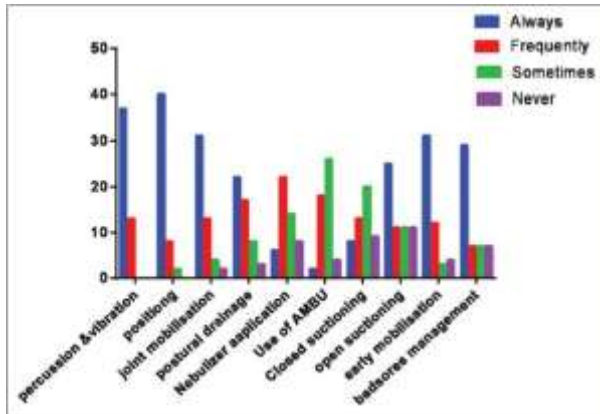


Figure 1 Physiotherapy techniques

DISCUSSION

This study was carried out to establish the current practices in ICU physiotherapy throughout Maharashtra, India. The physiotherapists working in ICU have been found to differ in qualifications, experience, and clinical knowledge. In this study 78 percent of respondents were 20 to 30 years of age, while 82 percent had less than 5 years of experience with ICU. During the evaluation, 76% of respondents were bachelors and 15% masters of physiotherapy were evaluated in physiotherapy for ICU. These results contrast with the 2007 study by Kumar et al.[8] that showed that 59% were ICU graduate physiotherapists.

In the field of ICU management it is important to regularly update knowledge and skills, continuing medical education (CME). However, it was found that nearly 19% of physiotherapists did not attend ICU management seminars/workshops/CMEs while 61% attended three, 6% attended up to five and only 12% attended over five seminars in the past 2 years.

According to the survey, 49% of ICUs have a resident physiotherapist and 13% have "on-call" services at night. Kumar et al.[8] surveyed showed that 24% of ICUs had a resident physiotherapist available at night and 79% of physiotherapists were on-call. Norrenberg and Vincent[9] indicated a nighttime availability of a physiotherapist of 34% for Europe, whereas 83% reported a night call for on-call physiotherapists in South Africa[10] and Chaboyer et al.[11] reported 90% of ICUs in Australia have weekly physiotherapists, and 25% have "on-call" services only for the Australian community.

58% of the respondents said the referencing system was "always a referred physician," while 39% said that they were initiated by a physiotherapist, while only 58% said that there are "established criteria" to initiate physiotherapy in ICU. The physiotherapy references varied with the referring professionals, their interest, understanding and the interaction with the physiotherapist and their physiotherapy ideas and concepts. The Shimpi et. al.[12] survey reported that 95.5% of physicians in all groups were referring to physiotherapy, but only 12.2% were not diagnosed as physiotherapists expected to diagnose it and choose the treatment for the patient. This suggests that while the physiotherapist's role in ICU increases, the reference seems to have been initiated mainly by a physician.

EBP is a concept of increasing significance for physiotherapy and explicit utilization of best evidence at present in decision making on the treatment of individual patients. 53 percent of the respondents practiced EBP in order to take decisions or plan treatment according to our study. In a survey by Akinbo et al.[13] 98% in Nigeria replied that EBP improves patient care quality, 99% said the use of evidence in their daily practice should be increased and 88% said the evidence helps to make decisions. 99% said the evidence is needed in their daily work.

During the evaluation of physiotherapy in ICU, most physiotherapists (80%) always performed chest-wall techniques. Their performance has been observed. Kumar et al.[8] found that 91% of physiotherapists in India, 79% in Australia[11] and 98% in Europe have performed chest wall techniques. [10] The report clearing secretions during weaning processes, a physiotherapist plays a vital role. The potential roles of the physiotherapist are numerous techniques that are based on knowledge and experience in weaning a patient from invasive ventilation to spontaneous breathing. These roles include decision making such as the beginning of weaning, weaning strategies, ventilation method and the appropriate use of non-invasive ventilation (NIV).

The ESA has proposed that "therapeutically driven weaning protocols" may depend on ICU staff and respiratory muscle training should be taken into consideration in patients with weaning muscle and respiratory weakness.

Five per cent of the respondents always took part in setting fan parameters while eleven per cent took opinions before a patient was weaned from the mechanical fan. Only 11% of respondents were involved in extubation decision-making, 25% in extubation suction, and 29% in always NIV application. Kumar et al. (10 percent of respondents participated and 18 percent were involved in weaning, according to Kumar et al.[8]. 12% of physiotherapists in Europe played a leading role in adjusting mechanical ventilation, 22% in mechanical

ventilation weanings, and 25% in extortion. In Europe[10].

44% of physiotherapists in this study have always been involved in 'patient and family education' and have been able to raise awareness of disease and prognoses. Good physiotherapeutic-patient interaction can reduce patient anxiety and discomfort and therefore enhance patient cooperation.

Diversity in physiotherapy in hospitals across the country of Maharashtra, India has been observed throughout this survey. Future study on variables like qualifications for physiotherapists, years of experience, seminar attendance, hospital type, referral system, physiotherapist availability in the night and preference physiotherapy techniques must examine this diversity.

As the number and response rates are low, a larger study to ensure a higher response should be validated for the results. Prompts or reminders would have led to a better response rate for participants. Studies should also be undertaken to generate information on the physiotherapy hospital policies in the ICUs. In view of diversities in the physiotherapy practice, the effectiveness of physiotherapy in ICUs should be assessed.

CONCLUSION

This survey showed that physiotherapist among the responding ICUs surveyed lack in experience and updated knowledge. Physician reference is necessary to initiate physiotherapy, and there exist no established criteria for physiotherapy treatment in ICU. All physiotherapists were routinely involved in chest wall techniques, mobilization, and positioning.

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