

Pulmonary rehabilitation: Too many ifs and buts

Pulmonary rehabilitation (PR) has proven its worth beyond doubt evident by latest Cochrane analysis concluding in agreement with all earlier versions since 1996 till 2015 restating it being beneficial in improving quality of life on completion of the program and took unusual precedence in closing all future analysis of its utility.^[1] Hence, it means that all stakeholders can act with confidence to peruse it further. But, despite PR being included as Grade IA recommendation by international guidelines for all symptomatic chronic obstructive pulmonary disease (COPD) patients, takers are far and few. However, evidence is supporting role of PR in non-COPD chronic respiratory diseases, for example, interstitial lung diseases.^[2] India has estimated more than 30 million COPD patients and scope and need for PR services is huge.^[3]

Even in developed nations estimated availability of PR programs is around 50%, while in India, its dismally poor.^[4] Hence, first barrier is to develop PR services across length and breadth of our country and stakeholders are both public and private health services. India falls much short in availability of PR services and reasons are multifactorial but inadequate financial compensations in private set ups to lack of prioritization in public institutions remains major hurdles. However, even if available need to utilize services has to be understood by both physician as well as patients by themselves. In developed nations, about 15% of eligible patients get referral to PR while <10% finally join such programs with <50% completing it reported in detailed narrative review of literature published in this issue, highlighting unmet needs from organization to delivery and from acceptance to completion. The situation is appalling even where healthcare systems are organized and well developed. Although no such data are available for India, is expected to be devastating. Although to improve morbidity of patients with chronic respiratory diseases, patients' needs to accept change in health-related perceptions from "popping a pill to more holistic care." This would require to strengthen the entire chain from referral to completion of the program with widespread availability.^[5] And for this, we need to make PR programs which are acceptable, effective, and feasible to all stake holders.

Although barriers are varied and many, from patients not being advised to availability of such dedicated PR centers, to patient's perception of being "either too sick or not enough sick" to join PR common to all countries. Issues faced by developing nations like India are somewhat different as compared to west as there is huge gap in availability of PR services.^[6] Under these circumstances increasing awareness among patients, caregivers as well

as physicians only may backfire if not supplemented with facilities to deliver them effectively. In India unlike in west PR is offered in organized manner either by public or private institutions where road blocks for providers are totally different. Lack of trained health-care professionals may be common to both but lack of funding in public systems and inadequate compensations in private setups is limiting availability to the end users. No doubt, poor uptake, and low completions by our patients needs to be addressed but it is equally important to be matched by easy access and availability of PR services.

Earlier systematic reviews focused on quality of studies, and brought out diagnostic uncertainties and correlated with heterogeneous outcomes of PR in COPD. However, focus of researchers should be on unmet needs in expending utilization by making programs more friendly and acceptable to all stakeholders, for example, degree of supervision and mode of delivery, modalities to be used, intensity and duration of training, maintenance modes and intervals, using teleservice, etc.,^[7] in today's new normal where need for social distancing is going to be the way of life, we need to improvise and use internet and virtual platforms to deliver PR services more effectively and safely.

This would be very much in line with the need of our country as it would address various issues by providing shortcut to the long winding circle of hurdles [Figure 1]. Home rehabilitation is being studied in west too and has shown promising results where, time, travel, cost, and infrastructure can all be minimalistic and is promising future intervention in this field. Home programs can

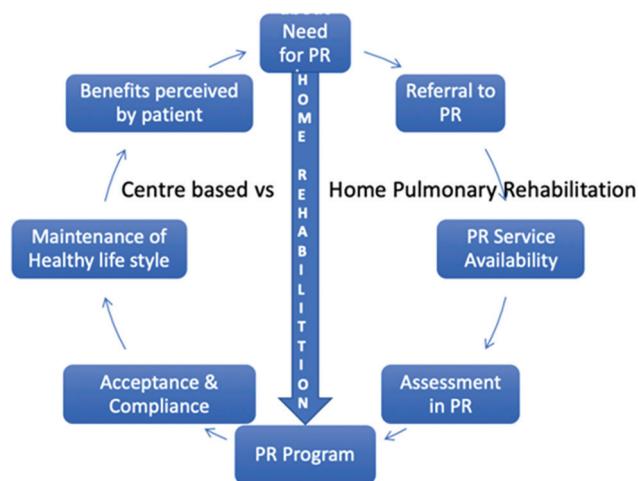


Figure 1: Cycle of pulmonary rehabilitation showing various touch points creating barriers and how shortcutting in home rehabilitation can decrease limitations to large extent

be supervised by audio or video inputs and low level of maintenance is required.^[8] Safety, applicability, and efficacy of such programs are enthralling all. Considering 600 million Indians use smart phones (as per data of 2019) and widespread increase in internet use during the present lockdowns, expansion of home rehabilitation once initiated is expected to achieve the desired results. However, this may further need validation by researchers by designing studies ethically and socially acceptable to our population. Post exacerbation PR intake is low and video calling to increase intake did not improve numbers and it is felt that more work is required to understand the patient preferences.^[9,10] Present times gave nearly 8 weeks of lockdown and created an opportunity to provide rehabilitation to patients at home. We are in the process of collating data of groups who were supervised on net versus unsupervised patients and wait such data from west too, to evaluate a road ahead in India.

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