

49 - Challenges in creating an indigenous hyperbaric oxygen unit in a fee for service tertiary care hospital in northern India

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Introduction

Hyperbaric Oxygen Therapy is available at many hospitals all over the world. However growth has been slow and possible reasons could be skepticism generated by its unregulated prescription in the sixties and seventies, high cost, slow returns, slow results and the few formal training courses for doctors and other staff.

Unlike government, defence and offshore chambers, which do not have to prove financial viability, in private centers this is an important issue. The experience of setting up India's first private hyperbaric chamber in a 500-bed tertiary care hospital in landlocked New Delhi about 24 months ago is shared with the aim of encouraging more centers to come up in the region.

The Hyperbaric vision: Why would a hospital want to set up a hyperbaric center

The choice between a stand-alone center and a hospital-based facility has to be taken early. Both have their merits and demerits. An ideal institution would be one, which has the vision to develop newer services, finances to set up the service and the potential to generate patient loads. The emergence of a new tertiary care hospital in Delhi seemed an opportune site to set up a hyperbaric center.

Approaching the institution with a broad vision in synergy with its own vision helps. Institutions are striving to upgrade services and Hyperbaric Oxygen Therapy (HBO) could be marketed as a new technology to attract additional segments of patients. The visibility of being a futuristic and research institute could be some of the approaches to take. Financial viability also needs to be addressed. Profitability may not compare with other equipment intensive specialities but the advantage of long life of the equipment without significant upgrades could be leveraged. Also revenues will be generated in other areas of the hospital because of patients admitted for Hyperbaric Oxygen and retainers for support to diving and Hyperbaric Tunnelling.

Meeting critical scrutiny

Many centers will learn about hyperbaric Oxygen only when a project is put up to them. Our proposal to include Hyperbarics for the first time in the private sector in India was put to close scrutiny. Issues addressed included whether it is alternative medicine, does it have international acceptance, indications, affordability, public image and relevance in a developing country etc. The experience of the consultant and the capability to lead the center are also critically assessed. International and national references, experience and publications go a long way in winning the confidence of the institution.

Equipment and site selection

The selection of chamber - monoplace or multiplace should take into account type and volumes of patients expected, infrastructure and support to the equipment and the costs. High cost of international chambers compounded by dollar conversion rate made it difficult to justify profitability. This was compounded by the limited paying capability of the Indian community. Pressure to keep costs low led us to identify an indigenous Indian manufacturer who had earlier made a number of chambers for the Indian Army to combat high altitude illnesses. The manufacturer along with cooperation of the Defence R& D manufactured the 6 ATA twin lock multiplace chamber while chamber accessories (Oxygen system, communication system and Analyzers) were imported and integrated locally. The chamber was third party certified to meet the standards of ASME Chapter VIII, PVHO and NFPA Chapter 19. This process took over two years.

The location of the chamber should take into consideration the support services and convenient patient access. Areas for patient evaluation, wound care and doctors' office should be defined. Integrating with existing services in the hospital may reduce requirement for space. At this hospital we were able to position the department at a site on the ground floor close to one of the main hospital entrances and many services are shared with the hospital.

Consultant Hyperbaric Medicine

The success of the hyperbaric program depends on the commitment of the Hyperbaric Consultant and two key areas need to be addressed - professional work based on his primary specialty and compensation, both are important for departmental success.

It is felt that the practice of hyperbaric medicine should be carried out in addition to their primary specialty. Establishing credibility and revenue source in the primary specialty would help in raising confidence. If the hyperbaric physician is segregated, he would be viewed as biased and promoting his specialty irrespective of scientific reasoning only for revenues. Revenue models could be (i) fee for service for patients' care and a compensation for non patient related activities (ii) revenue sharing on a percentage of the total hospital charges or collections in the department, (iii) assuring the consultant of a minimum income initially and sharing the balance amount after the threshold is reached. Revenue models need to address *both ethical and legal issues* relating to the appropriateness of patient selection and treatment.

Whatever financial model is proposed or accepted it is important that some revenue is identified for continuing medical education, memberships of various International and National societies and for attendance at outstation conferences.

Operationalising the Center

The consultant will have to address issues such as tariffs, government regulations, inviting physician and patient referrals and monitoring standards and safety. The institution will look to him / her for guidance in all areas. Government Health and safety inspectors' approval was obtained after educating them in the safe practice guidelines for Hyperbaric Medicine prevailing worldwide

Timings should cater to being able to provide 24 hrs emergency services eventually. The tariffs for the therapy need to be rationalized based on investment and paying capacity and innovative methods such as package costs may be used. We initially restricted ourselves to universally accepted indications but later with increasing inquiries and pressure for treating "off label indications" we list these as research indications and treat only if there is an approved protocol and with a detailed informed consent. Creating referral guidelines is important but difficult to implement in a fee for service hospital since policies are also dependant on financial implications. Once the healing capability is acknowledged the referrals come in steadily. We are still debating whether a referral fee should be payable to referring doctors.

The consultant has dual responsibilities. The first is patient care and includes establishing treatment protocols and tariffs, examining patients, maintaining records and follow-ups. The hyperbaric physician must have admitting rights in the hospital and be familiar with the other areas of activity in the hospital. The second is non patient related work and include training, policies for periodic upkeep of departments, infection control, safety procedures, emergency protocols, research initiatives and maintain currency in newer developments in this field. We encourage multitasking with most members of the hyperbaric team being able to perform most activities and thereby ensure better staff utilization. Interaction with Insurance Agencies for patient reimbursements and coverage to the hyperbaric attendants is also important.

Marketing may include developing information brochures, CME programs, distribution of recent literature to doctors, arrange visits to the chamber, TV and media programs. Success stories in newspapers and publication of articles on Hyperbaric Oxygen in medical journals will go a long way in increasing physician/public awareness. Visiting faculty from overseas and follow up notes to referring doctors are helpful to build a sustained patient referral base. We are now doing targeted marketing at specific sets of doctors.

Observations

An aggressive approach is required to highlight the benefits of Hyperbaric Oxygen. Patients are led by their primary doctors who need to be educated and encouraged to refer patients. In a direct payer system such as in India the primary or referring clinician wants to protect his own revenues. Steps need to be taken to convince physicians that the therapy would benefit their patients and increase the patients' faith in them.

By training doctors learn to treat, not to sell new treatments while the management of hospitals is mainly concerned with profitability. The Hyperbaric doctor in some ways is an entrepreneur and needs to work with the manager / institution / manufacturer for the success of the program albeit with a different driving force.

Recommendations

Creating hyperbaric centers is a challenge with the hyperbaric Consultant having to learn many new skills and lead the "orchestra" while interacting with many different people. People handling skills and understanding the key drivers to success is important.

Many of the existing set of practicing hyperbaricists have no formal training in Hyperbarics. Young doctors should be encouraged to take up hyperbaric medicine. Research should be encouraged and needs co-ordination with other clinical faculties.

Marketing the concept is important. However in the initial enthusiasm one may get carried away by the seemingly impressive financial gains and forget scientific methods. It is important in the long term, to be careful in selection of patients based strictly on scientific reasoning and on no other consideration. Ethical and need based growth in this field is necessary.

Conclusion

Hyperbaric Medicine has a distinct role in evidence-based medicine but the field is still young. Unaccustomed technology and new treatments present problems or equally: opportunities. With a little perseverance and the capability to innovate there could be a great opportunity and satisfaction in this field for those who desire to accept the challenge. The international hyperbaric community is a great source of information and inspiration and can be relied upon to answer many doubts and issues that come up¹⁻¹⁴.

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