Impact of Focused Education on Internal Medicine Resident Knowledge and Likelihood to Refer to Undersea and Hyperbaric Medicine

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PROBLEM:
• Hyperbaric medicine is an emerging subspecialty that is gaining recognition within the medical field. A common problem we encounter regularly is referring providers’ inexperience about the field.

BACKGROUND:
• Growth and integration of Undersea and Hyperbaric Medicine (UHM) into other specialties continues to be challenging, as referring clinicians lack knowledge about UHM and hyperbaric oxygen therapy (HBOT).
• These clinicians who provide primary clinical care could benefit from routinely partnering with UHM clinicians, as we regularly share mutual patients in hopes of improving provider’s confidence level when referring to our department.

OBJECTIVES:
• The objective of this study was to educate our physician peers about Hyperbaric Oxygen Therapy (HBOT).

METHODS:
• A quasi-experimental study was conducted to assess knowledge gained during a virtual didactic lecture about hyperbaric medicine/indications.
• The lecture consisted of hyperbaric physiology, the approved indications for hyperbaric medicine, as well as referral criteria to the UHM department.
• A questionnaire (Figure 1) was administered to each IM resident pre- and post-lecture to see if knowledge was gained and referral comfort level improved.
• Responses for categorical variables are presented as percentages.
• A T-test was used to compare comfort level with referring to UHM and summary was presented as a mean with standard deviation on a bar graph.
• P < 0.05 were considered statistically significant.

RESULTS:
• Overall, 42 residents were asked to participate; 26 and 20 completed the pre- and post-survey, respectively.
• Following the lecture, mean comfort level (1 [unsure] – 10 [confident]) with UHM referrals significantly increased (5.0 pre- vs. 8.0 post-survey; p < .0001; Figure 2).
• Knowledge regarding the physiology and indications of hyperbaric medicine clearly increased in all questions when comparing pre- and post-survey responses; Figure 3.

CONCLUSIONS:
• Our educational session resulted in short term knowledge gain and improved comfort levels with referrals among Internal Medicine residents. Collectively as a study group, knowledge base regarding the physiology and indications of hyperbaric medicine clearly increased in all questions when comparing pre and post surveys.
• A follow up study in 3 months to assess retained knowledge and durability could be of value. This survey has identified knowledge gaps that could be from underrepresentation during medical education. Closing this gap may be as simple as improving exposure with periodic educational discussions about hyperbaric medicine.

REFERENCES

Figure 1. Survey Questions.

Figure 2. Comfort Levels Pre- and Post-Education.

Figure 3. Pre- and Post-Didactic Survey Results.

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