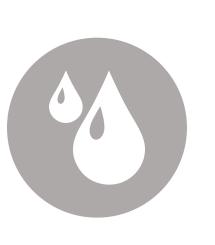


Current Management of Hyperhidrosis: How Do NPs and PAs Perform?

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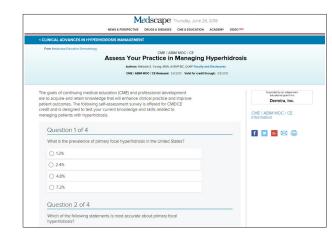
INTRODUCTION

Despite the widespread prevalence of hyperhidrosis and its impact on quality of life, this condition is often managed suboptimally. The goal of this study was to assess nurse practitioners' (NPs) and physician assistants' (PAs) current knowledge, skills, competence, and practice barriers regarding treatment of hyperhidrosis to obtain a snapshot of continuing medical education (CME) needs.1



METHODS

- A 26-question CME clinical practice assessment survey consisting of multiple-choice knowledgeand case-based questions was made available online to NPs and PAs in the United States without monetary compensation or charge¹
- Questions evaluated knowledge, skills, attitudes, and competence regarding hyperhidrosis prevalence, pathophysiology, disease awareness, diagnosis, and current and emerging treatments
- The survey launched on a website dedicated to continuous professional development on March 8, 2018 and data were collected until April 16, 2018
- Respondent confidentiality was maintained and responses were de-identified and aggregated prior to analyses



RESULTS

437 NPs and 105 PAs completed all questions in the survey during the study period. The key findings include (Figure 1):

- Awareness of prevalence of hyperhidrosis: 45% of NPs and 49% of PAs were aware of the prevalence of hyperhidrosis in the United States, and 45% of NPs and 44% of PAs were aware of the age groups most frequently affected by hyperhidrosis (Figure 1; Figure 2A)
- Patient communication regarding hyperhidrosis: Only 18% of NPs and 14% of PAs reported being very confident in addressing the possibility of hyperhidrosis with patients when presented with a patient case. In addition, only 25% of NPs and 32% of PAs correctly identified the frequency of patients discussing hyperhidrosis with a healthcare professional (Figure 1; Figure 2B)
- Pathophysiology of hyperhidrosis: 47% of NPs and 60% of PAs correctly identified the increased activity of sudomotor pathways originating in the central nervous system (CNS) in individuals with primary focal hyperhidrosis (Figure 1; Figure 2C)
- Diagnosis of hyperhidrosis: 40% of NPs and 51% of PAs were able to correctly identify endocrine disorders that may be associated with secondary hyperhidrosis (Figure 1; Figure 2D)
- Current management of hyperhidrosis: 71% of NPs and 73% of PAs were correctly able to identify first-line treatments for primary focal hyperhidrosis. However, when presented with a patient case scenario, only 47% of NPs, on average, and 44% of PAs, on average, were able to correctly select appropriate treatments for hyperhidrosis (Figure 1; Figure 2E)
- Emerging treatments for hyperhidrosis: 47% of NPs, on average, and 48% of PAs, on average, were aware of the clinical data on emerging treatments for hyperhidrosis (Figure 1; Figure 2F)
- The top 3 barriers reported by NPs and PAs managing hyperhidrosis were lack of time (34%; 43%), lack of safe and effective treatment (23%; 19%), and belief that hyperhidrosis is mostly cosmetic and therefore it is up to patients to bring it up with their healthcare providers (17%; 17%) (Figure 1; Figure 3)

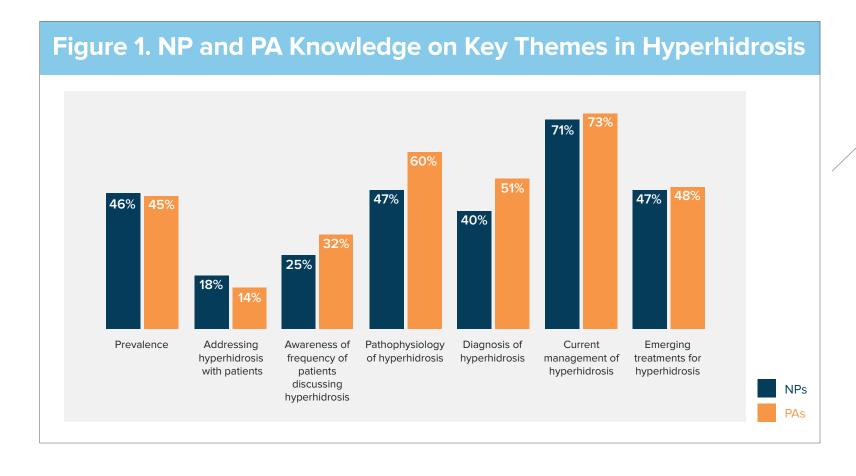


Figure 3. Barriers to Improving Outcomes in Hyperhidrosis

Figure 2. Representative Questions for Key Themes in Hyperhidrosis About half of NPs and PAs were not aware of the prevalence 40% of NPs and 51% of PAs were able to correctly identify endocrine of hyperhidrosis in the United States, and a majority of those disorders that may be associated with secondary hyperhidrosis underestimated the prevalence Olivia is a 13-year-old girl who presents to the dermatologist's office with NPs (n=437) NPs (n=437) frequent episodes of urticaria. While examining her, the dermatologist notes What is the prevalence of primary focal hyperhidrosis in the United States? that her skin is unusually warm and moist, and her palms and soles show PAs (n=105) PAs (n=105) signs of hyperhidrosis. Although it is a cold day outside, her face and palms are flushed and red. Which endocrine disorder listed below represents a potential cause of secondary hyperhidrosis in this patient? 25% (111) A. Addison disease 32% (140) 26% (113) B. Cushing syndrom 45% (198) C. Diabetes mellitus D. 7.2% 13% (57) 40% (176) D. Graves disease Only 18% of NPs and 14% of PAs reported being very confident in addressing the possibility of hyperhidrosis with patients when presented with a patient case 71% of NPs and 73% of PAs were correctly able to identify first-line Hallie is a 33-year-old woman who visits your practice periodically for NPs (n=437) treatments for primary focal hyperhidrosis management of a chronic health problem. When the visit is almost finished, you notice that her shoes and examination gown appear to be soaked PAs (n=105) through with perspiration. How confident would you feel addressing the NPs (n=437) possibility of primary focal hyperhidrosis with this patient? Which of the following therapies is considered first-line treatment for primary focal hyperhidrosis? PAs (n=105) 8% (36) A. 1 - Not confident 71% (311) A. Antiperspirant with aluminum salts 17% (73) 8% (37) B. Oral glycopyrrolate 7% (7) 8% (34) C. Oral oxybutynin 8% (8) 24% (104) 13% (55) D. Topical glycopyrrolate 18% (79) E. 5 – Very confident 47% of NPs, on average, and 48% of PAs, on average, were aware of the clinical data on emerging treatments for hyperhidrosis. Below is an 47% of NPs and 60% of PAs were aware of pathophysiology example of a question on one of the investigational agents: of hyperhidrosis Glycopyrronium tosylate (GT) is a novel topical anticholinergic agent under NPs (n=437) investigation in two 4-week phase 3 clinical trials (ATMOS-1 and ATMOS 2) Individuals with primary focal hyperhidrosis often have which of the NPs (n=437) for primary focal hyperhidrosis. Which of the following statements best PAs (n=105) following characteristics compared with individuals without hyperhidrosis? describes these trials and their results? PAs (n=105) 21% (93) 14% (61) A. Higher density of sweat glands A. GT reduced the severity and impact in the skin but not the bother of axillary sweating 47% (205) B. More than 70% of GT-treated 44% (191) B. Increased activity of sudomotor patients self-reported pathways originating in the CNS improvements in sweating 31% (137) C. Sweat glands that are 50% C. Only patients older than 18 years larger than normal D. Sweat glands that are less 24% (106) D. Of GT-treated patients, 30% to 40% still needed more than 1 shower or sensitive to acetylcholine bath per day

The top 3 barriers reported by NPs and PAs managing hyperhidrosis were lack of time (34%; 43%), lack of safe and effective treatment (23%; 19%), and belief that hyperhidrosis is mostly cosmetic and therefore it is up to patients to bring it up with their healthcare providers (17%; 17%) (Figure 1; Figure 3) In your practice, what are the top 3 barriers you have that prevent you from NPs (n=437) addressing and managing potential hyperhidrosis in your patients? PAs (n=105) 34% (150) A. Lack of time B. Lack of safe and effective treatments C. Hyperhidrosis is mostly cosmetic so 17% (74) it's up to the patient to bring it up D. I'm uncertain about when/how to diagnose hyperhidrosis E. I'm too embarassed to talk to my patient about their excessive sweat

F. Cost of existing treatments

DISCUSSION

This research uncovered current clinical practice patterns and gaps in knowledge and competence regarding hyperhidrosis amongst NPs and PAs. The key gaps uncovered were awareness of prevalence and pathophysiology of hyperhidrosis, confidence in communicating with patients, competency in selecting evidence-based management approaches, and knowledge of clinical data of emerging treatments. These gaps may be used to inform future medical education needs of NPs and PAs regarding treatment of patients with hyperhidrosis.

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