

# Hyperhidrosis Affects Multiple Focal Areas and Is Undertreated in Pediatric Sufferers: Survey Results from Population of >500 Children and Adolescents (Ages 6-18)

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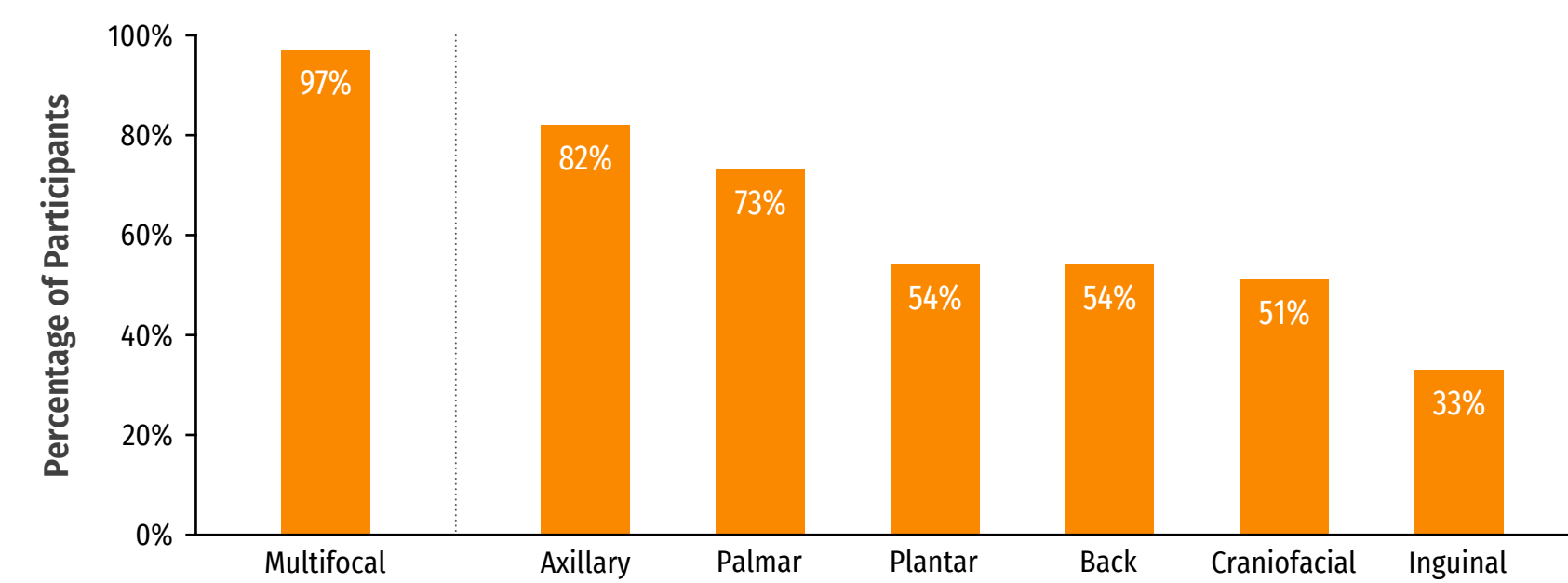
## PURPOSE

- Primary focal hyperhidrosis is characterized by excessive and uncontrollable sweating beyond what is necessary for thermal regulation; the condition affects an estimated 4.8% of the total U.S. population and approximately 2% of those under the age of 18<sup>1</sup>
- The condition is associated with a significant quality of life burden; an online survey in the U.S. showed that ~17% of teens experienced excessive sweating, and nearly 75% reported their symptoms led to moderate or major daily impairment<sup>2</sup>
- Though onset typically occurs during childhood/adolescence, the condition is underdiagnosed and undertreated; further, the impact of the disease in pediatric patients is not well characterized<sup>3</sup>
- Together with the International Hyperhidrosis Society (IHHS), this author team is engaged in a collaborative effort to characterize the patient experience in pediatric hyperhidrosis
- A quantitative survey was designed based on findings from previously completed qualitative research in a similar population<sup>4</sup> to elucidate characteristics and burden of hyperhidrosis in a pediatric (children and adolescent) population, a patient subset that has not been adequately studied to date
- Here, we report key findings of the quantitative phase to characterize the experiences of pediatric sufferers of hyperhidrosis, and to share these findings with healthcare providers

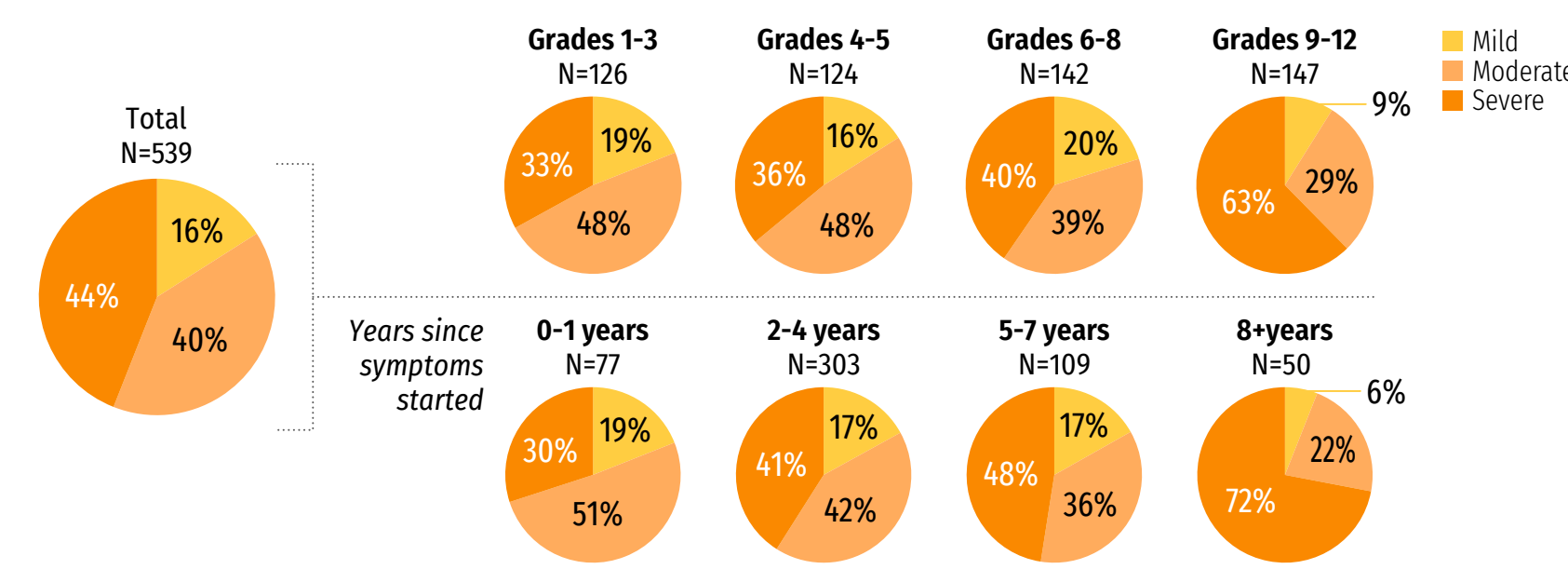
## KEY RESULTS

- Nearly all participants (97%) described sweating in multiple focal areas, with axillary and palmar sweating most frequently reported (**Figure 1**)
- Most responses indicated moderate or severe sweating, with severity increasing by age and years since symptom onset (**Figure 2**)
- Mean anxiety (GAD-7) and depression (PHQ-9) scores were highest in quantitative survey participants who perceived their sweating as severe (**Figure 3**)

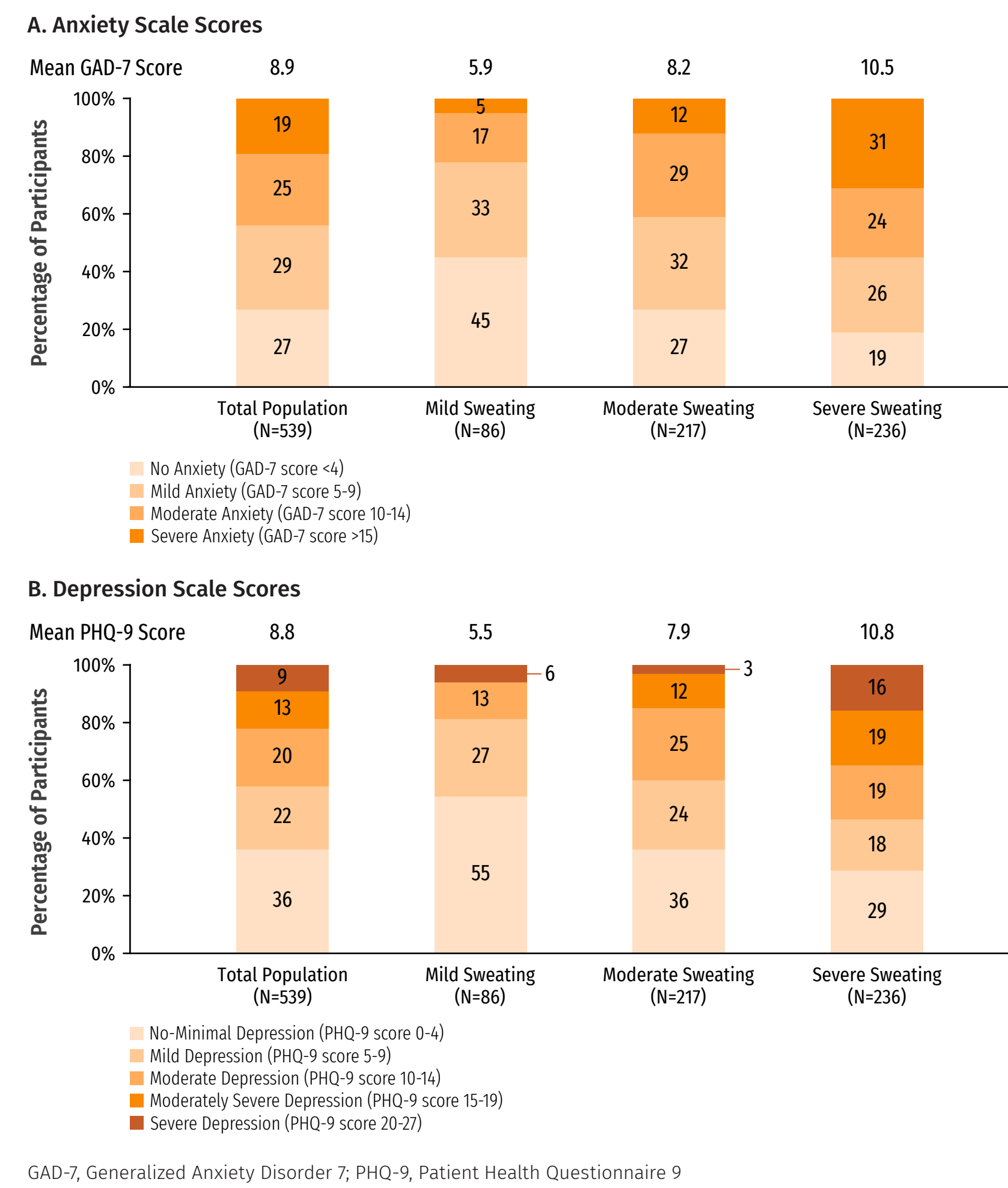
**Figure 1. Prevalence of Focal Sweating in Pediatric Sufferers**



**Figure 2. Sweating Severity by Age and Years Since Onset**

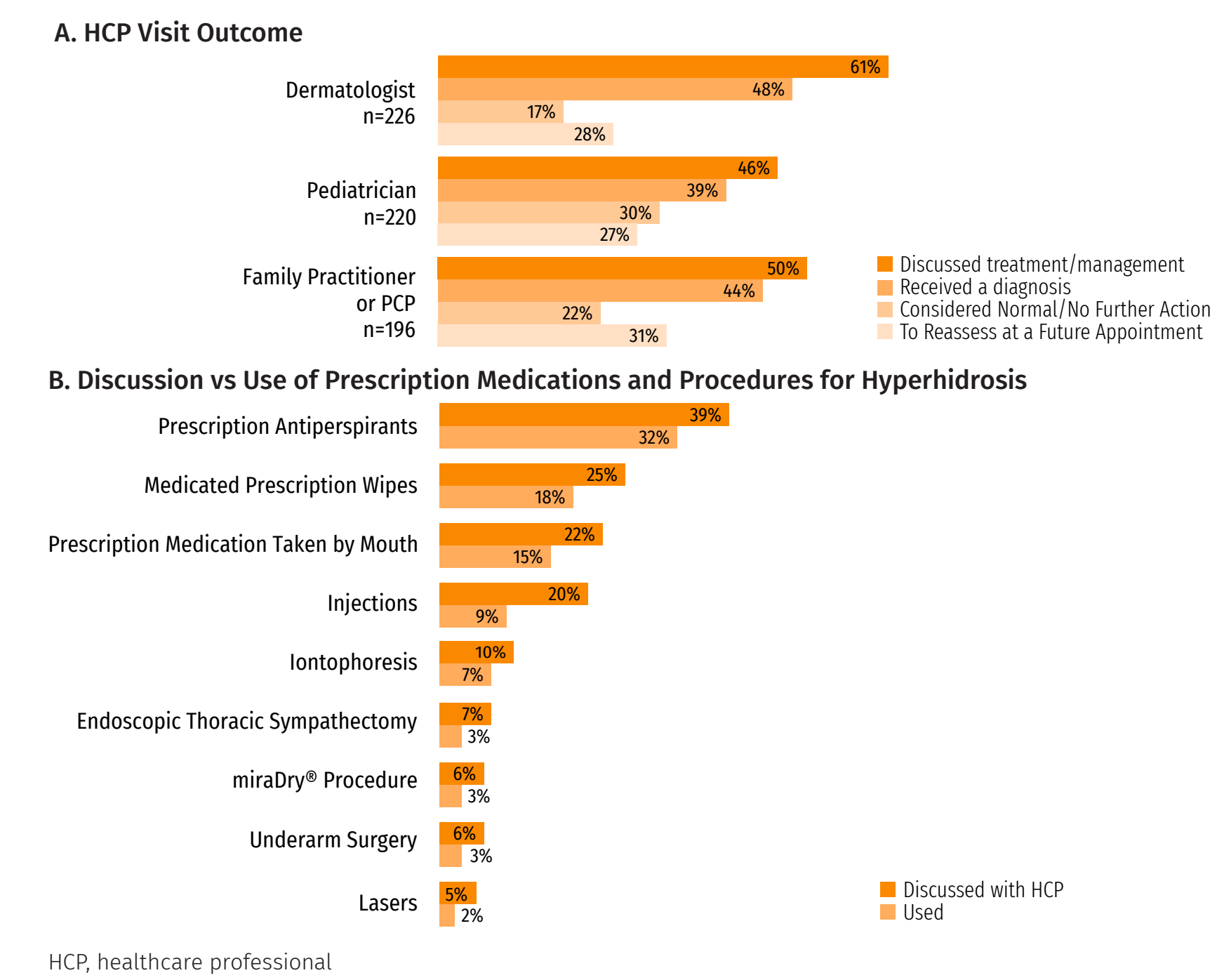


**Figure 3. Anxiety and Depression Scores Increase with Sweating Severity**



- While 91% of participants consulted a health care professional about their excessive sweating, less than half received a diagnosis (42%); moreover, close to half of those who saw a dermatologist, pediatrician, or family practitioner reported that the discussion ended with excess sweating considered normal or with a plan to reassess symptoms at a future visit (**Figure 4A**)
- Prescription medications and procedures used to treat hyperhidrosis were not often discussed with survey respondents, and an even fewer percentage of participants reported ever taking these treatments (**Figure 4B**)

**Figure 4. Outcome of HCP Visit**



## CONCLUSIONS

- The quantitative study reported here is the first to examine characteristics of excessive sweating and the resulting burden in a pediatric population
- In this pediatric survey population, most respondents reported excessive sweating at multiple focal areas, which is an important and novel insight in this population
- Increased disease severity was associated with greater depression and anxiety
- These observations together with the low percentage receiving hyperhidrosis treatment despite raising concerns with health care providers underscore the need to diagnose and provide adequate treatment to children as soon as symptoms present to avoid unnecessary suffering
- Findings reported here provide valuable insights into the unmet needs and experiences of pediatric sufferers of primary hyperhidrosis, a population that is currently understudied

## REFERENCES

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## METHODS

### Quantitative Study

#### Study Design & Participants

- The 40-minute online survey was informed by earlier qualitative interview and focus group data and was approved by an institutional review board
- Participants were recruited through a third-party market research panel and the IHHS, and targeted screening questions were used to identify excessive sweating consistent with hyperhidrosis
- For inclusion in the survey, participants were required to have experienced:
  - Sweating most of the time, or once/twice a week over the past 6 months
  - Sweating while awake, or awake and asleep
  - Moderate or major impairment due to sweating
  - Bilateral sweating

- Survey topics covered participant demographics and symptom characteristics, quality of life burden, and disease awareness
- Responses were collected for 539 children and adolescents aged 6-18 years (Grades 1-3, n=126; Grades 4-5, n=124; Grades 6-8, n=142; Grades 9-12, n=147), with caregivers required to provide responses for those aged 6-11 years with the child present (questions were catered to either the child or the caregiver, depending on who the respondent was)
- The average age of symptom onset was 8 years; approximately half of respondents were male and resided in urban areas, and most had insurance through a caregiver employer (**Table 1**)
- Sweating severity was determined using the Hyperhidrosis Disease Severity Scale (4-point scale); moderate and severe sweating were defined as a response score of 3 or 4 for any sweating region, respectively
- The General Anxiety Disease 7 (GAD-7) and Patient Health Questionnaire 9 (PHQ-9) questionnaires were embedded in the online survey to determine anxiety and depression scores, respectively

## SUPPORTIVE RESULTS

**Table 1. Participant Characteristics**

	Quantitative Survey (N=539)
Male (%)	49%
Mean Age of Onset (years)	8
Grades	
Grades 1-3	23%
Grades 4-5	23%
Grades 6-8	26%
Grades 9-12	27%
Insurance Status	
Through Employer	68%
Children's Health Insurance Program	13%
Medicaid	12%
Other	7%
Residential Area	
Urban	48%
Suburban	44%
Rural	8%
Severity	
Mild	16%
Moderate	40%
Severe	44%

- Most survey participants (86%) experienced sweating episodes at least 4 times a week; over 40% indicated that episode frequency, body areas affected, and amount of sweat per episode increased over time (**Figure 5**)

**Figure 5. Sweating Episodes Are Frequent, and Symptoms Can Worsen Over time**

