Attention deficit hyperactivity disorder (ADHD) rates in the United States continue to rise, with 11 percent of children ages 4-17 having received a diagnosis in 2011, according to a study released Friday.

The research, published in the Journal of the American Academy of Child & Adolescent Psychiatry, also shows more children are receiving medication for ADHD. More than 3.5 million American children (6 percent of 4-17 year olds) were reported by their parents to be receiving medicine in 2011, a 28 percent increase from the numbers reported in 2007.

About 2 million more U.S. children ages 4-17 were diagnosed with ADHD compared with 2003, according to the study, and nearly two-thirds of those children are taking medication for the condition.

Nearly one in five high school boys and one in 11 high school girls in the U.S. were reported by their parents to have been diagnosed with ADHD. Overall, in 2011, 6.4 million children were diagnosed with ADHD. Data from the 2011-12 National Survey of Children’s Health were used to calculate estimates for ADHD and the number of children receiving medication.

Lead author Susanna N. Visser, M.S., an epidemiologist with the Centers for Disease Control and Prevention, said the increasing numbers mean clinicians should use best practices and guidelines when diagnosing children and determining a treatment plan. Following ADHD diagnosis recommendations can help prevent inappropriate treatment and medication, Visser said.

More young children may benefit from early intervention and the initiation of behavioral therapy, the recommended first-line treatment for preschoolers before medication, Visser said. Pediatricians also must work with teenagers prescribed ADHD medication to make sure they use it correctly, she noted, and do not distribute medicine to classmates, friends or family.

Mark L. Wolraich, M.D., FAAP, chair of the AAP’s subcommittee on ADHD when the clinical practice guidelines were updated in 2011, said he believes the study shows that more parents are becoming aware of the traits of ADHD and reporting concerns to their doctors, who are better prepared for diagnosis.

“This is not increasing as a condition,” Dr. Wolraich said. “It’s that we’re finally identifying it. We’re finally getting much better at identifying the kids.”

Dr. Wolraich said it is positive that more children with ADHD are being diagnosed sooner, so they can begin to receive the treatment they need to succeed in school and life. More worrisome than the increasing number of children receiving an ADHD diagnosis, he said, is the number of children with ADHD who are not receiving proper treatment.

The report suggests that ADHD is causing an increasing burden on the U.S. health care system and “efforts to further understand ADHD diagnostic and treatment patterns are warranted.”

The percentage of children diagnosed with ADHD varies across the country, ranging from 15 percent in Arkansas and Kentucky to 4 percent in Nevada.

ADHD is the most common neurobehavioral disorder among children and can affect social interactions, academic performance and general well-being.

When the Academy updated clinical practice guidelines for ADHD diagnosis, evaluation and treatment, the age range was expanded to include children ages 4 to 18.

The guidelines, http://pediatrics.aappublications.org/content/128/5/1007.full, include evaluating children with behavioral or academic problems and symptoms of inattention, hyperactivity or impulsivity. The primary care physician should gather information about the child from parents, caregivers, teachers or mental health professionals and rule out a possible alternative cause when making a diagnosis for ADHD.

Clinicians should recognize that ADHD is a chronic condition and treatment is age specific, with preschool-age children to receive evidence-based parent- or teacher-administered behavior therapy first before any medicine is considered. Physicians should follow the Food and Drug Administration guidelines when prescribing medication for older children.