

e-Health: A National Registry and Therapeutic Algorithm for the Prevention and Management of Overweight and Obesity in Childhood and Adolescence in Greece



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Background: Obesity in childhood and adolescence represents a major health problem of our century and accounts for a significant increase in morbidity and mortality in adulthood. In Greece, more than 35% of children and adolescents are currently overweight or obese.

Objective and hypotheses: To develop a National e-Health System for General Pediatricians and General Practitioners for the prevention and management of overweight and obesity. Specific aims included: a) Development of a "National Registry for the Prevention and Management of Overweight and Obesity in Childhood and Adolescence" and b) Guidance and Training of General Pediatricians and General Practitioners regarding the management of overweight and obesity.

Methods: Using information and communication technologies (ICT), we developed a web application supporting interoperability with other National infrastructures (i.e. ePrescription) and multi-layered security spanning preventive, detective, and administrative controls. This includes transparent data encryption, data redaction, data masking, privileged user controls, privilege usage analysis, conditional auditing and real application security. The Patient Summary Dataset includes information on the present and past medical history, family history, medications, immunizations, clinical examination and laboratory findings, and appointment booking service. Based on the data that the doctor is registering, the system calculates a personalized therapeutic algorithm that provides information on diet, physical exercise and sleep, as well as guidance on laboratory investigations and referral to specialized centers.

Results: The application was launched in September 2015 and is accessible by the following URL: <http://app.childhood-obesity.gr/>. A pilot study performed in 1000 children and adolescents indicated that using this system resulted in a reduction of obesity rates by 30% and overweight rates by 35% within 1 year.

Conclusions: This National e-Health System appears to be effective in the management of overweight and obesity in childhood and adolescence.

<http://app.childhood-obesity.gr/>

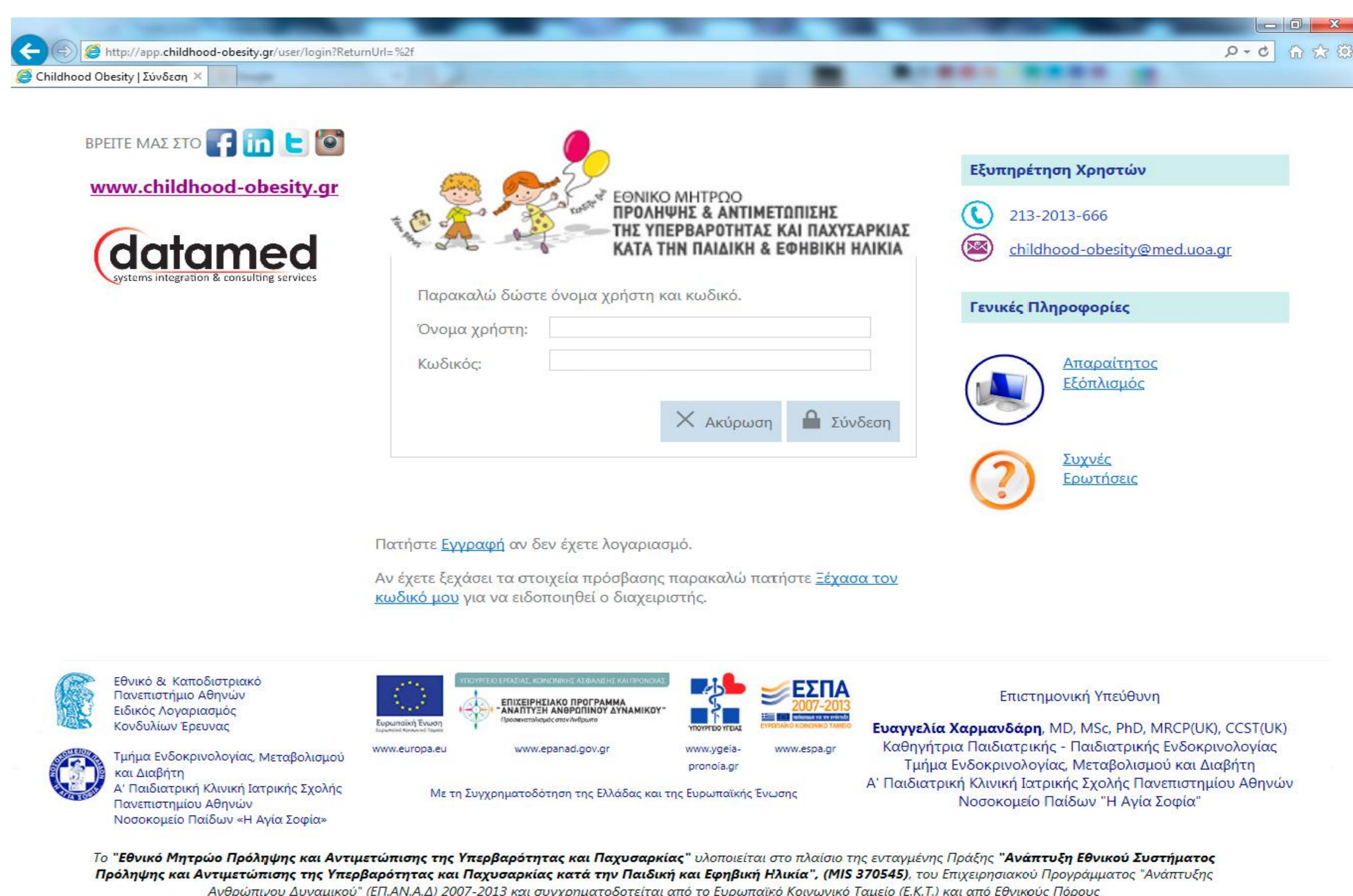


Figure 1. Login to the National e-Health System

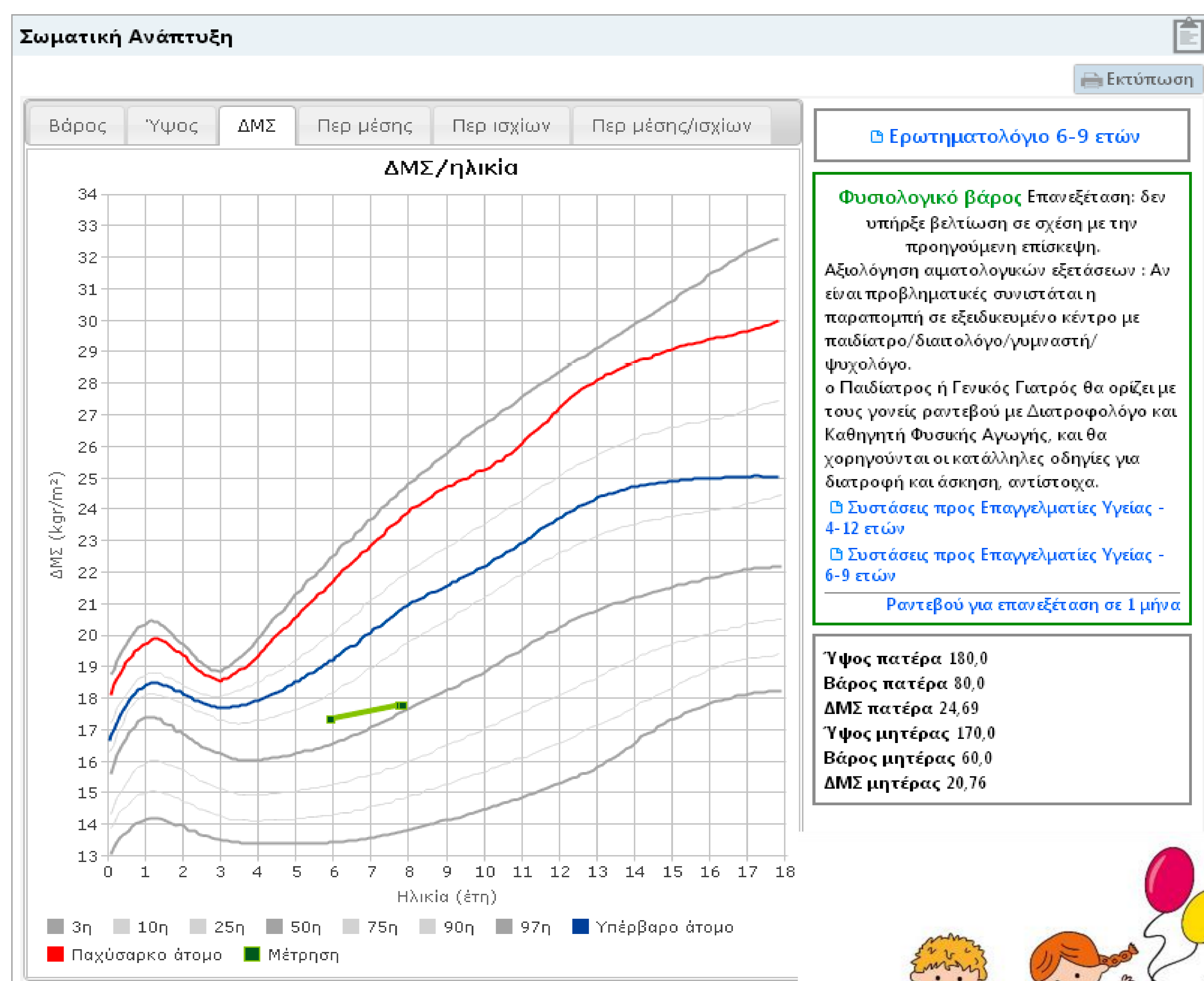


Figure 2. Therapeutic Algorithm



www.childhood-obesity.gr

