August Nutrition Research Review

Changes in the Incidence of Childhood Obesity

Abstract: This study examined obesity incidence and prevalence across 2 cohorts of children in the United States 12 years apart using the Early Childhood Longitudinal Studies; parallel data sets following the kindergarten cohorts of 1998 and 2010 with direct anthropometric measurements at multiple time points through fifth grade in 2004 and 2016, respectively.

Among children who did not have obesity at kindergarten entry, there was a 4.5% relative increase in cumulative incidence of new obesity cases by end of fifth grade across cohorts (15.5% [14.1%-16.9%] vs 16.2% [15.0%-17.3%]), though annual incidence did not change substantially. The risk of incident obesity for children who had normal BMI at kindergarten entry stayed the same, but the risk of incident obesity among overweight kindergartners increased slightly. Social disparities in obesity incidence expanded: incidence of new cases during primary school among non-Hispanic Black children increased by 29% (95% confidence interval, 25%-34%), whereas risk for other race-ethnic groups plateaued or decreased. Children from the most socioeconomically disadvantaged households experienced 15% higher cumulative incidence across primary school in 2010 than 1998.

The authors concluded the incidence of childhood obesity was higher, occurred at younger ages, and was more severe than 12 years previous; thus, more youths may now be at risk for health consequences associated with early onset of obesity. The authors speculate that prevention programs need to look beyond simple solutions to obesity, including addressing the substantial changes in physical activity and in food environments that have progressed in recent decades, as well as the epigenetic and neuro–psycho–behavioral pathways to obesity.

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Authors: Cunningham SA, Hardy ST, Jones R, Ng C, Kramer MR, Narayan KMV
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https://pubmed.ncbi.nlm.nih.gov/35789417/

Malnutrition Among Hospitalized Children in the United States: A 2012-2019 Update of Annual Trends

Abstract: The aim of this update was to assess change in the coded diagnosis of malnutrition (CDM) among US hospitalized children given increased awareness of the need for improved recognition and standardized diagnosis. This was a retrospective, cross-sectional analysis using nationally representative data from the Nationwide Inpatient Sample of 13.2 million hospitalizations from 2012 to 2019. The evaluation included pediatric patients between age 1 month and 17 years.

CDM prevalence increased from 3.9% in 2012 to 6.4% in 2019. During this period, failure to thrive decreased

from 40.6% to 23.3% of all cases with concomitant increases in the diagnosis of protein-calorie malnutrition and children identified with more than one malnutrition subtype. Differences in CDM diagnoses are evident by hospital type, race/ethnicity, and age of the patient.

The authors concluded, although pediatric malnutrition continues to be underdiagnosed in hospital settings, this study demonstrates improvement over time. There continues to be a need for continued professional education regarding best practices for diagnosis to improve health care provider knowledge and self-efficacy on this topic, especially in nonteaching hospitals.

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Authors: Carvalho-Salemi J, Phillips W, Wong Vega M, Swanson J, Becker PJ, Salemi JL
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Exclusive Enteral Nutrition Practices in the Management of Crohn's Disease: A Cross Sectional Survey of Specialist Pediatric Dietitians

Abstract: An online, cross-sectional survey was developed, piloted, and distributed to dietitians working at tertiary pediatric IBD centers. Centers were identified through a member of the British Society of Pediatric Gastroenterology, Hepatology, and Nutrition (BSPGHAN) working group.

Results showed eighty-five percent (17/20) of the specialist IBD centers in the UK responded. 100% of centers used polymeric feeds as their first line and 70% (12/17) of centers recommended EEN for 6 weeks. Dietetic monitoring whilst on EEN over the 6-8 weeks varied significantly, ranging from 30% (5/17) of centers monitored weekly compared with 30% of centers (5/17) only if clinical need indicated. There was a wide range in practices regarding which foods and drinks were permitted whilst on EEN. Forty-three percent (7/17) introduced solid foods over five to seven days, 19% (3/17) introduced food over seven to 14 days and 38% (6/17) introduced food over a minimum of 14 days. Eighteen percent (3/17) of centers were offering the Crohn's disease exclusion diet as a treatment for IBD.

The authors concluded that despite available evidence-based guidelines there is still considerable variation in the management of EEN to induce remission in active CD, especially in relation to the frequency of dietetic review and foods permitted during and after EEN. Further research is required to understand the impact this may have on achieving and maintaining remission in CD.

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Authors: Jackman L, Arpe L, O' Connor G
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A Systematic Review on the Agreement Between Clinical Practice Guidelines Regarding the Steps of the Nutrition Care Process of Critically Ill Adult Patients

Abstract: This review compared recommendations from Clinical Practice Guidelines (CPGs) for the nutritional management of critically ill adult patients and presents a synthesis of them for each step of the nutrition care process (NCP) in Intensive Care Unit (ICU) settings. Ten CPGs were reviewed, and nine made recommendations for energy requirement, time to start, and route for nutrition support; and three presented recommendations on nutrition monitoring. The relative frequency of agreement between the recommendations of the CPGs ranges from 11% to 100%. The highest agreement was for the determination of energy requirements by indirect calorimetry and the provision of high protein for obese patients (100%). The lowest agreement among the CGPs was for considering either EN or PN as an acceptable route (11%) and when to start PN (16.7%). Most recommendations were based on expert consensus. This review showed that there is wide divergence on the recommendations to NCP of critically ill patients.

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Association of Global Leadership Initiative on Malnutrition with Survival Outcomes in Patients with Cancer: A Systematic Review and Meta-Analysis

Abstract: This meta-analysis aimed to examine the association between malnutrition defined by the Global Leadership Initiative on Malnutrition (GLIM) and survival outcomes in patients with cancer. Twelve (n=12) articles reporting on 11 studies including 6799 cancer patients were identified. The prevalence of malnutrition defined by the GLIM ranged from 11.9% to 87.9%. Meta-analysis indicated that malnutrition defined by the GLIM was associated with poor overall survival (HR 1.90; 95% CI 1.58–2.29) and disease-free survival (HR 1.51; 95% CI 1.27-1.79), respectively. Subgroup analysis showed that the pooled HR was 1.49 (95% CI 1.32–1.68) for moderate malnutrition and 1.68 (95% CI 1.42–1.99) for severe malnutrition.

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https://www.clinicalnutritionjournal.com/article/S0261-5614(22)00243-6/fulltext?j=16000758&sfmc_sub=923556715&l=357_HTML&u=356823900&mid=1335441&jb=3007