

Ventilation

PS-385a **CLINICAL OUTCOMES AFTER BILEVEL POSITIVE AIRWAY PRESSURE (BiPAP) TREATMENT FOR ACUTE ASTHMA EXACERBATIONS**

¹C Golden, ²M Xu, ³CM Estrada, ⁴DH Arnold. ¹School of Medicine, Meharry Medical College, Nashville, USA; ²BioStatistics, Vanderbilt University School of Medicine, Nashville, USA; ³Pediatrics and Emergency Medicine, Vanderbilt University School of Medicine, Nashville, USA; ⁴Pediatrics and Emergency Medicine and Center for Asthma and Environmental Health Sciences Research, Vanderbilt University School of Medicine, Nashville, USA

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Aims To examine whether bilevel positive airway pressure (BiPAP) for children with acute asthma exacerbations not approaching respiratory failure (not meeting NIH and GINA guidelines for noninvasive ventilation) is associated with improved clinical outcomes.

Methods We prospectively enrolled children 5–17 years with exacerbations not meeting respiratory failure guidelines for BiPAP use in a paediatric emergency department. We modelled propensity scores for BiPAP treatment then used propensity score matching to estimate the associations of BiPAP treatment with hospital admission; PICU admission; hospital length-of-stay; and time to Q4 hr albuterol as a metric of clinical improvement.

Results Amongst 933 participants, median [IQR] age was 8.8 [6.9,11.2] years, male 61%, and African-American 59%. BiPAP-treated participants (n = 45) had similar demographic characteristics to BiPAP-untreated participants in the matched analysis and significantly greater likelihood of hospital and PICU admission (Table).

Conclusions BiPAP treatment for paediatric patients with asthma exacerbations not meeting respiratory failure guidelines may be associated with greater resource utilisation without evidence of improved outcomes.

Abstract PS-385a Table 1 Propensity score matching for participants who were treated with BiPAP

Characteristic	BiPAP Treatment Status	
	Not treated (n = 45)	Treated (n = 45)
Acute Asthma Intensity Research Score ¹	8 [7, 10]	9 [7, 10]
Age (Years)	8.4 [6.7, 11.6]	8.3 [6.9, 10.8]
Male gender	60%	64%
Symptom duration (Days)	1 [0.5, 3]	1.5 [0.5, 3.5]
Prior PICU admission ² asthma	44%	40%
Prior respiratory failure ² asthma	9%	7%
Public insurance	76%	67%
Outcomes		
Hospitalized ²	36%	96%
PICU admission ²	9%	53%
Hospital length-of-stay (Hours) ³	23 [14, 41]	41 [20, 47]
Time to Q4 hr albuterol (Hours) ⁴	6.6 [3.8, 13.4]	9.5 [5.5, 18.5]

Median [IQR] unless otherwise specified

1. Moderate=7–11; severe=12–16

2. p < 0.001

3. p = 0.07

4. p = 0.14

Adolescent Health

PO-0001 **ASSESSMENT OF PHYSICAL ACTIVITY AMONG ADOLESCENTS: A CROSS-SECTIONAL STUDY IN ANAND DISTRICT, INDIA**

¹H Dave, ²R Desai, ²AG Phatak, ³R Vasa, ¹S Nimbalkar. ¹Department of Pediatrics, Pramukhswami Medical College, Karamsad, India; ²Central Research Services, Charutar Arogya Mandal, Karamsad, India; ³Department of Neonatology, University of Chicago Medical Center and Mercy Hospital and Medical Center, Chicago, USA

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Background and aims Inadequate physical activity (PA) is a common thread running through most public health problems across the world. PA declines during the lifespan, especially during adolescence. We studied the current status of PA of children in Anand, India in the age group 11–19 years.

Methods Cross-sectional study using a self-reported Physical Activity Questionnaire (PAQ-A) which has consistently high validity and moderate reliability. It comprehensively captures the PA in last 7 days. Self-reported anthropometric data and socio-demographic data were also recorded. Of 3337 participants, anthropometric data was not reported in 784.

Results Mean physical activity level (n = 3337) amongst adolescents was 2.62 (0.72 SD). In females it was 2.5670 (0.71 SD) and in males was 2.66 (0.73 SD). Correlating their PA with age, in females (n = 1410) correlation was -0.204 and in males (n = 1927) it was -0.095. PA declines with age but in males not statistically significant. Lowest PA of 1.93 was reported from school (n = 231) where most students were appearing for boards within a year. Correlating PA with BMI (n = 2553), overall correlation was -0.116 showing insignificant correlation. Correlation of BMI with PA was -0.314 for an affluent school (n = 328). Most common physical activity was BICYCLING in males 55.9% and in females 51.7%. Swimming was practiced by 5.8%. Overall (n = 2617) 15.7% were overweight/obese (BMI > 23 for Indian population) in which 16.5% male and 14.8% female.

Conclusions PA in adolescents is not as per recommended levels. Solutions to improve PA need to be innovated for Indian Schools.

PO-0002 **PREVALENCE OF SMOKING AMONG ADOLESCENTS IN SAUDI ARABIA: THE RELATIONSHIP TO SCHOOL CONNECTEDNESS**

¹A Al-Makadma, ²M Moynihan. ¹Adolescent Medicine, King Fahad Medical City, Riyadh, Saudi Arabia; ²Adolescent Medicine, University of British Columbia, Vancouver, Canada

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Introduction Initiation of smoking behaviour during adolescence is associated with many negatives. In Saudi Arabia, the prevalence of teen smoking is not well understood. 2013 WHO Health Report on Global Tobacco Epidemic indicates the prevalence of current cigarette use among youth as 6% (Boys: 13%, Girls: 5%). This paper presents data from a larger study of adolescents' health developed for Saudi youth in Riyadh. The purpose of which is to describe the smoking behaviours of adolescent boys and girls aged 14–19.

Methodology A health survey was developed for Saudi youth after extensive literature review. The survey focused on adolescents' behaviours and attitudes, including questions about smoking and tobacco use. A total of 1430 Adolescents from 12

Abstract PO-0002 Table 1 Comparison of tobacco use by gender, age, and family members who currently smoke

% EVER SMOKED A WHOLE CIGARETTE					Chi ²	df	p-value
Boys	27.9%				52.56	1	<0.001
Girls	11.8%						
Younger (14-16)	17.4%				20.52	1	<0.001
Older (17-19)	27.6%						
NUMBER OF DAYS (%) CIGARETTS WERE SMOKED IN THE PAST 30 DAYS					Chi ²	df	p-value
	1-5 days	6-9 days	10-19 days	20-30 days			
Boys	33.1 %	11.0 %	18.1 %	37.8 %	9.14	3	0.03
Girls	59.4 %	9.4 %	3.1 %	28.1 %			
Younger (14-16)	49.2 %	4.8 %	7.9 %	38.1 %	10.75	3	0.01
Older (17-19)	31.3 %	16.5 %	17.4 %	34.8 %			
NUMBER OF CIGARETTS SMOKED PER DAY (%)					Chi ²	df	p-value
	1	2-9	10-19	20-30			
Boys	40.5 %	41.0 %	10.0 %	8.5 %	15.46	3	0.001
Girls	65.5 %	15.5 %	6.9 %	12.1 %			
Younger (14-16)	53.0 %	29.6 %	7.0 %	10.4 %	4.83	3	NS
Older (17-19)	41.3 %	39.0 %	10.5 %	9.3 %			

schools participated in the study. 54.8% were male. Univariate descriptive statistics were examined. data was analysed by chi-square tests using SPSS Statistics (Version 21) software; p-values < 0.05 were considered statistically significant.

Results 20% reported having ever smoked a whole cigarette. Among the smokers half smoked their first cigarette at 13 years. Students who reported ever smoking had a significantly lower mean school connectedness score compared to students who never smoked (t = 3.03, p = 0.003). (SD)=2.77(.67) vs. Never smoked=2.9(62), t. 50% of students had smokers in the family

Conclusion The most important implication of this study is finding ways to improve the school connectedness which will inversely affect the prevalence of smoking among adolescents. Policy makers have to consider this seriously Detailed surveying of smoking behaviours at regular intervals is likely to provide a more thorough perspective.

PO-0003 INJURIES – DISPROPORTIONATE THREAT FOR MALE ADOLESCENTS

¹A Mujkic-Klaric, ²N Geres, ³U Rodin, ⁴A Ivcevic-Uhemik, ¹Andrija Stampar School of Public Health, University of Zagreb School of Medicine, Zagreb, Croatia; ²Status M, Non-Governmental Organization, Zagreb, Croatia; ³Department for Research Vulnerable Group Health, Croatian National Institute of Public Health, Zagreb, Croatia; ⁴Department for Health Account Research, Croatian National Institute of Public Health, Zagreb, Croatia

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Background and aims Injuries are a huge and largely preventable public health problem. After the first year of life injuries are the leading cause of children's death before malignant diseases, congenital malformations and all other causes. For the adolescents injuries are even bigger problem. The aim of the study was to analyse the proportion of deaths caused by injuries among Croatian 15–19 years old male adolescents.

Methods We analysed deaths of adolescents aged 15–19 years who died because of injuries from 1995 through 2012. Vital statistics mortality data from the Republic of Croatia Central Bureau of Statistics prepared by the Croatian National Institute of Public Health were used.

Results Among all causes of death for the age group 1–19 years injuries took highest proportion: in 1995 62%, and in 2012 53%. For males 15–19 years in 1995 injuries took 72%, in 2012 76%. In 1995 in the age group 15–19 there were 168 injury caused fatalities (rate 50,76 per 100 000); out of them 125 (rate 73,98) were male and 43 (rate 26,54) were female. In 2012 there were 46 (rate 18,69) fatalities; out of them were 38 (rate 30,10) male and 8 (rate 6,65) female.

Conclusions In the analysed period significant decrease occurred regarding the total number of fatalities as well as the rate caused by injuries but proportion of death caused by injuries for males aged 15–19 increased. Targeted interventions tailored for this specific group are necessary to reduce the burden of injuries for male adolescents.

PO-0004 ENTORHINAL CORTICAL THINNING AND ADHD AND RELATIONAL PROBLEMS IN VLBW ADOLESCENTS

¹V Lozano-Botellero, ¹MS Indredavik, ¹J Skranes, ²S Lydersen, ¹AM Brubbakk, ¹M Martinussen. ¹Laboratory Medicine Children's and Women's Health, Norwegian University of Science and Technology, Trondheim, Norway; ²Regional Centre for Child and Youth Mental Health and Child Welfare, Norwegian University of Science and Technology, Trondheim, Norway

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Background Children born preterm present higher rates of ADHD symptoms and autistic traits than the general population. Entorhinal cortical abnormalities have been related to cognitive deficits in the preterm population, and to psychiatric and neurodevelopmental disorders in the general population.