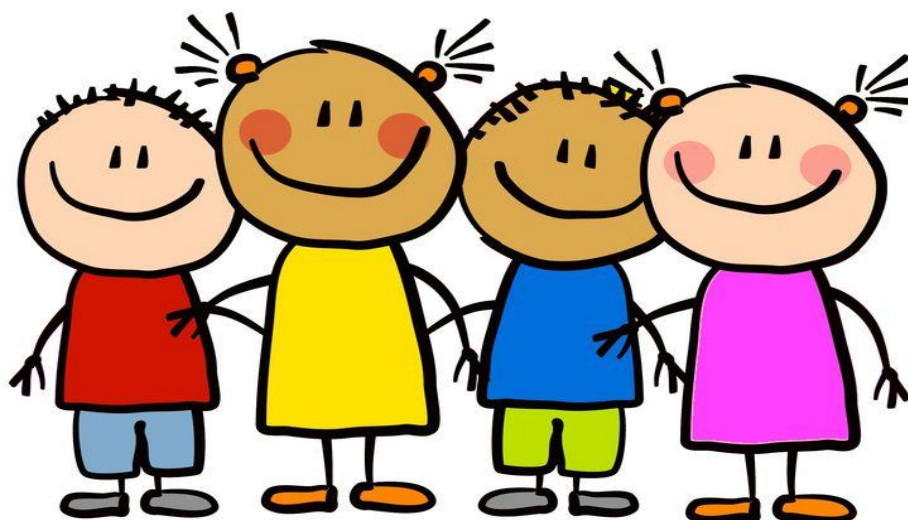


General Paediatrics

Evidence Update

January 2018

(Bimonthly)



Respecting everyone
Embracing change
Recognising success
Working together
Our hospitals.



Training Calendar 2018

All sessions are one hour

January (13.00-14.00)

4 th (Thu)	Statistics
8 th (Mon)	Literature Searching
18 th (Thu)	Critical Appraisal
24 th (Wed)	Statistics

February (12.00-13.00)

1 st (Thu)	Literature Searching
9 th (Fri)	Critical Appraisal
12 th (Mon)	Statistics
20 th (Tue)	Literature Searching
28 th (Wed)	Critical Appraisal

March (13.00-14.00)

8 th (Thu)	Statistics
12 th (Mon)	Literature Searching
20 th (Tue)	Critical Appraisal
28 th (wed)	Statistics

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Key Papers

If you would like any of the papers in full text then please email the library:
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[Association Between Inhaled Corticosteroid Use and Bone Fracture in Children With Asthma.](#)

[JAMA Pediatr.](#) 2018 Jan 1;**172(1):57-64.**

[Gray N](#)1,2, [Howard A](#)1,2,3, [Zhu J](#)1,3, [Feldman LY](#)1, [To T](#)1,2,3.

Daily use of inhaled corticosteroids is a widely recommended treatment for mild persistent asthma in children. There is concern that, similar to systemic corticosteroids, inhaled corticosteroids may have adverse effects on bone health.

OBJECTIVE:

To determine whether there is an increased risk of bone fracture associated with inhaled corticosteroid use in children with asthma.

DESIGN, SETTING, AND PARTICIPANTS:

In this population-based nested case-control study, we used health administrative databases to identify a cohort of children aged 2 to 18 years with a physician diagnosis of asthma between April 1, 2003, and March 31, 2014, who were eligible for public drug coverage through the Ontario Drug Benefit Program (Ontario, Canada). We matched cases of first fracture after asthma diagnosis to fracture-free controls (ratio of 1 to 4) based on date of birth (within 1 year), sex, and age at asthma diagnosis (within 2 years). We used a 1-year lookback period to ascertain history of inhaled corticosteroid use. Multivariable conditional logistic regression was used to obtain an odds ratio (OR) with 95% confidence interval for fracture, comparing no inhaled corticosteroid use vs current, recent, and past use.

EXPOSURES:

Inhaled corticosteroid use during the child's 1-year lookback period, measured as current user if the prescription was filled less than 90 days prior to the index date, recent user (91-180 days), past user (181-365 days), or no use.

MAIN OUTCOMES AND MEASURES:

First emergency department visit for fracture after asthma diagnosis, identified using International Statistical Classification of Diseases and Related Health Problems, 10th Revision codes.

RESULTS:

This study included 19 420 children (61.0% male; largest proportion of children, 31.5%, were aged 6-9 years at their index date). The multivariable regression results did not show a significant association between first fracture after asthma diagnosis and current use (OR, 1.07; 95% CI, 0.97-1.17), recent use (OR, 0.96; 95% CI, 0.86-1.07), or past use (OR, 1.00; 95% CI, 0.91-1.11) of inhaled corticosteroids, compared with no use, while adjusting for sociodemographic factors and other medication use. However, use of systemic corticosteroids in the 1-year lookback period resulted in greater odds of fracture (OR, 1.17; 95% CI, 1.04-1.33).

CONCLUSIONS AND RELEVANCE:

Systemic corticosteroids, but not inhaled corticosteroids, were significantly associated with increased odds of fracture in the pediatric asthma population.

[Reduction in Hypoglycemia With the Predictive Low-Glucose Management System: A Long-Term Randomized Controlled Trial in Adolescents With Type 1 Diabetes.](#)
[Diabetes Care.](#) 2018 Feb;41(2):303-310.** doi: 10.2337/dc17-1604. Epub 2017 Nov 30.**

[Abraham MB](#)^{1,2}, [Nicholas JA](#)^{1,3}, [Smith GJ](#)³, [Fairchild JM](#)⁴, [King BR](#)⁵, [Ambler GR](#)⁶, [Cameron FJ](#)⁷, [Davis EA](#)^{1,2}, [Jones TW](#)^{8,2}; [PLGM Study Group](#).

OBJECTIVE:

Short-term studies with automated systems that suspend basal insulin when hypoglycemia is predicted have shown a reduction in hypoglycemia; however, efficacy and safety have not been established in long-term trials.

RESEARCH DESIGN AND METHODS:

We conducted a 6-month, multi-center, randomized controlled trial in children and adolescents with type 1 diabetes using the Medtronic MiniMed 640G pump with Suspend before low (predictive low-glucose management [PLGM]) compared with sensor-augmented pump therapy (SAPT) alone. The primary outcome was percentage time in hypoglycemia with sensor glucose (SG) <3.5 mmol/L (63 mg/dL).

RESULTS:

In an intent-to-treat analysis of 154 subjects, 74 subjects were randomized to SAPT and 80 subjects to PLGM. At baseline, the time with SG <3.5 mmol/L was 3.0% and 2.8% in the SAPT and PLGM groups, respectively. During the study, PLGM was associated with a reduction in hypoglycemia compared with SAPT (% time SG <3.5 mmol/L: SAPT vs. PLGM, 2.6 vs. 1.5, $P < 0.0001$). A similar effect was also noted in time with SG <3 mmol/L ($P < 0.0001$). This reduction was seen both during day and night ($P < 0.0001$). Hypoglycemic events (SG <3.5 mmol/L for >20 min) also declined with PLGM (SAPT vs. PLGM: events/patient-year 227 vs. 139, $P < 0.001$). There was no difference in glycated hemoglobin (HbA1c) at 6 months (SAPT $7.6 \pm 1.0\%$ vs. PLGM $7.8 \pm 0.8\%$, $P = 0.35$). No change in quality of life measures was reported by participants/parents in either group. There were no PLGM-related serious adverse events.

CONCLUSIONS:

In children and adolescents with type 1 diabetes, PLGM reduced hypoglycemia without deterioration in glyceemic control.

[High blood pressure in the young: why should we care? \(pages 14–19\)](#)

[Acta Paediatr.](#) 2018 Jan;107(1):14-19. doi: 10.1111/apa.14110. Epub 2017 Nov 2.

[Flynn JT](#)1,2.

Abstract

While primary hypertension (HTN) clearly occurs in children and adolescents, the approach of many providers to such patients can best be described as ambivalent: the condition may be recognised, but is not acted upon. Such ambivalence may stem from incomplete understanding of the effects of high blood pressure in the young, which in turn is related to the shortage of information on long-term outcomes of primary childhood HTN. However, other evidence on the short- and long-term effects of blood pressure elevation in childhood clearly shows that it is not a benign condition at all.

CONCLUSION:

Childhood HTN warrants action to prevent adult cardiovascular disease.

KEYWORDS:

Blood pressure; Cardiovascular; Hypertension; Kidney; Prevention

[Pediatric Injuries Related to Window Blinds, Shades, and Cords](#)

Bridget Onders, Eun Hye Kim, Thitphalak Chounthirath, Nichole L. Hodges and Gary A. Smith

[Parents with overweight children age two and five years of age did not perceive them as weighing too much](#)

Sara Berggren, Josefine Roswall, Bernt Alm, Stefan Bergman, Jovanna Dahlgren and Gerd Almquist-Tangen

Accepted manuscript online: 6 DEC 2017 02:20AM EST | DOI: 10.1111/apa.14174

Updates

NICE National Institute for
Health and Care Excellence

[WHO | WHO recommendations on child health](#)

Source: [World Health Organization](#) - 08 November 2017

This document collates all WHO recommendations on child health that have been approved by the Guidelines Review Committee (GRC) of WHO.



[Providing physicians with feedback on medication adherence for people with chronic diseases taking long-term medication](#)

Vincent Zaugg, Virginie Korb-Savoldelli, Pierre Durieux, Brigitte Sabatier

Online Publication Date: January 2018

[Non-pharmacological interventions for sleep promotion in hospitalized children](#)

Sapna R Kudchadkar, Sean Barnes, Blair Anton, Daniel J Gergen, Naresh M Punjabi

Online Publication Date: December 2017

[Probiotics for the prevention of Clostridium difficile-associated diarrhea in adults and children](#)

Joshua Z Goldenberg, Christina Yap, Lyubov Lytvyn, Calvin Ka-Fung Lo, Jennifer Beardsley, Dominik Mertz, Bradley C Johnston

Online Publication Date: December 2017

[The effects of oral vitamin D supplementation on linear growth and non-communicable diseases among infants and children younger than five years of age](#)

Elaine A Yu, Samantha L Huey, Juan Pablo Peña-Rosas, Saurabh Mehta

Online Publication Date: November 2017

[Probiotics for the prevention of Clostridium difficile-associated diarrhea in adults and children.](#)

Cochrane Database Syst Rev

[Nebulised hypertonic saline solution for acute bronchiolitis in infants.](#)

Cochrane Database Syst Rev

[Inhaled magnesium sulfate in the treatment of acute asthma.](#)

Cochrane Database Syst Rev

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Potential for burns from electronic nicotine delivery systems (January 2018)

Electronic nicotine delivery systems (ENDS) serve as heat generators for e-cigarettes and heat-not-burn (HNB) cigarettes. Added to the risk related to chemical constituents produced during use of an ENDS, there is a risk of burns due to device malfunction. Burns to local tissue have occurred while an ENDS device was stored (eg, in a pants pocket) or during its use, resulting in burns to the thigh, groin, face, and/or hand [1]. While reported previously, this risk may not be widely recognized among clinicians or users of ENDS. (See "[E-cigarettes](#)", section on 'Adverse health effects'.)

Overprescription of opioids in children (December 2017)

Overprescription of opioids for acute pain results in leftover pills, which are available for diversion and contribute to the opioid epidemic. Excess prescription has been well documented in adults, but there have been no data on opioid requirements or prescribing practices for pediatric patients. A prospective study of 343 children who were discharged from the hospital with an opioid prescription reported that 58 percent of prescribed doses were not consumed, and only 4 percent of leftover medication was disposed of [2]. Female sex, specific procedure types (orthopedic or Nuss procedures), and discharge pain scores $\geq 5/10$ predicted higher opioid consumption. (See "[Prescription of opioids for acute pain in opioid naïve patients](#)", section on 'Excessive prescription'.)

Departmental News

News, Research, Conferences, Training etc

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