

An update to the Greig Health Record: Executive summary

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The Greig Health Record is an evidence-based health promotion guide for clinicians caring for children and adolescents 6 to 17 years of age. It provides a template for periodic health visits that is easy to use and adaptable for electronic medical records. On the record, the strength of recommendations is indicated in **boldface** for good, in *italics* for fair, and in regular typeface for recommendations based on consensus or inconclusive evidence. Checklist templates include sections for Weight, Height and BMI, Psychosocial history and Development, Nutrition, Education and Advice, Specific Concerns, Examination, Assessment, Immunization, and Medications. Included with the checklist tables are five pages of selected guidelines and resources. This update includes information from recent guidelines and research in preventive care for children and adolescents 6 to 17 years of age. Regular updates are planned. The complete Greig Health Record can be found online at the Canadian Paediatric Society's website: www.cps.ca.

Key Words: Adolescents; Children; Counselling; Evidence-based practice; Forms and records; Preventive health services; Primary prevention; Screening

The Greig Health Record is an evidence-based clinical tool to be used in preventive care visits for school-aged children. It contains a checklist tool and five pages of supplementary information for reference and patient information handouts. This tool was designed using the model of the widely used Rourke Baby Record for infants and children from birth to age 5.⁽¹⁾ This is the first update of the Greig Health Record, which was published initially in 2010.^(2,3) It incorporates recent guidelines and research in preventive care for children and adolescents 6 to 17 years of age. The Greig Health Record comprises information and evidence which is relevant for all paediatric populations, although Canadian research and guidelines have been emphasized wherever possible.

Tables have been updated and additional tables and revisions may be found in the supplementary resource pages. As with the Rourke Baby Record, three fonts are used to reflect the strength of recommendations: **boldface** for good, *italics* for fair, and regular typeface for recommendations based on consensus or inconclusive evidence. Also following the format of the Rourke Baby Record, the classification system used here is based on the old classification system from the Canadian Task Force on Preventive Health Care.⁽⁴⁾ Recommendation classifications are determined by evaluating the quality of supporting evidence.

The recommended frequency of preventive visits for healthy children of this age group, based on consensus, is every one to two years.

Résumé de la mise à jour du relevé médical Greig

Le relevé médical Greig est un guide de promotion de la santé fondé sur des données probantes destiné aux cliniciens qui s'occupent d'enfants et d'adolescents de six à 17 ans. Ce modèle pour les bilans de santé périodiques est facile à utiliser et adaptable aux dossiers médicaux électroniques. Sur le relevé, les recommandations sont indiquées en **caractères gras** lorsqu'elles sont de bonne qualité, en *caractères italiques* lorsqu'elles sont de qualité acceptable, et en caractères normaux lorsqu'elles sont consensuelles ou peu concluantes. Les listes de vérification comprennent des rubriques sur le poids, la taille et l'indice de masse corporelle, l'histoire psychosociale et le développement, la nutrition, l'éducation et les conseils, les problèmes particuliers, les examens, les évaluations, la vaccination et les médicaments. Elles s'accompagnent de cinq pages de lignes directrices et de ressources sélectionnées. La présente mise à jour contient de l'information tirée des lignes directrices et des recherches récentes sur les soins préventifs pour les enfants et les adolescents de six à 17 ans. Des mises à jour régulières sont prévues. Il est possible de consulter l'intégralité du relevé médical Greig, en anglais, dans le site Web de la Société canadienne de pédiatrie, à l'adresse www.cps.ca.

Checklist templates are divided into three age ranges: 6 to 9, 10 to 13 and 14 to 17 years (inclusive). Section headings include: Weight, Height and BMI, Psychosocial history and Development, Nutrition, Education and Advice, Specific Concerns, Examination, Assessment, Immunization, and Medications.

Five pages of selected guidelines and resources related to preventive care visits accompany the checklist tables. The first two pages focus on nutrition, sleep, safety and Internet resources and are designed to download, print and share with patients or parents.

Growth Charts

Using the WHO growth charts adapted for Canada to monitor and promote optimal growth is strongly recommended. These charts were redesigned for added clarity in 2014 and can be downloaded on the Dietitians of Canada website at www.whogrowthcharts.ca, which also includes BMI tables and links to BMI calculators and other important resources.⁽⁵⁾

Psychosocial History and Development

Social history for younger children should focus on family structure and dynamics (including discipline), school performance and enjoyment, extracurricular activities and peer relationships, including bullying. The focus of discussions shifts as the child matures and is tailored to the age and maturity of the child, his or

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her life experiences and anticipated changes. It is important to discuss the evolving nature of the adolescent's relationships with peers and family and to inquire about school, work and social groups.

Poverty

In Canada, nearly one child in seven lives in poverty.(6) Growing up in poverty is associated with significant morbidity and mortality in childhood as well as later in life.(7,8) While government subsidies are available to help alleviate poverty, many families are unaware of benefits that may be available to them by applying directly or filing their taxes and claiming deductions and credits. Details are available at www.canadabenefits.gc.ca.

One-third of households in Canada have substandard or inadequate living conditions which also affect the health of children and youth.(9) Street-involved youth are a population with many special needs; they experience not only poverty and homelessness but are also at higher risk for substance use, violence, sexually transmitted infections (STIs) and abuse.(10)

The assessment of populations with special needs and being aware of supportive resources targeted for them are essential skills for primary care providers. Where resources do not exist, physicians can help raise awareness and influence government policy to create them.

Peer relationships – Bullying

Physicians should ask about negative experiences, including bullying, when exploring peer relationships. Helpful resources are provided in the Greig Health Record.

Mental health

Screening is recommended for major depressive disorder in adolescents, provided that systems for diagnosis, treatment and follow-up are also in place.(11) Evidence-based professional resources and guidelines on topics from addiction and anxiety to self-harm and suicide prevention can be found at www.kidsmentalhealth.ca.(12)

Substances and Addictions

This section has been expanded to include problem Internet use, excessive screen time and gaming, habitual online gambling and cellphone behaviours with risk potential as well as common substance-related habits that cause harm, such as smoking, alcohol and drug use.(13)

Youth are spending many hours per day gaming. In one survey, 12% of students reported symptoms of a gaming problem.(14,15) Those with this addiction can also have mental health problems, including low self-esteem, social phobia and depressive symptoms.(16,17)

Underage gambling can start in children as young as 9 or 10. To screen for a gambling problem, ask about frequency, tendency to gamble more than planned, and behaviours suggesting that a patient is hiding his or her gambling behaviour.(13)

Recent evidence to support primary care-relevant behavioural interventions to prevent smoking in children and adolescents has been captured in Canadian Paediatric Society position statements and a practice point on smoking prevention, cessation strategies and concerns regarding the use of e-cigarettes.(18-20)

The CRAFFT screening questionnaire is highly sensitive for alcohol and drug problems in adolescents and young adults <21 years of age and is included in the Greig Health Record.(21-23) Note that prescription medications such as opioids and stimulants may also be abused.(24)

The consumption of caffeinated energy drinks is problematic in youth who commonly combine them with alcohol and are more sensitive to their effects, especially if they are non-habitual users.(25,26)

Body changes

For easy reference, Sexual Maturity Rating (SMR) tables have been included in the Greig Health Record.

Sexual health and relationships

The 'sexual health' heading on the Greig Health Record has been updated to 'sexual health and relationships'. Sexual health in the adolescent includes many factors that influence sexual development (both physical and psychosocial), sexual function and reproductive health. These topics must be addressed with sensitivity. Discussions can range from contraception to sexual orientation, from dating safety and abusive relationships to STIs.

The U.S. Preventive Services Task Force recommends intensive behavioural counselling in sexually active adolescents to prevent STIs.(27) Safer sex counselling for risk reduction is recommended because there is good evidence that counselling for condom use in adolescents decreases the incidence of STIs.(28) A table of prevention counselling topics is included in the supplementary resource pages of the Greig Health Record.

The Greig Health Record recommends considering issues of consent, sexting, dating violence and contraception, including emergency contraception. The following evidence-based recommendations are made:

- Chlamydia and gonorrhoea screening for **all** sexually active females and for males at risk.
- HIV screening for **all** sexually active adolescents ≥15 years of age.
- Youth <15 years of age should be screened for STIs when they have risk factors.

Cervical cancer screening is not recommended for young women <21 years of age. Routine clinical or self-examination of breasts or testicles is not recommended.

Nutrition

Nutritional guideline tables have been added to the Greig Health Record's reference pages to illustrate the relative proportions recommended for the four major food groups. They include information from *Canada's Food Guide*, Health Canada's updated dietary reference intakes and the U.S. Institute of Medicine (now the National Academies Health and Medicine Division). There is considerable debate about vitamin D requirements and supplementation. Physicians should ask adolescent patients what vitamins, supplements and alternative health products and therapies they are taking.

Body image/dieting

Eating disorders, disordered eating and dieting can be addressed by inquiring about body image, self-esteem, and an individual's desire to change weight and foods they eat. It is important to ask about weight control behaviours and obsessive thinking about food, weight, body shape or exercise.

Obesity

A strong recommendation to screen for obesity is made based on good evidence for the effectiveness of screening and of offering or referring individuals for intensive counselling and behavioural interventions.(29) The Greig Health Record includes tables of recommendations for overweight and obese children and adolescents well as recommendations for preventing obesity.

Physical Activity and Sedentary Behaviour

Canadian guidelines recommend at least 60 minutes per day of moderate to intense physical activity for school-aged children and youth.(30) Guidelines for reducing sedentary behaviour and screen time are included in the Greig Health Record.

Sleep Issues

Accumulation of sleep loss can have significant negative impact on daytime functioning, school and work performance, and quality of life.(31,32) The Greig Health Record includes sleep recommendations and strategies for healthy sleep habits.

Injury Prevention and Safety

Clinicians should include safety topics in their discussions with patients and parents. A list of possible discussion topics is included in the supplementary pages of the Greig Health Record, with links to the Canadian Paediatric Society, Parachute and Canada Safety Council websites(33-35) and other resources.

Important safety topics are covered in the Greig Health Record. Using booster seats in motorized vehicles is mandated in most Canadian provinces and territories, and wearing a helmet while cycling, skiing and skating is strongly recommended and mandated in some places. The risks of ATV, snowmobile and trampoline use are addressed. Safer sun practices and banning children and youth from commercial tanning facilities are also recommended. Legislation to limit access to and ensure safer storage of firearms is called for. Resources for preventing and managing concussions, for workplace safety and for avoiding environmental hazards are included.

Abuse

Health care providers are recommended to maintain vigilance for signs and symptoms of abuse, maltreatment and neglect.

Dental Care and Fluoride Use

Professional dental care has been clearly shown to reduce dental caries. Regular brushing with a fluoride containing toothpaste and regular flossing are recommended.(36-38)

Fluoride supplementation should be discussed in areas where it is not present in sufficient amounts in the water supply.(39)

Specific Concerns

A section of the Greig Health Report is reserved for notation of specific concerns – such as an illness or personal issue raised during the visit or by examination – along with directions for where to find details elsewhere in the patient's chart.

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Physical Examination

Consensus opinion supports the inclusion of height, weight, blood pressure and visual acuity screening as part of the physical examination. Headings for other examinations have been included as reasonable for the purpose of case-finding. Screening for idiopathic scoliosis in asymptomatic adolescents is not recommended.(40)

Laboratory Investigations

Evidence does not support routine laboratory investigations.(41) Rubella immunity should be confirmed in sexually active females but laboratory screening is not necessary with documented evidence of prior rubella vaccination or immunity.(42) Ferritin should be ordered for individuals at higher risk for iron deficiency.

Lipid and plasma glucose screening should be performed on overweight or obese children >10 years of age.(43) Individuals with diabetes and/or familial dyslipidemias are also at increased risk and may be considered for screening but evidence to make a recommendation is insufficient. Evidence for routine lipid or glucose screening is lacking.(44)

Immunizations and TB Screening

Immunization recommendations and reminders have been included as per the current Public Health Agency of Canada's National Advisory Committee on Immunization guidelines.(45) Strategies for reducing pain with vaccination are also included. Specific recommendations for varicella, measles, mumps, rubella, meningococcal and human papillomavirus immunization are summarized.

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