

# Provisional Active Healthy Kids Scotland Report Card 2013

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Physical Activity for Health Group

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## **‘Programme Team’**

**Prof John J Reilly, Univ Strathclyde**

**Prof Geraldine McNeill, Dr Smita Dick, Univ Aberdeen**

**Prof Mark Tremblay, Univ Ottawa/ CHEO**

**Funding: Knowledge Exchange Grant (March-Oct 2013); Scottish Universities Insight Institute**

# Project Partners

- Steering Group
  - Dr Julie Armstrong, Glasgow Caledonian University
  - Prof Tim Lobstein, International Obesity Task Force
  - Scottish School of Public Health Research (Obesity Working Group)
- Invited external partners, wide range of relevant sectors, based on Canadian model
  - Local & National Government
  - NGO's
  - Academic
  - ie YOU

# Active Healthy Kids Scotland Report Card 2013

- [www.activehealthykidsscotland.co.uk](http://www.activehealthykidsscotland.co.uk)
- Based on successful Knowledge Translation model, Active Healthy Kids Canada
- ‘State of the nation’ report for childhood & adolescence
- Will grade 11 health categories from A-F
  - Using Active Healthy Kids Canada methods
  - 9 categories in Canadian card
  - **We have added: Diet; Obesity**

# What is distinctive & useful about the project ?

- Comprehensive
- Synthesises available evidence, rather than just reporting it; is critical/judgemental
- Aimed at a wide audience
- Is international
- Aims to improve our understanding of child & adolescent public health
  - Improve research, surveillance, policy, policy implementation; Identify important gaps

# 11 Report Card Categories (health behaviours, statistics)

<b><u>Physical activity</u></b>	Sport participation	Active play	Active transportation
Sedentary behaviour	Family & Peers	School	Community & built environment
<b><u>Government strategy, policy, investment</u></b>	<b><u>Obesity</u></b>	<b><u>Diet</u></b>	<b><u>Others??</u></b>

# Your input appreciated, on

- *What* have we missed/misinterpreted ?
- *Who* have we missed ?: groups/individuals
- What other categories and indicators should be in the card ?/ in future cards ?
- How can card be sustained beyond 2013 ?
  - Which data sources improved/added ?
  - Frequency, Funding & Partnerships

# Basis of provisional grades 1

- Canadian model:
  - % of population meeting relevant recommendations
  - INC= incomplete data, cannot be graded
  - A-F grades (**no grade E**)
- Data available for ?
  - Trends; disparities (e.g. socioeconomic)
- Other considerations
  - sustainability; biases in the measure; how representative is sample ?; how relevant is sample ?



## Basis of provisional grades 2

- A succeeding with a large majority (>80%)
- B succeeding with well over half (60-79%)
- C succeeding with around half (40-59%)
- D succeeding with much < half (20-39%)
- F succeeding with only 0-19%
  - Grades consolidated and modified (e.g.+, -) by disparities, trends, biases

# Habitual physical activity: the 'headline grade'

Recommendations (Start Active Stay Active 2011)

60 mins MVPA/day every day (school age);

180 mins PA day every day (toddlers &  
preschoolers)

# Habitual PA: main data sources considered

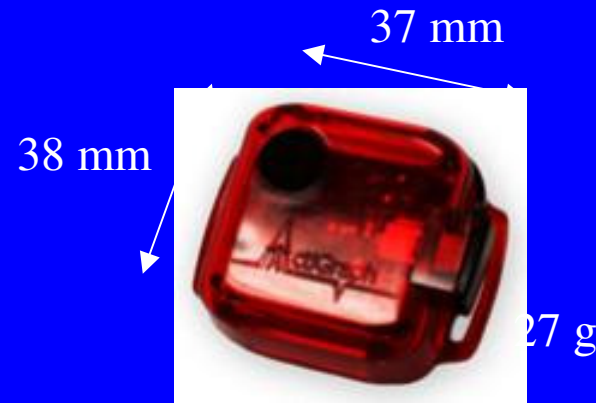
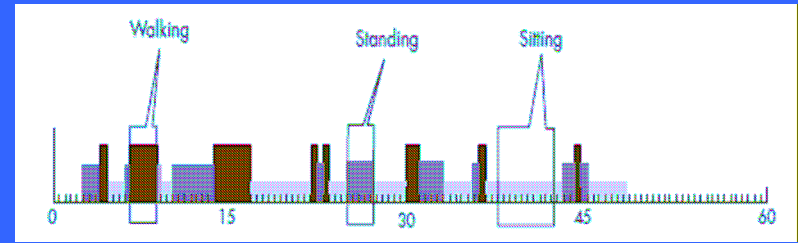
- SHeS
  - 2-15y olds; subjective measure (questionnaire);  
‘all PA assumed to be MVPA’
- GUS
- HBSC (11-15y olds) e.g. 2010; subjective measure

# Validation of SHeS Physical Activity Questionnaire (Basterfield et al Arch Dis Child 2008)

- Comparison with Actigraph accelerometer in 6-7y olds
  - Mean error from questionnaire +122 mins MVPA/day (CI 124-169)
- No significant rank correlation between methods
- Compliance with 60 mins/day MVPA by method
  - Boys 83% vs 3% ; girls 56% vs 2%



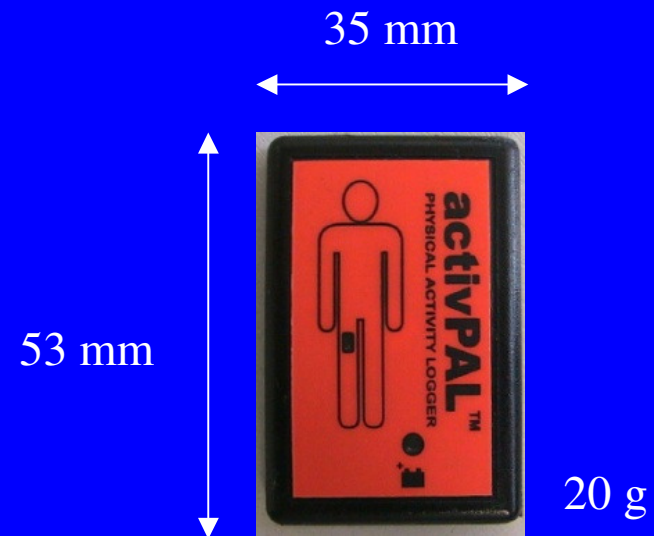
## Physical activity patterns - Children and young people in England



e.g. Actigraph;  
activPAL; Actical

Objective  
measurement of  
PA:

use of monitors



# Habitual physical activity-other issues

- Trend data available- of doubtful value though (e.g. SHeS)
- Biases-large
- Disparities? only with subjective measures
  - Reilly et al Arch Dis Child 2008
- Objective measures available in other countries: Canada; USA; England

# Habitual physical activity % school age CYP meeting MVPA recommendation

- Scotland: 65% of 2-15y olds in 2010 (SHeS)
  - 19% (boys); 11% (girls) HBSC 2010 (11-15y)
- Canada: 7% in 2011 (Actical accelerometry, CHMS)
  - 26% -19% (boys) and 20-11% (girls) HBSC 2010 (11-15y)
- England HSE 2008 accelerometry data
- Boys 51% , Girls 34% at 4-10y
- Boys 7% , Girls <1% at 11-15y



# Habitual physical activity

- INC grade-
  - cannot be graded with confidence using Scottish data
  - high degree of bias
- Recommendations and gaps
  - Include objective measures in surveillance, as in many other countries
  - Gap in early years

# Sport participation: category 2

No 'recommendation'

Distinct from active & outdoor play  
(category 3)

# Sport participation (category 2): data sources

- SHS (Scottish Household Survey) reports data for 8-21y olds combined
- Sports Scotland surveys discontinued (e.g. Research Digest 110 in 2008; 81% of 8-15y olds once a week; 92% once a month)
- Grade: INC ??
- Gap ?? & Recommendation for better and disaggregated data from SHS
- Games Legacy ??

# Active & Outdoor Play (category 3)

- Not including organised sport or PE
- No ‘recommendation’
- Main data sources
  - SHS data aggregated for 8-21y olds
  - GUS e.g. under 5y Play Briefing for Play Scotland 2012
  - HBSC 2010 (11-15y olds)

# Active & outdoor play (category 3, contd)

- INC, cannot be graded ?/ grading difficult
- SHS 8-21y data not useable at present ?
- GUS under 5's: 1-2 per week 53% (89% Jan. 21% July)
- HBSC 2010 *use of outdoor greenspace in summer*;
  - 71% of respondents reported weekly
  - 19% (<1h/week); 23% 1-4h/week

# The Scottish Report Card 2013 so far

- 1. Habitual physical activity: INC
- 2. Sports participation: INC
- 3. Active & outdoor Play: INC
  
- Comparison: Canada has better data for all 3 categories and can assign grades relatively easily in most cases

## Category 4: Active transportation (to school= active commuting)

No 'recommendation' ;

Multiple data sources;

Fairly consistent findings

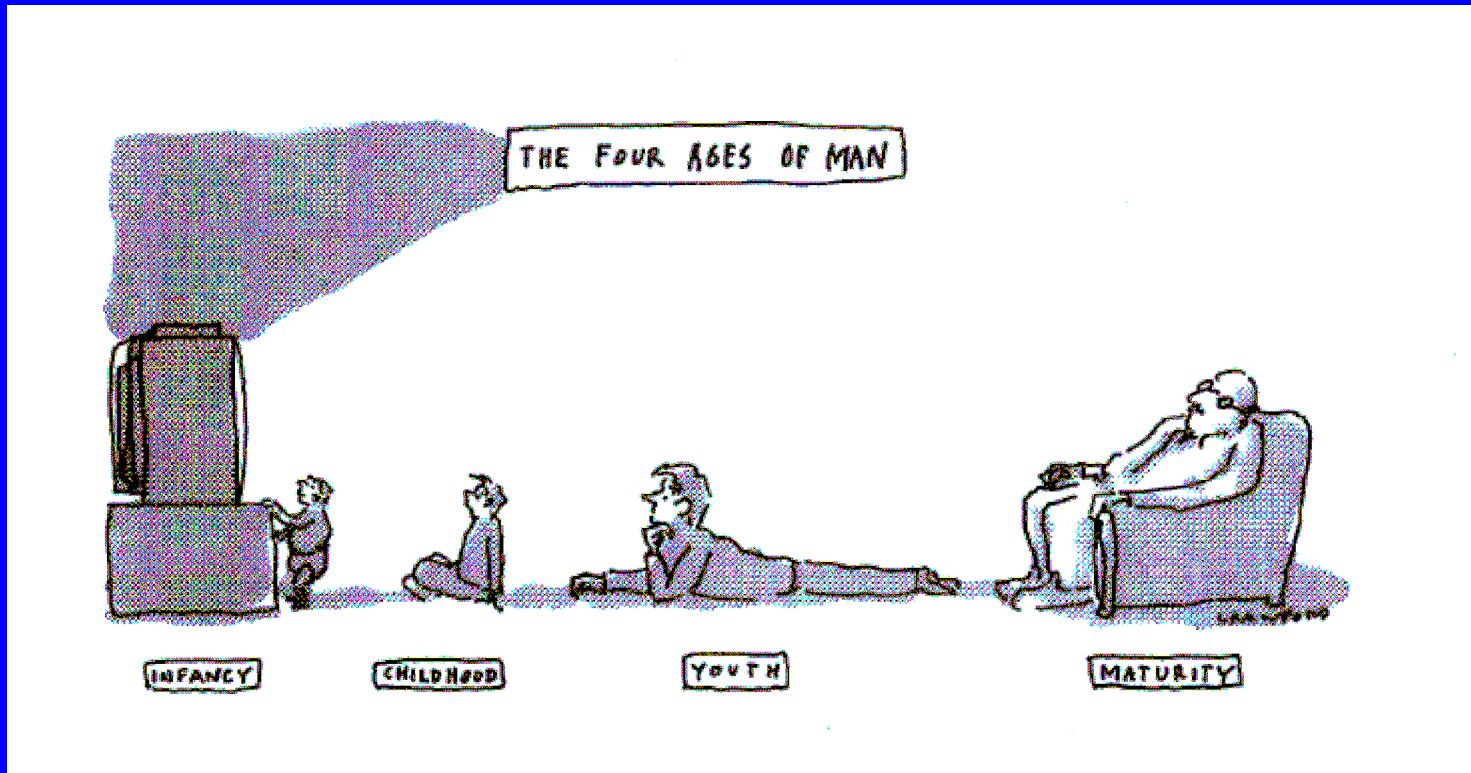
# Category 4 (Active commuting): national data sources

- National Travel Survey 2012
  - 43% of 5-16y olds walk or cycle
- SHS 2010
  - Primary 59%
  - Secondary 42%
- Hands Up Scotland Survey 2011
  - 54% primary
  - 43% secondary
- HBSC 2010 (11-15y)
  - 49%
- **Grade!!!!: C**
- Trend & disparity data available; gap for younger children ?



# Sedentary behaviour (Category 5)

- Behaviours with low energy expenditure;  
Behaviours with low energy expenditure while sitting or lying down;
- *Screen time (TV, gaming etc)*
- Non-screen sedentary time
- Sitting time
- Breaks in sitting time





## WHY OUR CHAIRS ARE KILLING US

We are sitting ourselves to death. And even those who exercise before spending their day at a desk are in danger. **LIFE, PAGE L1**



# THE GLOBE AND MAIL

CANADA'S NATIONAL NEWSPAPER • MONDAY, DECEMBER 5, 2011



# Sedentary behaviour (screen time) recommendations:

School age: <2h/d (14h/week)

Scottish (SIGN 2010); AAP;

Under 2's: 0; 2-4y 1h/d, Canada 2012

# Sedentary behaviour (screen time) data and sources

- SHeS-no data at present
- GUS-some data e.g at 6y 31% reported >3h/d
- HBSC 2010 (11-15y olds) self report data
  - Presented by age, gender, weekday/weekend
  - Exposure very high relative to recommendation
  - as in HBSC Canada (>50% report >2h/d TV; plus 50% of boys and 25% girls >2h/d gaming)

# Sedentary behaviour (screen time) exposure & grades

- HBSC 2010 e.g. weekend data
  - >76% report >2h/d of TV, both sexes, all ages
  - Plus 77% >2h/d gaming in boys, 37% in girls
- Trend, disparity data available
- Biases- self report validity unclear but estimates probably conservative (Lubans et al 2011 review)
- **Grade F, as in Canada**
- Gaps: children; other forms of sedentary behaviour

# Family Environment (category 6)

Infrastructure, peer support, parental behaviour; Adult health behaviours & statistics ; Multiple data sources fairly consistent

# Family Environment/Peers

- Adult MVPA:
  - SHeS 2011
    - 45% of men and 33% of women met 5x30 min recommendation (self report)
- Adult overweight and obesity:
  - SHeS 2011
  - 28% of >16y olds obese (BMI)
  - Very conservative estimate
  - With disparities by SES
- Diet
  - SHeS 22% met fruit & veg. recommendations (self report)
  - With disparities
  - 2.9 UK portions/person/day (reported purchase Family Food 2011)
  - **Grade F ?**



# School Environment (category 7)

Infrastructure, policies, programmes

## Category 7: Data Source (PE policy only) & Grade

- Healthy Living Survey (national, annual, e.g. 2011)
- Recommendation 2 timetabled hours (primary) and periods (secondary)/ week
- Reported as met by 84% of primaries & 92% of secondaries
- **Graded A** (but recognise high risk of bias, ‘use cautiously’)

# Category 8: Community & Built Environment

Various indicators & multiple data sources for this category:

Safety; Access/ Availability;

Use dealt with in category 3 (Active Play)

# Category 8: Community & Built Environment: Grade B-

- **Perceived safety**
  - HBSC 2010 (11-15y olds) 51% 'always felt safe locally'; 81% of 11y olds and 77% of 15y agreed it was 'safe for children to play outside'
  - SHS e.g. 2011 youngest age perceived safe for children to play outdoors (median 9-10y)
  - GUS 77% of parents agreed or strongly agreed that local outdoor play spaces were safe for their children
- **Access/Local Availability**
  - SHS e.g. 2011 50% of households report access to a local park
  - GUS 88% of parents of under 5y olds reported access to park or play area within 10 min walk
  - **Access to sports facilities ???-no data??**

# Category 9 Government Strategy; Policy; Investment

Work in progress-----

## Obesity (category 10)

No longer included in Canadian card;

Difficult to grade, targets but no  
recommendations;

Measures of prevalence are conservative (Reilly et  
al Obes Rev 2010)

# Category 10 Obesity

- SHeS e.g. 2011 surveillance
  - 75% response
  - measured data
  - Sample rel. small and presented 2-15y combined; ISD offers bigger samples
  - Trends levelling ?
  - Disparities
- 32% overweight & obese in 2011 (vs. 15% in 1990)
- 16% obese in 2011 (vs 5% in 1990)
- Grade D or F ?

# Category 11 (Diet)

Many indicators, recommendations:

Non milk extrinsic sugars (NMES);

Fruit & vegetables;

Fat; Saturated fat



# Scottish Dietary Targets for Nutrients of Interest

- NMES <10% of energy intake
- Fruit & vegetables 5 a day (portion size\*)
- Fat,  $\leq 35\%$  of energy intake
- Saturated fat: <11% of energy intake
- Data sources:
  - Survey of diet among children in Scotland 2010
  - SHeS e.g. 2011

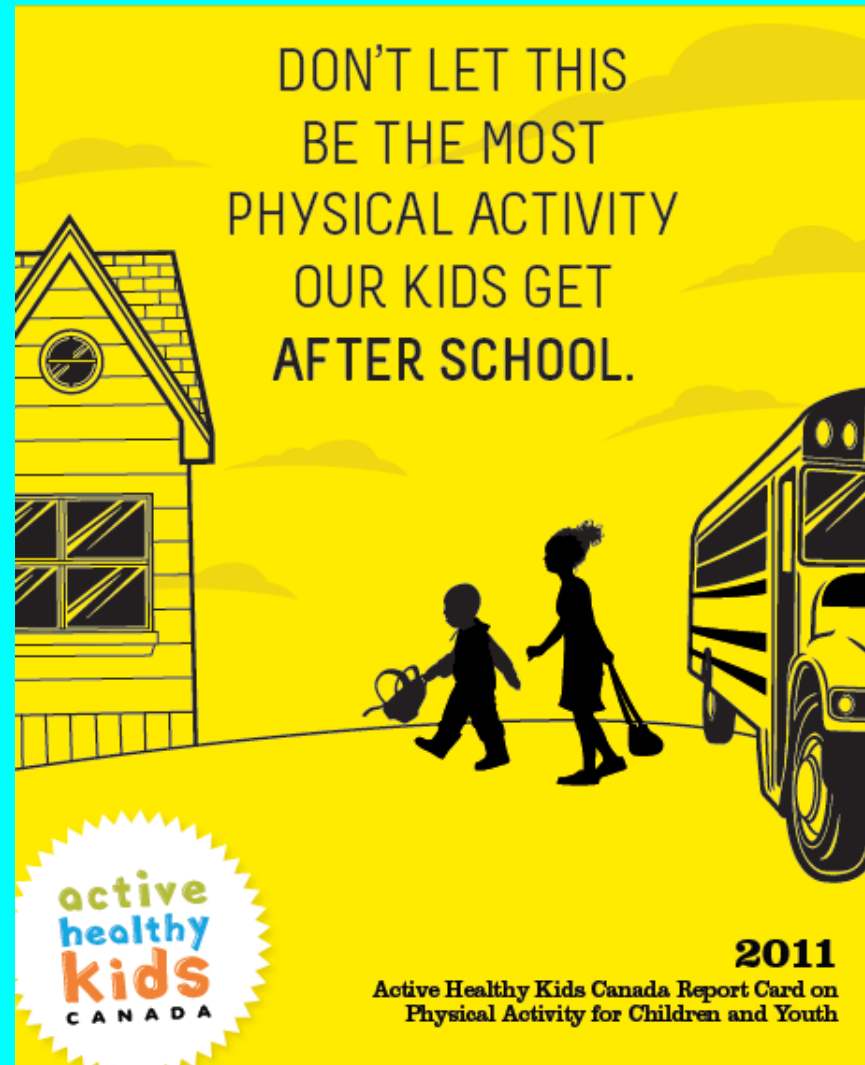
# Category 11 (Diet) Grades

- **Overall: D-**
  - Generally poor compliance with recommendations
  - Disparities (e.g. by socioeconomic status)
  - Trends not encouraging
- NMES: F
- Fruit & Veg: D
- Fat: A-B
- Saturated Fat: F

# Summary provisional grades

<b><u>Physical activity</u> INC</b>	Sport participation <b>INC</b>	Active play <b>INC</b>	Active Transport <b>C</b>
Sedentary Behaviour <b>F</b>	Family & Peers <b>F</b>	School (policy) <b>A</b>	Community & built environment <b>B-</b>
<b><u>Government strategy, policy, investment??</u></b>	<b><u>Obesity</u></b> <b><u>F?</u></b>	<b><u>Diet</u></b> <b><u>F</u></b>	<b><u>Others??</u></b> <b><u>Over to you</u></b>

# Active Healthy Kids Report Card Canada 2011



# IS ACTIVE PLAY EXTINCT?

**2012**

**Active Healthy Kids Canada  
Report Card** on Physical Activity  
for Children and Youth



active  
healthy  
**kids**  
CANADA

THE  
POWER  
TO MOVE  
KIDS

**MAY**  
**19-22**  
**2014**  
Toronto, Canada

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[www.activehealthykids.ca/summit](http://www.activehealthykids.ca/summit)

Presented by Active Healthy Kids Canada,  
publisher of the annual Report Card  
on Physical Activity for Children and Youth



active  
healthy  
kids  
CANADA

# Thank You

This presentation focused on content of the Scottish card-we  
will work over the summer on the presentation.

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**[www.strath.ac.uk/humanities/schoolofpsychologicalscienceshealth/  
physicalactivityforhealth](http://www.strath.ac.uk/humanities/schoolofpsychologicalscienceshealth/physicalactivityforhealth)**

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