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## Results from Ireland's 2014 report card on physical activity in children and youth

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## Results From Ireland's 2014 Report Card on Physical Activity in Children and Youth

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**Background:** Physical activity (PA) levels are a key performance indicator for policy documents in Ireland. The first Ireland Report Card on Physical Activity in Children and Youth aims to set a robust baseline for future surveillance of indicators related to PA in children and youth. **Methods:** Data collected between 2003–2010 on more than 35,000 7- to 18-year-old children and youth were used and graded using a standardized grading system for 10 indicators. **Results:** Grades assigned for the indicators were as follows: overall physical activity levels, D-; sedentary behavior (TV viewing), C-; organized sport participation, C-; physical education, D-; active play, inconclusive (INC); active transportation, D; school, C-, community and the built environment, B; family, INC; and government, INC. **Conclusions:** PA recommendations exist in Ireland but this Report Card has shown that participation is still low. A number of promising policies, programs and services are in place but these require thorough evaluation and adequate resourcing. Agreement and implementation of a common framework for the systematic surveillance of indicators related to PA of children and youth is necessary to monitor change over time and ensure the impact of promising work is captured.

**Keywords:** physical education; sedentary; sport; transportation

A key performance indicator for the 2013 Healthy Ireland Framework in the Republic of Ireland is to increase by 20% the proportion of the population undertaking regular physical activity (PA),<sup>1</sup> while Northern Ireland's Framework for Preventing and Addressing Obesity has participation in PA, physical education (PE) and sport as a key component.<sup>2</sup> Due to this renewed interest in PA promotion and an impetus to use PA as a means of preventing disease and improving overall health, monitoring of indicators related to PA among children and youth are necessary over time.

The Report Card on Physical Activity is a knowledge exchange and translation vehicle that has been used internationally<sup>3</sup> and its use is increasing. It has the potential to create linkage and intersectoral engagement of the kind that is required on the island of Ireland. Ireland is made up of the Republic of Ireland (herein called Republic) and Northern Ireland. Overall, ~6.6 million people live on the island (4.8 million in the Republic and 1.8 million in Northern Ireland) and ~20% are under 15 years of age. The island enjoys a temperate maritime climate with rugged hills and low mountains, particularly by the coast. The island has endured a turbulent history, with the country being divided into the Republic of Ireland (26 counties) and Northern Ireland (6 counties). The Republic of Ireland is an independent country and Northern Ireland is part of the United Kingdom. Since 1998, however, Northern Ireland has been largely self-governed by the Northern Ireland Assembly.

Although there are differences between the 2 jurisdictions in terms of legislation and governance structures, the Good Friday Agreement in 1998 has been the impetus for many all-island bodies and initiatives. Joint activities relating to PA, sport and health exist between the 2 countries, including the Institute of Public Health Ireland ([www.publichealth.ie](http://www.publichealth.ie)), the Physical Education, Physical Activity and Youth Sport research network ([www.ul.ie/pess/pepays](http://www.ul.ie/pess/pepays)) and the successful Irish rugby team. The estimated contribution of physical inactivity to the burden of disease in Ireland was 8.8% for coronary heart disease, 10.9% for type 2 diabetes, 15.2% for breast cancer, and 15.7% for colon cancer.<sup>4</sup> The Report Card will serve as a vital tool for practitioners and policy makers on both sides of the border and cross-border to identify key needs and gaps, allocate funds and develop PA promotion initiatives. The surveillance of indicators related to PA is vital for sustainable success and, ultimately, to improve the health profile of children and youth in Ireland.

The aim of this paper is to present the grades for Ireland's first Report Card on Physical Activity in Children and Youth and to briefly summarize the evidence for each grade. The data herein represent over 35,000 children aged 7–18 years sampled between 2003–2010 and, where possible, from representative datasets.

### Methods

This scientific advocacy was undertaken by a research work group (RWG) comprised of 12 researchers with experience in child and adolescent PA and health. The RWG chair (DMH) informally convened the group based on knowledge of researchers in Ireland and through recommendations. The RWG first met in May 2013 to decide on the indicators to include and to identify key data sources for each indicator. The 10 indicators included in Ireland's first Report Card are *overall physical activity levels; sedentary behavior (TV viewing); organized sport participation; physical education;*

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*active play; active transportation; school; community and the built environment; family; and government.*

All RWG members were responsible for identifying key data sources through database and online searching and examining their personal records. The RWG chair, in collaboration with a research assistant, extracted the relevant information, collated it in a spreadsheet to make the data easy to navigate and be ready for grading. All members of the RWG met for a 4-hour discussion meeting on the data in February 2014. Members were emailed the spreadsheet of data 1 week before this meeting to allow for perusal of the data and to consider possible grades. During the meeting each indicator was discussed and assessed, and each member proposed a grade privately. When ambiguity existed, prevalence data and evidence from Ireland were compared with Report Cards from other countries. A proposed grade for each indicator was decided upon using the standardized, international grading system.<sup>3</sup> To increase validity, the key data were sent to 4 external researchers with experience of the Report Card grading process. Finally, the data and grades were presented during a targeted consultation session to practitioners and policy makers. The key items considered when grading were a) representative nature, b) sample size, c) possibility of that study being repeated or at least the question being asked again in the future, and d) procedures used by other countries. The grades were based on the best available data from the island of Ireland collected between 2003–2010, and represented observations for more than 35,000 children and youth (in addition to census data). Data sources included the following:

### **Growing Up in Ireland (GUI)<sup>5</sup>**

A longitudinal study of 2 cohorts of children in the Republic funded by the Department of Children and Youth Affairs and run by a consortium of researchers led by the Economic and Social Research Institute (ESRI) and Trinity College Dublin. Data from wave one of the 9-year-old cohort of 8568 children and their care-givers sampled in 2007–2008 are reported.

### **Health Behavior of School-Aged Children (HBSC)<sup>6,7</sup>**

HBSC data have been collected in the Republic over 4 waves between 1997–2010. We report data from the 2009–2010 wave collected on a representative sample of 16,060 11- to 15-year-olds run by National University of Ireland Galway and funded by the World Health Organization and the Department of Health.

### **Young Persons' Behavior and Attitudes Survey (2010)<sup>8</sup>**

This study queried 3463 11- to 16-year-olds from a representative sample of schools in Northern Ireland. A consortium of Northern Ireland government departments commissioned the Central Survey Unit to design and run the survey.

### **UK Millennium Cohort Study (MCS)<sup>9</sup>**

This is a longitudinal study following the lives of children born in the UK and funded by the Economic and Social Research Council (ESRC). It is run by the Centre for Longitudinal Studies in the UK. In the fourth wave (MCS4) in 2008–2009, 1317 children aged 7–8 years in Northern Ireland had data available, while 634 children provided objective PA data from 2+ days of accelerometry.<sup>10</sup>

### **Children's Sport Participation and Physical Activity (CSPPA)<sup>11</sup>**

This study aimed to provide a national database on PA, PE and sport participation, and to examine influences on participation. Overall, 5397 children and youth aged 10–18 years were sampled in 2010, with sampling stratified by urban/rural and SES, among other factors, to achieve a representative sample. The project was run by a consortium of Irish universities funded by the Irish Sports Council (ISC).

### **Census of Population of Ireland<sup>12</sup>**

Every 5 years all people in the Republic of Ireland are required to complete the census, which is administered by the Central Statistics Office (CSO). In 2011, demographic and societal data on more than 800,000 young people aged 5–18 years were included.

### **Keeping Them in the Game<sup>13</sup>**

This document contains data and evidence for policy compiled from 3 large nationally representative surveys of sport and PA from 2007–2009 by the ESRI and commissioned by the ISC.

### **Take PART (Physical Activity Research for Teenagers) Studies<sup>14–16</sup>**

Three Take PART studies were undertaken between 2003–2007, with 3292 15- to 17-year-olds sampled in 3 areas in the Republic. The study was run by Dublin City University and funded by the Health Service Executive (HSE).

## **Results**

This 2014 Report Card (see Figure 1) is the first assessment of indicators relating to PA in children and youth in Ireland. These grades are included Table 1.

## **Discussion**

### **Overall Physical Activity Level**

Using the criterion of the percentage of children and youth in Ireland meeting the PA guidelines of 60 minutes of moderate-to-vigorous physical activity (MVPA) every day,<sup>17,18</sup> this indicator was graded D-. Based on self-report data, 25% of 11- to 15-year-olds,<sup>6</sup> 12% of 11- to 16-year-olds,<sup>8</sup> 25% of 9-year-olds,<sup>5</sup> and 19% of primary and 12% postprimary (high school/secondary school) children and youth<sup>11</sup> were meeting the guidelines. Only 1 national survey used objective measures of PA and found that 43% of 7- to 8-year-olds met the recommendations.<sup>10</sup> The prevalence of meeting physical activity recommendations among children and youth living in the Republic of Ireland were lower than those residing in Northern Ireland, although Northern Ireland children had the lowest physical activity of the UK countries involved in MCS4. Moreover, the age group assessed most likely represented the most active age group and may not be representative of all children and youth. A sex difference was also evident in the data<sup>6,11</sup> (due, in part, to advanced biological maturation in girls).<sup>19</sup> Similar to other countries,<sup>20,21</sup> this gap between sexes increased with age.<sup>5</sup>



Figure 1 — Front cover of the 2014 Ireland Physical Activity Report Card.

## Sedentary Behavior (TV Viewing)

No recommendations on the maximum amount of sedentary time exist for Ireland, although replacing sedentary time with active time is included in PA guideline documents.<sup>17,18</sup> Using the target of the percentage of children watching < 2 hr of TV/day,<sup>22</sup> this indicator was graded C-. From HBSC 2010, 46% of 11- to 15-year-olds reported watching < 2 hrs TV/day.<sup>7</sup> Other available data reported 73% of 11- to 16-year-olds spent < 10 hr/week watching TV,<sup>8</sup> 21% of 9-year-olds watched < 1 hr TV/video/day,<sup>5</sup> and 23% of 7- to 8-year-olds spent < 1 hr watching TV/video/day.<sup>9</sup> Given mean time spent in self-reported sedentary activities of > 2.6 hr/day,<sup>11</sup> this grade of C- is likely to be generous.

## Active Transportation

Using the percentage of children reporting active transport to or from school each day, this indicator was graded D. Only 24% of 11- to 16-year-olds<sup>8</sup> and 26% of 9-year-olds<sup>5</sup> actively commuted to or from school. This indicator was one that did not follow the typical decline noted in overall PA and sport participation. For example, 32% of primary children and 43% of postprimary children actively commuted to school,<sup>11</sup> while the census reported that 25% of primary and 24% of post primary commuted on foot.<sup>12</sup> There was, however, an urban-rural difference, whereby children in more rural areas reported less active commuting (39% versus 18%)<sup>15,16</sup> possibly due to distance and less opportunity to actively commute.

## Physical Education

Using the discrepancy between the recommended time allocated to PE in schools and the amount actually reported by students, this indicator was graded D-. In the Republic of Ireland, 1 hour+/week on the Primary curriculum is suggested<sup>23</sup> while at postprimary level, 2 hours/week for postprimary is suggested.<sup>24</sup> Of 123 schools in the Republic that agreed to participate, 35% of primary (5th and 6th class) children reported receiving the recommended levels of PE, while 10% of post primary youth reported receiving the recommended levels.<sup>11</sup> In Northern Ireland, PE is a compulsory subject

**Table 1 Grades According to Physical Activity Indicator in the 2014 Ireland Report Card on Physical Activity for Children and Youth**

Indicator	Grades
Overall Physical Activity Levels	D-
Organized Sport Participation	C-
Physical Education	D-
Active Play	INC
Active Transportation	D
Sedentary Behavior (TV viewing)	C-
Family	INC
Community and Built Environment (perceptions)	B
School	C-
Government	INC

*Note.* The grade for each indicator is based on the percentage of children and youth meeting a defined benchmark: A is 81%–100%; B is 61%–80%; C is 41%–60%, D is 21%–40%; F is 0%–20%; INC is incomplete data/inconclusive.

for children and youth aged 4–16 years;<sup>25</sup> although there is a flexible timetable, guidance recommends 2 hrs/week. Of the 419 primary schools in Northern Ireland that returned surveys, 17% reported 2+ hours of PE/week.<sup>26</sup> Recommended levels of PE were lower than global and European averages<sup>26,27</sup> and, based on the data, the prevalence of meeting the recommendations is even lower.

## Organized Sport Participation

Using the target of the percentage of children participating in sport twice/week,<sup>28</sup> this indicator was graded C-. In Northern Ireland, 40% of parents reported participation in sport 2+ days/week by their 7- to 8-year-olds.<sup>9</sup> In the Republic, 56% of 9-year-old males and 33% of 9-year-old females reported playing sport almost every day,<sup>5</sup> while 64% primary and 54% postprimary students reported at least 2–3 days/week of extraschool sport.<sup>11</sup> Postprimary school boys reported participation in extraschool sport more often than girls. Sport participation typically decreased with age and socioeconomic differences were also evident.<sup>13</sup>

## Active Play

Although active play is mentioned as a contributor to MVPA recommendations<sup>18</sup> and guidelines exist for early years,<sup>17</sup> there are no recommendations for active play alone. Due to lack of a target and data, this indicator was graded as Inconclusive. However, a number of promising signs are in place including an Active Play Plan<sup>29</sup> and an early years curriculum framework (birth to 6 years), with a section on learning and developing through play<sup>30</sup> in the Republic and a dedicated agency Play Board ([www.playboard.org](http://www.playboard.org)) in Northern Ireland.

## Family

Infrastructure and support for PA and parental/peer PA behaviors and attitudes are elements that could contribute to this indicator. As a target or data do not currently exist, this indicator was graded as Inconclusive. Nevertheless, some self-report data from Northern Ireland suggested a relatively low level of family support: 22% of children did PA with family every day/almost every day, while 8% of parents played active games with their children every day/almost every day.<sup>9</sup> In the Republic, 6% of parents played sports/cards/games with their child every day,<sup>5</sup> while the typical sport club volunteer was a parent aged 35–54 years.<sup>31</sup>

## School

Using the target of the percentage participating in 2+ hr/week in extracurricular sport (ECS) and school based recreation,<sup>32</sup> this indicator was graded C-. In the Republic, 42% of primary and 57% of postprimary students reported participating in ECS 2+ times/week,<sup>11</sup> while ECS declined when moving from primary to postprimary school.<sup>13</sup> In Northern Ireland, 49% of adolescents reported 2 hrs of PE or games at school, while 46% were part of school club or team.<sup>8</sup>

## Community and the Built Environment (Perceptions of Quality and Safety)

Using the target of the percentage of parents of young children and percentage of adolescents perceiving their local area as safe, this indicator was graded B. In Northern Ireland, 47% of parents stated their 7- to 8-year-old child played on the street/public spaces,<sup>9</sup> while 53% of adolescents stated that local play/leisure facilities were very

good/fairly good.<sup>8</sup> In the Republic, 68% of parents agreed that it was safe to walk alone after dark in their area, 91% agreed it was safe to play outside during the day, and 58% agreed there were safe parks/playgrounds in their area.<sup>5</sup>

## Government

Although there was evidence of good practice in both the Republic and Northern Ireland, there were a number of gaps and weaknesses that need to be addressed. For this reason, this indicator was deemed Inconclusive. Strengths in the Republic included a dedicated Department of Children and Youth Affairs ([www.dcy.gov.ie](http://www.dcy.gov.ie)) and a National Cycle Framework<sup>33</sup> as part of Smarter Transport for a Sustainable Future.<sup>34</sup> Healthy Ireland is a new national health and wellbeing framework and PA has been identified as the exemplar.<sup>1</sup> However, currently no national PA plan exists in the Republic, and consequently no agreed PA goals or targets have been established for exemplary practice. The Northern Ireland Strategy for Sport and Physical Recreation 2009–2019 (Sport Matters)<sup>32</sup> and the development of the Framework for Preventing and Addressing Overweight and Obesity in Northern Ireland 2012–2022<sup>2</sup> also exist. However, the absence of a national PA plan and a national PA and health surveillance system, and the unavailability of PA workforce and investment data means that much of the key evidence for this indicator is in fact lacking.

## Limitations

Although grades were based on the best available data, there were research gaps for objective data on active play, early childhood and family PA. Guidelines for screen time are needed and monitoring total screen time among children and youth is necessary as using only TV is likely to underestimate total time spent sedentary.<sup>35</sup> Evaluation of the effectiveness and cost-effectiveness of interventions to identify best practice and to resource adequately are required. Evidence of the PA levels of children with disabilities is also needed.

## Conclusion

PA recommendations exist on the island of Ireland, but this Report Card has shown that PA levels remain low. A number of promising policies, programs and services are in place, but these require thorough evaluation and adequate resourcing. Agreement and implementation of a common framework for the systematic surveillance of indicators related to PA of children and youth, which would align with HEPA Europe<sup>36</sup> and meet Ireland's commitments under the recent Council of the European Union recommendations on PA,<sup>37</sup> are necessary to monitor change over time and ensure that the impact of promising work is captured. All children and youth should have the opportunity of a 'quality' experience of school-based PA and sport. Halting the proposed downgrading of PE to a short course (rather than a subject) in the postprimary curriculum by the Department of Education and Skills (in the Republic) is vital for improving the grade. Embracing 4 hours/week of sport and PA during school (PE) and after-school, as is the case in Northern Ireland and the rest of the UK, would be another useful step to improve the grade. Finally, the development, launch, and implementation of a National Physical Activity Plan is a necessity.

Volunteerism is an important nongovernmental, community-based support for sport. In the Republic, 97% of the junior sport workforce are volunteers, with a typical commitment of 1 day/week;<sup>31</sup> while 92% of sports clubs in Northern Ireland could not operate without volunteers.<sup>38</sup> In order for sustainable PA participation on the island, we need to carefully monitor experiences in other



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