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Results from the Australian 2022 Report Card on physical activity for children and young people

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ABSTRACT

Background: Past Physical Activity Report Cards have indicated a minority of Australian children and young people are sufficiently active. The purpose of this paper is to summarise grades across 10 indicators of the 2022 Australian Physical Activity Report Card, to assess physical activity behaviours and supports.

Methods: A development team consisting of research experts synthesised and evaluated national and state level data to inform grades for each indicator. Data were drawn from nationally and state/territory representative datasets spanning 2016–2021.

Results: Overall Physical Activity Levels and Screen Time were both assigned grades of D-, remaining the worst performing indicators. Australia's best performing indicator was Community and the Built Environment (A-), followed by Organised Sport and Physical Activity (B-). Remaining indicators were Family and Peers (C+), School (C+), Strategies and Investments (C-), Active Transport (D-) and Physical Fitness (D-). Active Play was unable to be graded, due to lack of consensus on a primary metric for this indicator and a lack of representative data.

Conclusion: Evidence suggests that physical activity levels of Australian children remain consistently low, despite access to and availability of facilities and open spaces. There is a strong need for a National Physical Activity Plan to address this. The theme for the 2022 Australian Physical Activity Report Card, *REBOOT! Reimagining physically active lives* encourages us all to think more imaginatively about how we might engage all children and young people through diverse physical activity opportunities to be more active.

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1. Introduction

Physical activity is vital for children's health, development and learning.^{1–3} With active children more likely to become active adults,⁴ physical activity also plays an important role in the overall burden of disease in Australia.⁵ The Physical Activity Report Card initiative is designed to collate population-representative data on physical activity behaviours and supports for children and young

people aged 0–18 years every two years (extended to four years in the current iteration due to the pandemic), providing surveillance and a mechanism to advocate for better supports. Despite evidence-based national guidelines on the amount of physical activity recommended for children's health and wellbeing,^{6,7} past Physical Activity Report Cards have indicated only about one quarter of Australian children achieve recommended levels of physical activity and screen time.^{8–10} Active transport and physical fitness have previously been graded slightly higher with around 40% of children meeting benchmarks for these indicators.^{8–10} In past Report Cards, organised sport participation has been the only indicator of overall physical activity levels that has scored higher than 50%, with around two thirds of children and young people reported to participate in organised sport outside of school hours.^{8–10}

The Global Matrix initiative collates grades from Physical Activity Report Cards produced across multiple countries. The last iteration, Global Matrix 3.0 in 2018, involved 49 countries.¹¹ Grades for other very high Human Development Index (HDI) countries were similar to Australia at that time for overall physical activity, indicating about one quarter of children and young people meet physical activity guidelines (Grade D-). Average grades in the Global Matrix were higher than Australia for meeting sedentary behaviour (screen time) guidelines (about one third versus one quarter; Grade D+ versus D-), active transport (C- versus D+) and physical fitness (C- versus D+), and lower for organised sport participation (C+ versus B-).¹¹

The purpose of this paper is to summarise the results of the 2022 Australian Physical Activity Report Card across 10 indicators. Data were drawn from nationally and state/territory representative datasets spanning 2016–2021.

2. Methods

The 2022 Australian Physical Activity Report Card was developed and produced by the Active Healthy Kids Australia Committee of the Asia-Pacific Society for Physical Activity (<https://asactivity.org/>). The Report Card development team consisted of 10 physical activity academic researchers from seven Australian universities plus a data manager with content expertise in physical activity. The development team were responsible for identifying and collating the available data on 0–18 year olds, evaluating eligibility for inclusion in the grading, and synthesising the eligible data that were then used to assign a grade to each indicator. Pre-determined metrics and benchmarks (described in the full report card available here <https://asactivity.org/resources/ahka-report-cards/>), aligned with the Global Matrix 4.0, were used to assign grades to each of the ten included indicators. The development team was also responsible for production of the final Report Card and for the media, dissemination, and advocacy strategy.

The 2022 Australian Physical Activity Report Card assessed 10 indicators, aligning with the Global Matrix 4.0 and sitting within four categories: (1) Physical activity behaviours (Overall Physical Activity Levels, Organised Sport and Physical Activity Participation, Active Play, Active Transport, Screen Time); (2) Physical activity traits (Physical Fitness); (3) Settings and sources of influence (Family and Peers, School, Community and the Built Environment); and (4) Government (Strategies and Investments). Data used to inform the grades for the 10 indicators were drawn from nine nationally representative and 19 state/territory representative sources that were collected in the past 5 years between 2016 and mid-2021. An additional six supplementary data sources from the same period were drawn on for illustrative or contextual information but were not included in the grading process as their samples were not representative of the Australian population.

Following the identification and collation of available data, the development team held a series of consensus meetings to evaluate data eligibility, synthesise eligible data, and determine a grade for each indicator. Where sufficient data were available, grades were based primarily on national data, although all national and state/territory representative data were considered. Weighting of grading decisions were based on:

- representativeness of the data (national or state/territory based, sampling procedures and response weights, age range of children included, and sample size)
- robustness of the data (device-assessed vs subjective, how subjective questions were asked, reliability and validity)
- how well the data addressed the grading metrics (single data source vs multiple data sources, address all or some grading metrics).

Final grades were decided by consensus using the Global Matrix 4.0 grading framework (A+ = 94–100%, A = 87–93%, A- = 80–86%, B+ = 74–79%, B = 67–73%, B- = 60–66%, C+ = 54–59%, C = 47–53%, C- = 40–46%, D+ = 34–39%, D = 27–33%, D- = 20–26%, F = <20%, INC = insufficient or inadequate information to assign a grade). Final grades and informing data were provided to the Global Matrix team for independent confirmation. In addition to the Global Matrix 4.0 grading system, the Australian team also applied the star rating system introduced in their 2016 Report Card.⁹ The star rating system is used to indicate the level of confidence the development team had in the representativeness and robustness of the data used to determine the grade (1 star = low confidence, 2 stars = moderate confidence, 3 stars = high confidence). The development team came to a consensus on the star rating to be allocated to each indicator based on both (1) the representativeness of datasets included for the indicator, taking into account such things as national versus state-based data, number of datasets, age range, sampling frame, response rate, sample size, and (2) the robustness of the data, taking into account such things as how the question was asked, objective versus subjective data, reliability and validity of the data.

The theme of the 2022 Australian Physical Activity Report Card was *REBOOT! Reimagining physically active lives*. This theme was selected by the development team to provide an opportunity to discuss the impact of the COVID-19 pandemic on Australian children's physical activity and post-pandemic recovery, and to look forward from a population monitoring and program development perspective. This is even though data used to inform the grades was almost exclusively collected pre-pandemic due to regular surveillance activities pausing or pivoting topic during the pandemic. Evidence for the theme was derived from studies conducted during the pandemic that did not meet the rigorous standards for population representativeness required for grading but nonetheless were illustrative of the topics discussed within the theme. The theme was designed to provide an optimistic outlook despite Australia still grappling with the difficult consequences of the pandemic.

3. Results

The 2022 Australian Physical Activity Report Card is the fourth assessment of physical activity for children and youth since 2014. Table 1 shows the assigned grades for each of the 10 indicators of the Report Card. Fig. 1 shows the front cover of the 2022 Australian Physical Activity Report Card, highlighting the theme and the full Report Card can be accessed at <https://www.activehealthykids.org/wp-content/uploads/2022/03/Australia-report-card-long-form-2022.pdf>.

Table 1
Grades assigned to indicators in the 2022 Australian Report Card on physical activity for children and young people.

Indicator	Grades	Star rating
Overall Physical Activity	D-	**
Organised Sport and Physical Activity	B-	**
Active Play	INC	n/a
Active Transport	D+	**
Screen Time	D-	**
Physical Fitness	D+	*
Family and Peers	C+	*
School	C+	*
Community and the Built Environment	A-	*
Strategies and Investments	C-	n/a

Note. The grade for each indicator is based on the percentage of children and young people meeting a defined benchmark: A+ is 94–100%; A is 87–93%; A- is 80–86%; B+ is 74–79%; B is 67–73%; B- is 60–66%; C+ is 54–59%; C is 47–53%; C- is 40–46%; D+ is 34–39%; D is 27–33%; D- is 20–26%; F is <20%; INC is incomplete data. The star rating provides a consensus rating by the development team of the representativeness and robustness of the data available to grade each indicator: 1 star = low confidence, 2 stars = moderate confidence, 3 stars = high confidence.

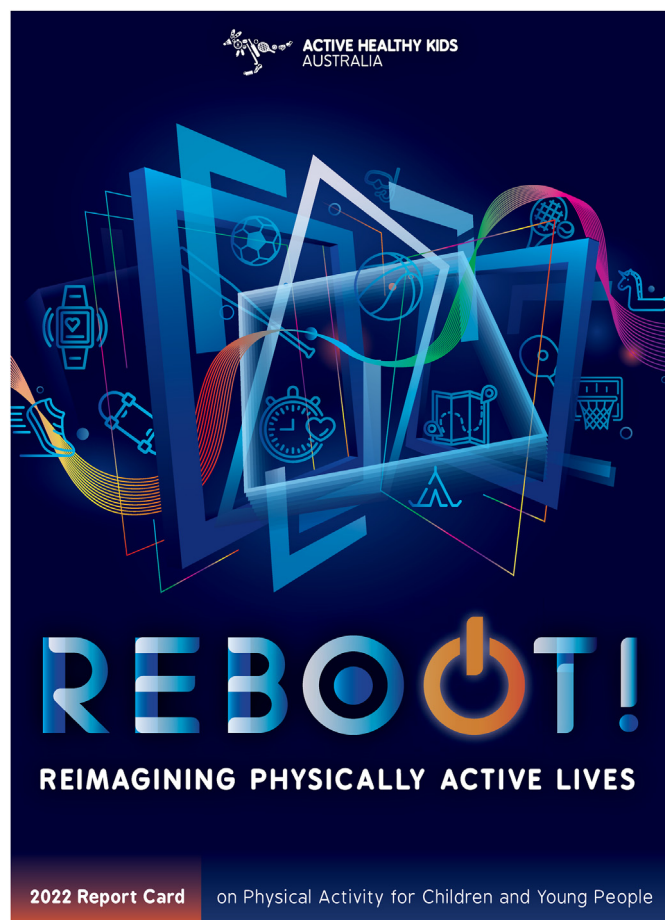


Fig. 1. Front cover of the 2022 Australian Physical Activity Report Card.

4. Discussion

The theme for this year's Report Card *REBOOT! Reimagining physically active lives* discussed the opportunity the global COVID-19 pandemic brought to stop, reflect, and re-evaluate. Through an optimistic lens, the theme considered how societal changes had the potential to impact physical activity of children and young people, particularly regarding broadening the definition of what is

considered physical activity and how it is supported and promoted. In the context of no improvement in Australian children's physical activity levels in over a decade, it encouraged reimagining of the ways we promote and support physical activity for children and young people.¹²

We discuss each of the ten indicators graded for the 2022 Australian Physical Activity Report Card below. Further information on each indicator, including key research gaps, recommendations for measurement and recommendations for future actions to improve the grades are provided in the full Report Card available at <https://aspactivity.org/resources/ahka-report-cards/>

4.1. Overall Physical Activity

Consistent with the previous three Report Cards, Overall Physical Activity was again assigned a D-, indicating that about 20% of children and young people are meeting national physical activity guidelines. National data (a mix of self- and parent-reported) estimates ranged between 2% and 22% of 5- to 18-year-olds meeting the recommended daily minimum of 60 min of moderate- to vigorous-intensity physical activity on most or all days. State/territory data (again a mix of self- and parent-reported) showed between 19 and 67% of primary school-aged children and between 11 and 31% of secondary school-aged young people were meeting national physical activity guidelines.

4.2. Organised Sport and Physical Activity Participation

Organised Sport and Physical Activity Participation was assigned a B-, remaining unchanged from the previous Report Card in 2018, and down from an assigned B in 2016 (B- in 2014). A B- indicated that 60–66% of children and young people met the metric of participating in organised sport or physical activity at least once per week. There was a broad range in the data estimates (27–82%). National data showed 27%, 63%, 77% and 71% of children aged 0–4, 5–8, 9–11 and 12–14 years, respectively, participated in organised sport and physical activity outside of school hours at least once per week. Additional national data for older children showed 71% of 12- to 17-year-olds participated in organised sport outside of school hours at some point in the last 12 months, 51% of 14- to 15-year-olds regularly participated in team sports, and 27% of 14- to 15-year-olds regularly participated in individual sport outside of school hours. The grade was informed by new national and state/territory data showing no evidence of an overall change in participation rates despite a small decline seen in the new national data and fewer data available for regular participation.

4.3. Active Play

Active play was again assigned an incomplete grade, remaining unchanged from previous years. This grade is due to the lack of consensus on how active play should be operationalised, the absence of a single defined metric and subsequent national benchmarks, and a lack of national or state/territory data on the proposed metrics for the Global Matrix 4.0.

4.4. Active Transport

Active transportation was assigned a D+, remaining unchanged from 2018, and down from the C- assigned in 2016 and C assigned in 2014. While the metric indicates usual mode of transport to and from school for at least part of the journey, the available data variously report active travel as usual mode, daily and at least once per week. National data showed estimates ranging from 16 to 52%, with state and territory data ranging from 40 to 45%. As per our

methodological approach, national data were weighted more heavily than state and territory data in determining the grade.

4.5. Screen Time

Screen time was assigned a D-, remaining unchanged from all previous Report Cards. This indicator focused on screen time rather than sedentary behaviour more broadly as the Australian guidelines quantify screen time recommendations but not sedentary time more broadly. National data showed that only 37% of children aged 0–2 years, 28% of children aged 3–5 years, and 10% of children aged 12–17 years were meeting screen time guidelines on an average day. Additional national estimates ranged from 15 to 48% for primary and secondary school aged children and young people. State and territory data suggested between 20% and 56% of 5- to 17-year-olds met screen time guidelines of no more than 2 h of sedentary recreational screen time per day.

4.6. Physical Fitness

Physical Fitness was assigned a D+, unchanged from 2018, but lower than the C assigned in 2016. New objective data from a single state were available that allowed both aerobic and muscular fitness to be included in the determination of the grade. The data were from children aged 9–10 years and young people aged 14–15 years and indicated that Australian children and young people rank in the 41st percentile for aerobic fitness and in the 28th percentile for muscular fitness, placing them below average relative to international norms.^{13,14}

4.7. Family and Peers

Family and Peers was assigned a C+ remaining unchanged since 2016 (assigned a C in 2014). There was variability across the seven metrics used for grading this indicator. Despite data from four national and one state-based survey relevant to this indicator, for most of the seven metrics for this indicator data were available from only one of these sources. The overall picture is that parental encouragement for children and young people to be physically active is high (76%), and parents are often active with their children (68–85%). Yet only 18% of parents met the physical activity guidelines themselves and the level of encouragement for physical activity from peers ranged from 40 to 53%. Two thirds of secondary school students report having adequate physical activity equipment at home. The home environment for screen time varied, with 63% (range 2–73%) of homes having rules around screen use and 56% (range 44–62%) of children and young people reporting a screen-free bedtime.

4.8. School

School was assigned a C+, down from the B+ assigned in 2018 and B- in 2014 and 2016. It should be noted that in previous Report Cards school was represented by two separate indicators: (1) School and (2) Physical Activity Participation in School, which were previously graded B+ and B, respectively. This year the indicators were combined to align with the Global Matrix. The reduction in grade for this indicator reflected new data from two state-based sources on the proportion of schools implementing the mandated time in planned physical activity (27–32%) and national data suggesting a decrease in the proportion of secondary schools with specialist PE teachers (61%). Consistent with the previous Report Card, were national data indicating 43–50% of teachers consider their schools to have good or excellent facilities/equipment available for PE and sport but only 7% report access to a gym or indoor

physical activity space. State-based data suggest 72–79% of primary schools have a specialist PE teacher.

4.9. Community and the Built Environment

Consistent with all previous gradings, Community and the Built Environment was assigned an A-. Compared with the previous Report Card, fewer data sources were available to inform this grade, but the available data were consistent and like previous Report Cards. National self-report data from 12- to 17-year-olds indicated that 77% have access to parks or sports grounds near their home. State-based parent-report data for children aged 0–12 years show that 89% of children live near good parks, playgrounds and play spaces, and that 95% feel their neighbourhood is safe for children.

4.10. Strategies and Investments

Strategies and Investments was assigned a C-, slightly higher than the D assigned in 2018. This grade was assigned through evaluation of major government initiatives that were implemented since 2018. Evaluation findings for several initiatives were mixed, and the absence of a National Physical Activity Plan was noted as a major shortcoming. While there has been no notable advancement in national or state government physical activity policy since 2018, the increase in the grade was primarily due to substantial investment by some states and territories to reduce the cost barrier for children's participation in organised sport through financial incentive "voucher" programs.

5. Strengths and limitations

A strength of the 2022 Australian Physical Activity Report Card was representation on the development team from multiple states and institutions of physical activity researchers with a diversity of backgrounds and areas of expertise in the field. Although we conducted a comprehensive collation of data to inform the grades, we found a lack of nationally representative data and, in particular, national device-based measures of physical activity in youth of all ages. It was noted that gaps in surveillance data persisted, for example, regarding metrics to assess Active Play and for children from priority populations (e.g. children with disability, First Nations children). In addition, several regular surveillance surveys were paused during the pandemic or pivoted to assess impact of the pandemic and hence did not collect the physical activity data we have used in previous iterations of the Report Card.

6. Conclusion

The 2022 Australian Physical Activity Report Card shows that Australian children and young people are continuing to experience overall low levels of physical activity and high screen time, with no change in the grades for these indicators since inception of the Report Card in 2014. This is despite high levels of participation in organised sport and supportive physical environments for physical activity in most communities. A highlighted gap is the lack of a National Physical Activity Plan. This, alongside the focus of government investment on financial incentives for children and young people to participate in organised sport, where participation is already high, suggests a refocusing of government priorities to supporting physical activity more broadly than just sport is needed. Broad dissemination of the Report Card will facilitate advocacy for increased support for children and young people in Australia to be physically active. To date dissemination has included a release webinar, media and social media coverage, presentations to government and non-government agencies and direct delivery of the

Report to all relevant Federal and State ministers and shadow ministers. The theme of this year's Report Card, *REBOOT! Reimagining physically active lives*, challenges us all to think more creatively about how we might best engage the diversity of children and young people in the enjoyment and health benefits physical activity can bring, to ensure they embrace physical activity for life.

Declaration of competing interest

The authors declare that they have no conflicts of interest related to this manuscript.

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