

Adolescence and young adulthood: an untapped window of opportunity for obesity prevention

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Article history

Publication date: 12 October 2022

Citation: Partridge SR, Sim KA, Armaghanian N, Steinbeck KS, Cheng HL.

Adolescence and young adulthood: an untapped window of opportunity for obesity prevention. *Public Health Res Pract.* 2022;32(3):e3232223. <https://doi.org/10.17061/phrp3232223>

Key points

- Adolescents and young adults (AYA) represent a critical window for establishing lifelong health trajectories. Yet AYA are historically forgotten in healthcare planning
- Unique AYA vulnerabilities mean personal empowerment strategies to prevent obesity must be matched with environments supporting healthy decision-making
- The *National obesity strategy 2022–2032* is welcomed but will require concerted efforts in collaboration with AYA to reach its ambitious goals

Abstract

Adolescence and young adulthood (AYA) are formative life stages, second only to the first 1000 days. Yet young people have historically been 'forgotten' in our health system. Major health risk factors, like adolescent obesity, have largely been left untreated, resulting in significant chronic disease burdens and health costs later in life. In Australia, strategies to address obesity have primarily been implemented disjointedly by different jurisdictions of government, which has meant that obesity responses across the country have been piecemeal. Current state-based interventions show modest effects on improving weight-related behaviours. Major fiscal and regulatory measures have yet to be implemented despite demonstrable public health benefits and public support. The new *National obesity strategy 2022–2032*, which recognises the importance of engaging with youth, is a welcomed approach to coordinating obesity prevention Australia-wide. The challenge remains to ensure that meaningful AYA engagement is followed through with future interventions. The digitalisation of society poses future health challenges for AYA because of the likelihood of greater physical inactivity and ease of access to junk foods.

Key points (cont.)

- The digitalisation of society poses significant future challenges for obesity prevention in AYA

Introduction

The *United Nations (UN) convention on the rights of the child* states every adolescent has the right to live and develop healthily. Australia committed to uphold this right more than 30 years ago, yet many young Australians still live with suboptimal health. Overweight and obesity affect 25% of 5–17-year-olds.¹ Alarming, this figure rises to 46% among 18–24-year olds.¹ Poor dietary, physical activity, sedentary behaviour and sleep habits are established in adolescence and young adulthood.² These habits are challenging to undo later in life and precipitate the chronic diseases that burden our health system.²

Adolescent and young adults (AYA) are historically 'forgotten' age groups in the health system.³ In Australia, few weight management services are available for AYA, and hospital-based clinics tend only to treat those with severe obesity. Young people are poorly represented in health guidelines and standardised data collection systems.⁴ Globally, there are also no AYA-specific targets set for relevant UN and World Health Organization action plans about nutrition⁵, sustainable development goals⁶ and noncommunicable diseases (NCDs).⁷ Yet, AYA represents a dramatic development period, second only to the first 1000 days.

The case for investing in AYA health is strong. Economic modelling shows a 10-fold return on adolescent health investment, including addressing NCDs.⁸ Improving youth health delivers immediate and downstream benefits of reduced adolescent and later-life morbidity, improved productivity and economic participation in their prime years, and the best possible start for the next generation – 'the triple dividend'.³

Growth and development

The importance of AYA obesity prevention is supported by their unique developmental needs. In early–mid adolescence, teenagers experience their pubertal growth spurt, increasing energy requirements.⁹ The drive to eat is strong.⁹ Changes are evident in appetite-related hormones and muscle and fat deposition, which can facilitate excess weight gain if coupled with physical inactivity and sedentary behaviours. Extensive neurocognitive development occurs during adolescence until the mid-20s.² Notably, the prefrontal cortex region responsible for self-control is last to mature, whereas pleasure-seeking centres are hypersensitive

and impulsive. This state likely contributes to the overconsumption of palatable, fat- and sugar-rich foods.¹⁰

Emerging autonomy and the importance of peer approval are part of normal psychosocial development.¹¹ Peers, social media and advertising thus strongly influence dietary, physical activity and other lifestyle behaviours.¹¹ Completing high school and moving out of home trigger lifestyle changes that often mean young adults cease team sports, consume more takeaway meals, and engage in binge drinking and eating, leading to rapid weight gain.² Moreover, the COVID-19 pandemic has restricted young people's physical and social freedoms to lead a healthy lifestyle – the consequences of which we are yet to fully understand.

Current state of affairs in Australia

The Australian Government launched the *National obesity strategy 2022–2032* in March 2022.¹² This strategy includes a goal to "reduce overweight and obesity in children and adolescents aged 2–17 years by at least 5% by 2030". It marks the first time a national target has been set for adolescent obesity. The strategy emphasises engagement with AYA as a priority group. However, initial consultations only included 21–26-year olds, meaning adolescents' voices are yet to be fully appreciated.

In the absence of a coordinated approach to combating obesity until now, Australia has historically relied on state/territory governments and federally funded Primary Health Networks to implement obesity prevention strategies. The priorities of these health jurisdictions do not always align, creating a situation where obesity responses have been inconsistent across different levels of government.

Lessons so far

In New South Wales (NSW), more than 30 initiatives, guidelines and policy directives are in place to prevent and manage AYA obesity. Many of these lack robust evaluation, with only seven having published outcomes relevant to adolescents.¹³ Data indicate a modest effect of evaluated interventions on improving AYA behaviour and weight outcomes. Inequitable engagement of lower socioeconomic groups is common. For example, the Active Kids voucher program (a NSW program that incentivises physical activity in school children)

significantly raised the number of days adolescents met activity guidelines in its inception year.¹⁴ Those with higher weight status also showed the greatest benefits.¹⁴ However, the program reached only 25% of those with overweight and obesity, meaning that many disadvantaged youths did not engage.¹⁵ As well, an evaluation of Nutrition in Schools (a statewide policy directive that encourages healthier school canteens) found the policy had reduced effectiveness in lower socioeconomic settings.¹⁶ The Students As LifeStyle Activists (SALSA) program uses a peer education model to improve physical activity and healthy eating in schools. Unlike other programs, more than half of the schools included in the SALSA evaluation were of low socioeconomic status, with findings showing preliminary efficacy in improving weight-related behaviours.¹⁷

The Australian Government introduced the nationwide Health Star Rating scheme in 2014. At its 5-year evaluation, this front-of-pack nutrition labelling system demonstrated a positive effect in steering consumers toward healthier options.¹⁸ However, the voluntary nature of this scheme remains its key limitation. Products carrying a rating tend to rate highly in the first place.¹⁸ The impact of this scheme on AYA food choices is unknown.

Sugar-sweetened beverage (SSB) taxation and junk food marketing restrictions are relevant to AYA because of their high consumption of these products.¹¹ SSBs are taxed in more than 50 countries. Australia currently relies on an industry pledge that promises a 20% sugar reduction in beverages by 2025.¹⁹ Similarly, Australian food advertising is largely industry self-regulated, with the only mandate covering free-to-air television and protecting children younger than 14 years.¹⁹ Mounting evidence suggests fiscal and regulatory measures are essential for managing population-level obesity.²⁰ Successful implementation of these measures in Australia will require careful consideration of commercial interests along with experiences from other countries.²¹

Recommendations

Effective obesity prevention requires a combination of interventions that empower AYA to make healthy lifestyle choices and create environments that support healthy decision-making. To date, Australia's state-based responses to AYA obesity have been piecemeal. We are also lagging on national legislation with demonstrable public health benefits. Coordinated action is needed across multiple sectors to address nutrition and health literacy, improve the food and built environment and provide social protection to disadvantaged AYA via affordable, nutritious food, recreational activities and health services.⁴ Interventions and services need to be multidisciplinary and consider youth in marginalised and rural communities with disproportionate health and stigma burdens. An evaluation component must be embedded in

any intervention or health service to assess efficacy and cost-effectiveness and to guide quality improvement.

In our recent youth consultation work, adolescents identified: 1) the toxic social media environment; 2) manipulative food marketing strategies; and 3) inaccessibility of sport and recreation venues (especially during pandemic lockdowns) as the main concerns threatening their physical health.²² Such concerns provide clear directions for action. Policy makers should place priority on co-designing solutions that are gender- and culturally-tailored and fostering long-term partnerships with AYA and researchers.¹² A voice should be given to diverse AYA groups, enabling them to challenge processes of future interventions. Organisations like Youth Action²³ and research advisory groups, e.g. the Health Advisory Panel for Youth at the University of Sydney²² and the Wellbeing, Health & Youth Commission²⁴, are invaluable.

Platforms for health communication need to be relevant to young people, as do the modes of AYA health service delivery (e.g. telehealth, messaging, apps). One of the greatest solutions and challenges for obesity prevention is the digitalisation of society. Young people's engagement in the rapidly evolving virtual world will continue to create new marketing opportunities, for example for fat- and sugar-rich junk foods, that derail public health efforts.

Future challenges

The *National obesity strategy 2022–2032* is a welcomed approach to unifying obesity prevention efforts across different levels of government. Specifically, strategy 2.4, “engage and support young people to embed healthy behaviours as they transition to adulthood”, recognises the uniqueness of the AYA life stage.¹² Challenges lie in ongoing advocacy to ensure AYA recognition is reflected in future policy document updates. Many current interventions fail to engage AYA in ways that are meaningful to them. Future efforts could leverage key global concerns and social movements related to climate change, which provide unique avenues to address AYA obesity.⁴

Recently, the Australian Government Therapeutic Goods Administration updated its social media advertising guide to prohibit testimonials by influencers for certain products, e.g. supplements. This change supports AYA in reducing harmful diet culture. However, similar restrictions have not been implemented for junk food marketing. Online advertising regulations must keep pace with evolving technology, particularly as the emerging metaverse will allow individuals to spend much of their time in computer simulations. Virtual or augmented reality poses significant challenges for AYA obesity because of increased physical inactivity and junk food accessibility through virtual restaurants. Online food

delivery services, facilitated by the COVID-19 pandemic, are already shifting how young people access junk food.

Conclusions

AYA face unique challenges with respect to preventing excess weight gain. Multisectoral, coordinated action is needed to support young people to lead healthy lifestyles through personal empowerment and environments that promote healthy decision-making. The *National obesity strategy 2022–2032* is a welcomed approach to coordinating the inconsistent obesity responses across Australia. Recognition of AYA engagement in this strategy is encouraging and will need to be sustained in future interventions and policies. Meaningful youth engagement will be essential for tackling imminent public health challenges associated with the digitalisation of society.

Acknowledgements

SP is supported by a National Health and Medical Research Council (NHMRC) and National Heart Foundation Early Career Fellowship. HC is supported by a grant from the National Health and Medical Research Council. KS is supported by an NHMRC Centre of Research Excellence in Adolescent Health grant and project grant related to predictors of adolescent health risk using a birth cohort, as well as a Medical Research Future Fund Australia primary health care grant for research into improving adolescent physical activity and nutrition in primary care. She has received transport, registration and accommodation support as a plenary speaker at the International Congress of Obesity 2022.

This paper is part of a special issue of the journal focusing on obesity prevention, which has been produced in partnership with the Health and Social Care Unit, School of Public Health and Preventive Medicine, Monash University, with support from VicHealth.

Peer review and provenance

Externally peer reviewed, invited.

Competing interests

None declared.

Author contributions

All authors contributed to the development and several revisions of the manuscript.

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