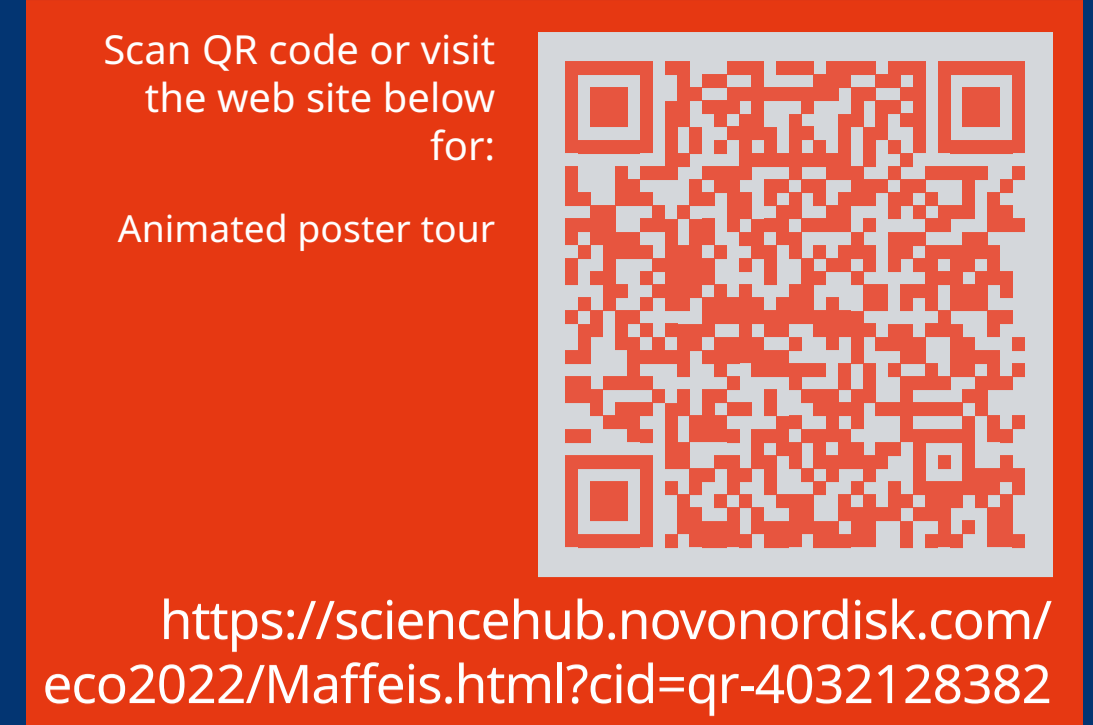


ACTION Teens global survey: participant characteristics and key information sources for adolescents living with obesity, caregivers and healthcare professionals

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LBP3.02

Aim

- The global survey-based ACTION Teens study aimed to identify perceptions, attitudes, behaviours and barriers to effective obesity care among adolescents living with obesity (ALWO), caregivers of ALWO (CGs) and healthcare professionals (HCPs).
- This poster reports participant characteristics and information sources that are commonly used to learn about obesity/weight management.

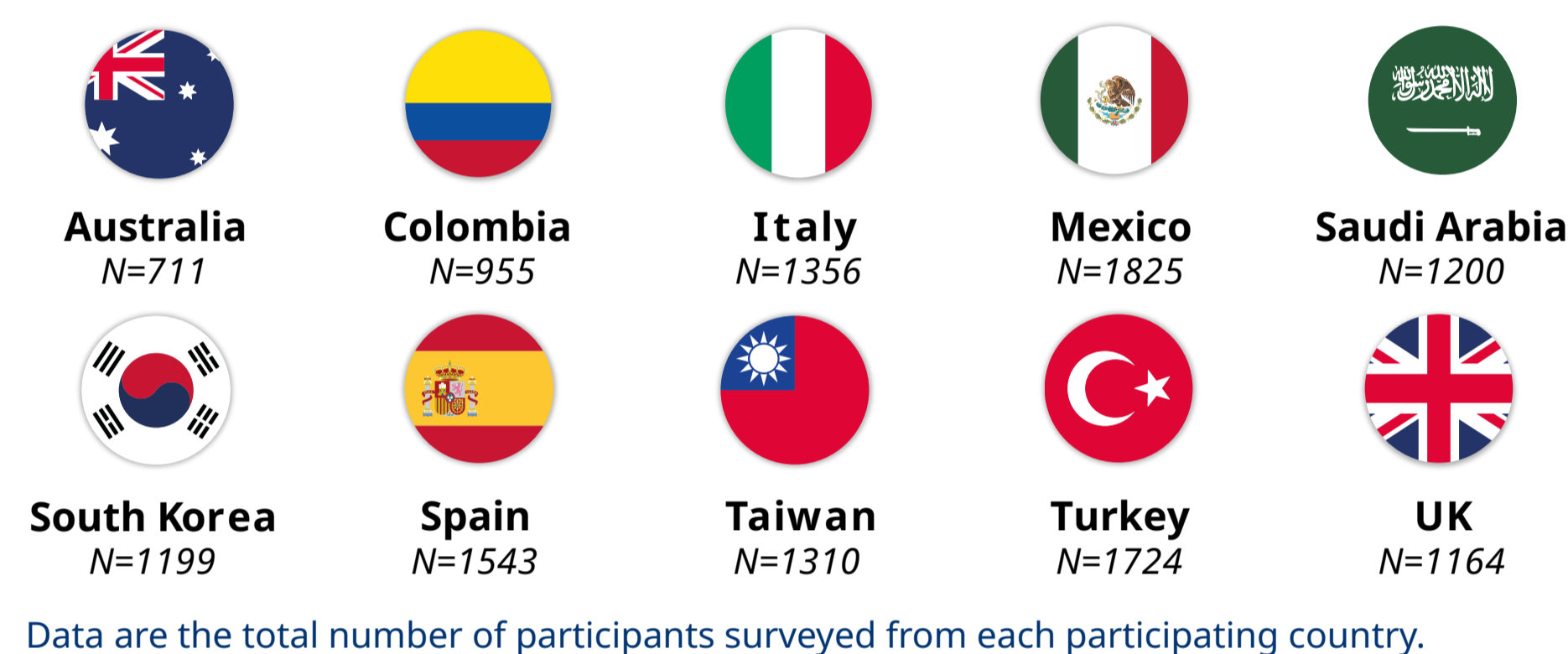
Introduction

- Adolescent obesity often continues into adulthood, resulting in more severe long-term impacts than obesity that occurs in adulthood.¹⁻³
- Although the global prevalence of obesity among children and adolescents is increasing,⁴ information regarding the experiences, challenges and needs of ALWO, CGs and HCPs who treat ALWO is scarce.
- The ACTION Teens study assessed the perceptions, attitudes, behaviours and barriers to effective obesity care among ALWO, CGs and HCPs, with a view to generating insights that can inform improvements in obesity management for ALWO.
- Data from the ACTION Teens study are also reported in Zoom Forward 22 posters LBP3.06 and PO3.46.

Methods

- ACTION Teens (NCT05013359) was a cross-sectional, survey-based study conducted in 10 countries between August and December 2021 (Fig. 1).

Figure 1: Survey respondents from participating countries



- ALWO, CGs and HCPs with direct, recent experience of clinical obesity management in adolescents were recruited from online panels/databases.
- Eligible ALWO were aged 12–<18 years and had a current body mass index-for-age (based on self-reported sex, age, height and weight) $\geq 95^{\text{th}}$ percentile for age and sex, per locally appropriate definitions.
- Eligible CGs were aged ≥ 25 years, lived with an ALWO $\geq 50\%$ of the time and were involved in the ALWO's healthcare decisions.
- HCPs were eligible if they had been in clinical practice for ≥ 2 years, spent $\geq 50\%$ of their time in direct patient care and treated ≥ 10 ALWO in a typical month.
- To maximise the number of matched pairs of CGs and ALWO, CGs were asked for permission for their ALWO to participate.
- Survey questions explored a range of topics, including the characteristics of participants and sources of information regarding healthy lifestyles and weight loss/management.
- Surveys were designed under the guidance of an international steering committee consisting of HCPs and subject matter experts; separate but overlapping surveys were developed for each sample group.

Results

- Overall, 5275 ALWO, 5389 CGs and 2323 HCPs were surveyed (Table 1), including 933 matched pairs of ALWO and CGs (18% and 17% of total, respectively).

Table 1: Demographics and characteristics of participants

	ALWO (n=5275)	CGs (n=5389)	HCPs (n=2323)
Age in years, mean (SD)	14.8 (1.7)	40.9 (8.6)	45.0 (10.7)
Proportions of ALWO aged 12, 13, 14, 15, 16 or 17 years, %	13, 15, 15, 13, 26, 18	-	-
Female, n (%)	2304 (44)	2781 (52)	919 (40)
BMI classification of ALWO*			
- Obesity class I	65% (n=3434)	62% (n=3324)	58% (SD=21.4)
- Obesity class II	21% (n=1128)	23% (n=1242)	27% (SD=13.0)
- Obesity class III	14% (n=713)	15% (n=823)	15% (SD=12.9)
BMI classification of CGs and HCPs, n (%)			
- Underweight (<18.5 kg/m ²)	-	141 (3)	46 (3)
- Healthy weight (18.5–24.9 kg/m ²)	-	2030 (38)	1023 (58)
- Overweight (25–29.9 kg/m ²)	-	1997 (37)	561 (32)
- Obesity class I–III (≥ 30 kg/m ²)	-	1221 (23)	138 (8)

*BMI classification for ALWO, the ALWO of the CGs surveyed, and the ALWO treated by the HCPs surveyed (obesity class I: BMI $\geq 95^{\text{th}}$ percentile for age and sex; obesity class II: BMI $\geq 120^{\text{th}}$ percentile for age and sex; obesity class III: BMI $\geq 140^{\text{th}}$ percentile for age and sex). ALWO and CG data are the percentage (number) of ALWO in each BMI category; HCP data are the mean percentage (SD) of their ALWO patients in each category. BMI classification of the recruited CGs and HCPs (n=1768 for HCP BMI classification). Percentages may not sum to 100% due to rounding. BMI of CGs and HCPs were categorised according to the BMI ranges presented, rather than by the definition of underweight, healthy weight, overweight or obesity in their country. For South Korea and Taiwan, obesity classes are: "Obesity class 1" (same as 'Overweight' in other countries, BMI range starting at 25.0 for South Korea and 27.0 for Taiwan); "Obesity class 2" (same as Obesity class I in other countries); and "Obesity class 3" (same as Obesity class II and III in other countries). ALWO, adolescents living with obesity; BMI, body mass index; CGs, caregivers of ALWO; HCPs, healthcare professionals; SD, standard deviation.

- The ALWO surveyed and the ALWO patient population for the HCPs surveyed had a similar obesity class distribution (Table 1).
- The most common comorbidities among ALWO, as reported by HCPs, were metabolic syndrome, stomach/intestinal problems and depression/anxiety; by comparison, CGs reported fewer diagnoses of these conditions (Table 2).
- According to HCPs, only 20% of their ALWO patients had no comorbidities, whereas 55% of CGs indicated that their ALWO had no other medical conditions.

Table 2: ALWO comorbidities, as reported by CGs and HCPs

	ALWO (n=5275)	CGs (n=5389)	HCPs (n=2323)
Additional diagnoses for ALWO, %			
- Metabolic syndrome	-	3	21
- Stomach or intestinal problems	-	7	21
- Depression/anxiety	-	11	20
- Eating disorder	-	6	18
- Prediabetes	-	2	16
- ADHD	-	5	11
- Polycystic ovarian syndrome	-	1	11
- Obstructive sleep apnoea	-	5	10
- Type 2 diabetes	-	3	9
- Other	-	5	4
- No other medical conditions	-	55	20

CG responses are the percentage of CGs who indicated that their child had ever been diagnosed with the medical condition by a doctor. HCP responses are the mean percentage of their ALWO patients with the additional diagnosis. ADHD, attention deficit hyperactivity disorder; ALWO, adolescents living with obesity; CGs, caregivers of ALWO; HCPs, healthcare professionals.

- Most of the HCPs were primary care practitioners (57%), although general paediatricians (20%) and HCPs with other specialties (23%) were also surveyed. On average, HCPs treated 33.7 ALWO per typical month (Table 3).

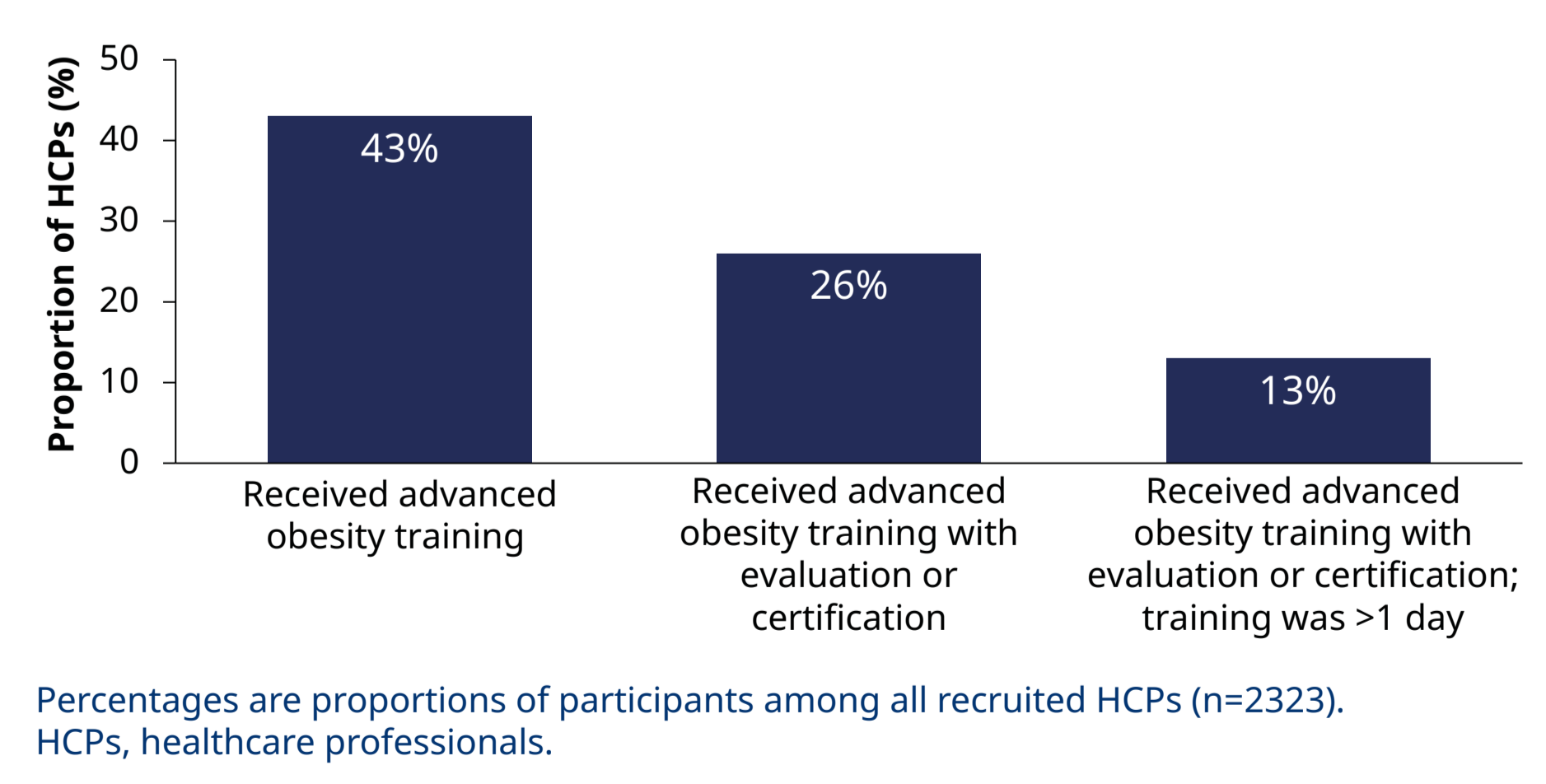
Table 3: HCP background and professional experience

	HCPs (n=2323)
Primary medical specialty*, n (%)	
Primary care practitioner	1326 (57)
- General practice physician	683 (29)
- Family practice physician	600 (26)
- Internal medicine (primary care practitioner)	43 (2)
General paediatrician	457 (20)
Other specialty	540 (23)
- Paediatric endocrinologist	265 (11)
- Nutrition specialist	121 (5)
- Paediatric gastroenterologist	77 (3)
- Obstetrician/gynaecologist	34 (1)
- Psychiatrist	25 (1)
- Internal medicine (specialist)	8 (<1)
- Paediatric cardiologist	10 (<1)
Experience with ALWO, mean (SD)	
- Number of ALWO seen per typical month	33.7 (36.0)
- Proportion of ALWO who are being treated by the HCP for obesity	44 (30.5)
- Years providing obesity care/management to adolescents	8.6 (7.0)

*HCPs selected their primary medical specialty from a list of prespecified response options; specialties were subsequently classified into three overarching categories (primary care practitioner, general paediatrician and other specialty). ALWO, adolescents living with obesity; HCPs, healthcare professionals; SD, standard deviation.

- Only 13% of HCPs had received more than 1 day of advanced training in obesity or weight management with certification or evaluation (Fig. 2).
- Most HCPs were aware of clinical treatment guidelines for ALWO (67%); among this group, 92% followed the guidelines and 75% found them to be either somewhat or very effective.

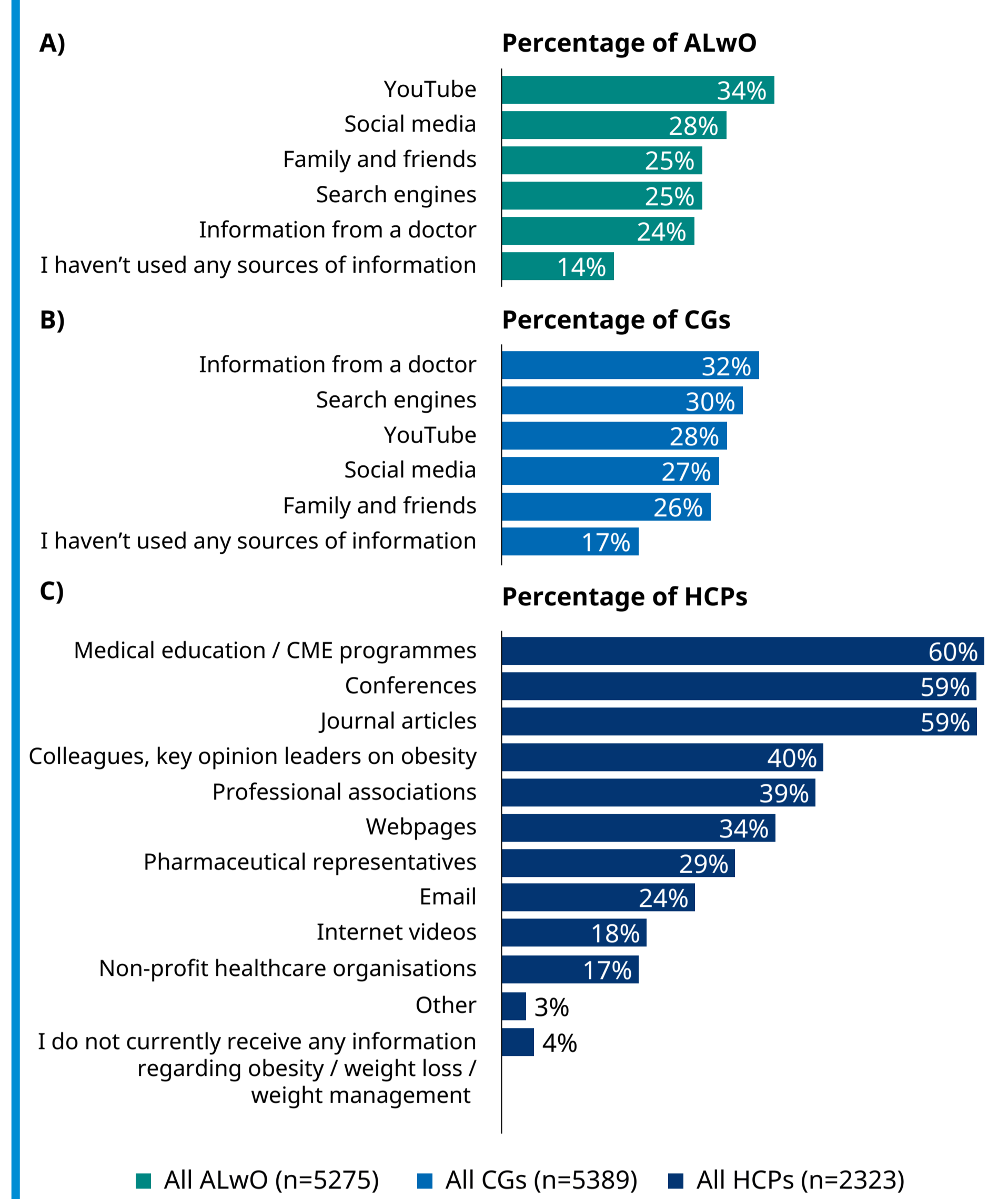
Figure 2: HCP self-reported advanced training in obesity / weight management beyond medical school



Percentages are proportions of participants among all recruited HCPs (n=2323). HCPs, healthcare professionals.

- Online sources, such as YouTube, search engines and social media, were among the most common sources of information on weight management used by ALWO (Fig. 3).
- For CGs, the most commonly used source of information was doctors (Fig. 3).
- Medical education/continuing medical education programmes were the most commonly used source of information for HCPs (Fig. 3).
- YouTube was the *most important* information source for ALWO, whilst doctors were the *most important* source for CGs (Fig. 4).

Figure 3: Information sources used by ALWO (A), CGs (B) and HCPs (C) to learn about healthy lifestyles, weight loss and weight management



Panels A and B present the top five information sources that ALWO and CGs reported having used from a prespecified list of sources (which also included the following additional response options: dietician/nutritionist, smartphone apps, TV programmes, weight loss programmes, medical websites, books/magazines and wellness coaches or personal trainers); percentages are proportions of participants among all recruited ALWO and CGs. Panel C presents information sources that HCPs reported they currently use to receive information, from a prespecified list of sources; percentages are proportions of participants among all recruited HCPs. ALWO, adolescents living with obesity; CGs, caregivers of ALWO; CME, continuing medical education; HCPs, healthcare professionals.

Figure 4: Most important information sources used by ALWO (A) and CGs (B) to learn about healthy lifestyles, weight loss and weight management

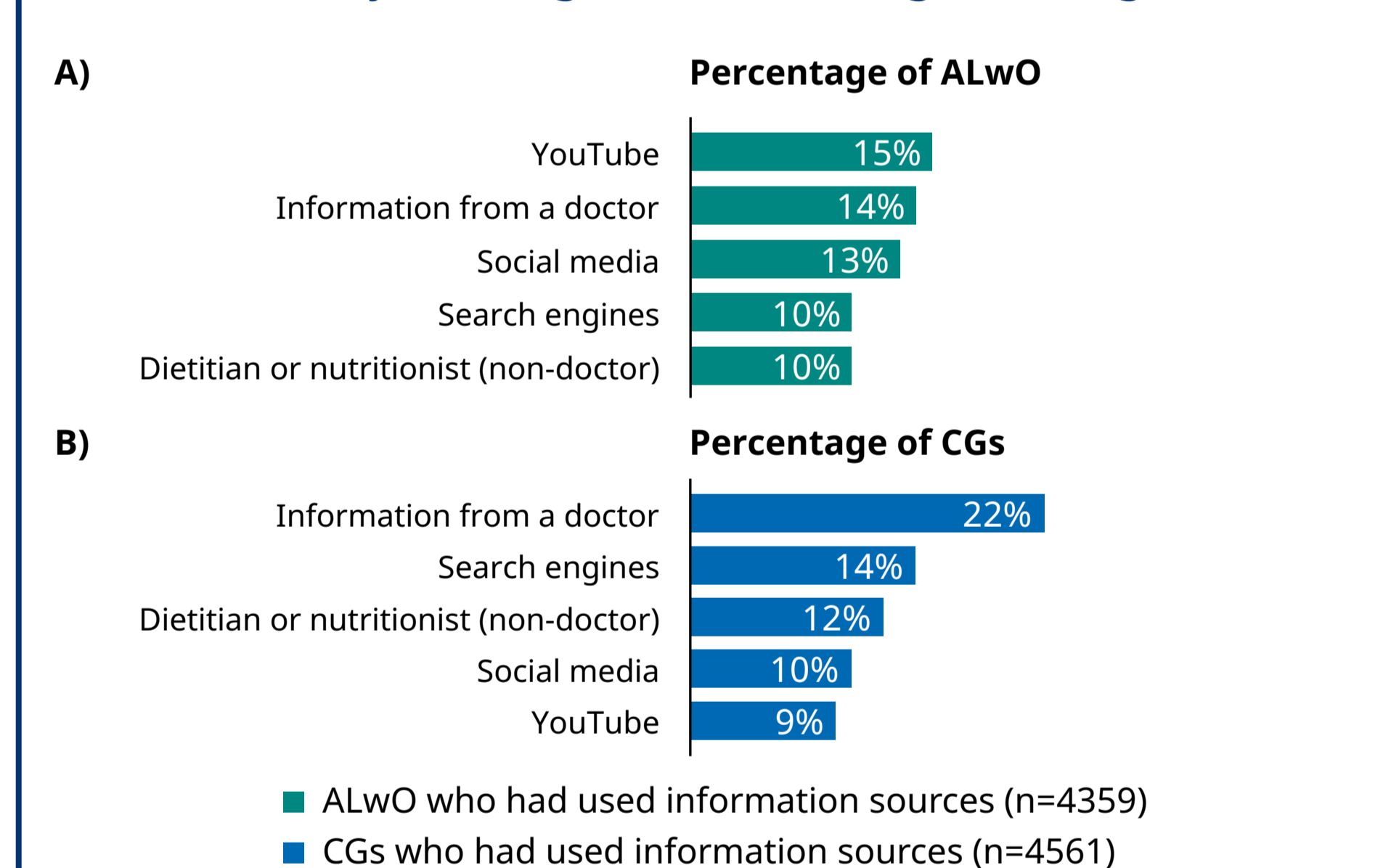


Figure presents the top five information sources that ALWO and CGs indicated were their single most important source of information, from a prespecified list of sources (including all response options detailed for Fig. 3); percentages are proportions of participants among ALWO and CGs who reported using information sources. ALWO, adolescents living with obesity; CGs, caregivers of ALWO.

Discussion

- In the ACTION Teens study, ALWO obesity class distribution was consistent across the surveyed ALWO, CGs and HCPs.
- Although HCPs spent $\geq 50\%$ of their time in direct patient care and treated ≥ 10 ALWO in a typical month, only 13% had received >1 day of advanced training in obesity/weight management with certification or evaluation.
 - This finding highlights a potential unmet need for supplementary training support for HCPs in this field.
- Online channels were the primary source of weight management information for ALWO and a commonly used information source for CGs.
- Comparable proportions of ALWO selected YouTube (15%) and social media (13%) as selected doctors (14%) when asked about their most important information source. This suggests that YouTube and social media may be key avenues for communicating with ALWO.
 - However, online health resources for ALWO should be developed using insights from ALWO themselves, to ensure that their needs regarding online health information searches are met.⁵

Conclusion

- Participating HCPs were a mix of primary care practitioners and other specialties currently treating ALWO, but few had received advanced training in obesity/weight management.
- Online channels (e.g. YouTube and social media) were reported as important information sources for obesity information and weight management for ALWO.

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