Trajet de soins Obésité infantile:

Centre Pédiatrique Multidisciplinaire de prise en charge de l'Obésité (CPMO)

Prof. Dr. Véronique Beauloye,
Endocrinologie pédiatrique,
Zeepreventorium,
Professeure invitée UCLouvain,
BASO Board member,
Vice-présidente BASO pediatric working group.

Zee preventorium

1998: Epstein, Pediatrics, treatment of obesity?

2000: Cole international definition of obesity

2003-5: comorbidities, metabolic syndrome,...

2009: combined behavioural lifestyle interventions - clinical trials

2013: obesity is recognized as a disease

Pediatric Obesity—Assessment, Treatment, and Prevention: An Endocrine Society Clinical Practice Guideline

J Clin Endocrinol Metab March 2017, 02(3):1–49

2018: developmental cascade model of pediatric obesity (prenatal, maternal, (epi)genetics, sleep...)

2021: obesity phenotyping as a tool to select treatment- precision nutrition

2022: Smith, Lancet, the biosocioecological model

2023: New clinical practice guideline for evaluation and treatment of children and adolescents with obesity: paradigm shifts

1992 — 2023

2002: Minister's office-first convention project

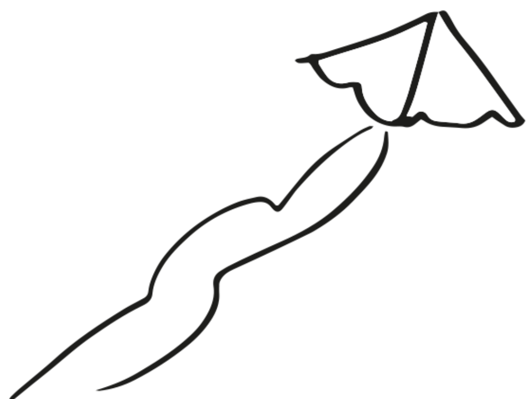
2008-2012: RIZIV/INAMI sessions

2012: pilot project under article 56

2013: round table pediatric academy-health authorities

2020: concept note - Zeepreventorium

2021: proposition BASO working group



From Successes in Childhood Obesity Policy

In December 2023, a stepped-care integrated model was implemented in Belgium to combat childhood obesity[1]. It was thanks to the joined forces of the pediatric working group of the Belgian Association for the Study of Obesity (BASO), Eetexpert, and Zeepreventorium De Haan that a comprehensive framework to provide tailored obesity care to children and adolescents aged 2 to 17 years old saw the light.

D'ASSURANCE MALADIE-INVALIDITÉ

lic institué par la loi du 9 août 1963

ilée 5/1 – 1210 Bruxelles

es soins de santé

L'ASSURANCE

..lles, le xxx 2023

jet transversal 2 : Trajet de soins pour enfants souffrant d'obésité

EXES

Annexe 1 : projet de convention « Obésité chez les enfants »

Annexe 2 : analyse actuarielle projet de convention « Obésité chez les enfants »

Annexe 3 : projet d'arrêté royal adaptation nomenclature de réadaptation diététique

Annexe 4 : version coordonnée adaptation nomenclature de réadaptation diététique

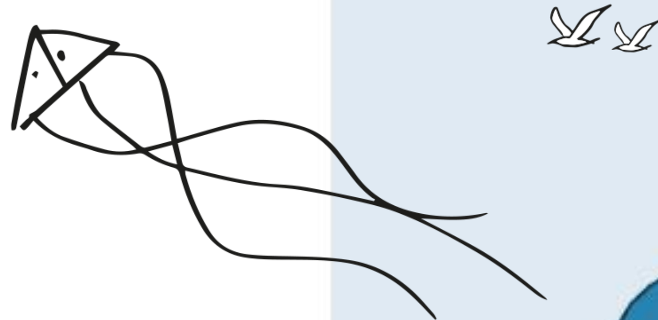
Annexe 5 : analyse actuarielle adaptation nomenclature de réadaptation diététique

CONTENU DE LA PROPOSITION

Une ligne budgétaire transversale a été reprise au budget 2022. Elle comprend 15 projets, dont 7 sont réalisés transversalement par le biais de groupes de travail spécifiques. Le projet 2 est décrit dans la note CSS 2022/073.

En annexe 1 figure le projet de convention « Obésité chez les enfants ».

Flexible
Individual
Personalized
Stepped-care
Intervention model



Early detection
Primary prevention

- Pre-existing screening
- Community based approach
- Involvement states

1st Level
Physician
Monodisciplinary

- EOSS-P 0 and 1
- Monodisciplinary therapy with 1 or max 2 additional health care professionals (dietitian or psychologist)
- Intensive monodisciplinary aftercare

Case Coordinator

3th Level
Pediatric Expertise
Center for Obesity (PEO)

2nd Level
Pediatric Multidisciplinary
Obesity Center (PMOC)

- EOSS-P (2) - 3
- Multidisciplinary residential therapy
- Possible bariatric referral
- Advice and expertise function for support for second and first level in function of aftercare

- EOSS-P 2 and 3
- Multidisciplinary outpatient therapy
- Intensive multidisciplinary aftercare
- Advice and expertise function for support for first level

Figure 1. Stepped-care integrated care model for childhood obesity.

22 CPMO composés :

- d’un pédiatre
- d’un diététicien spécialisé
- d’un psychologue spécialisé
- d’un kinésithérapeute
- d’un assistant ou infirmier social
- d’un assistant administratif.

Un membre de l’équipe assure le rôle de case coordinateur du CPMO

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Stepped-care integrated care model for childhood obesity.

Porte d'entrée:

- 2-17 ans inclus
- BMI ITOF 30

«Un enfant peut être orienté par son médecin généraliste ou par un pédiatre, **mais aussi par un médecin de l'ONE, d'un centre PSE…»**

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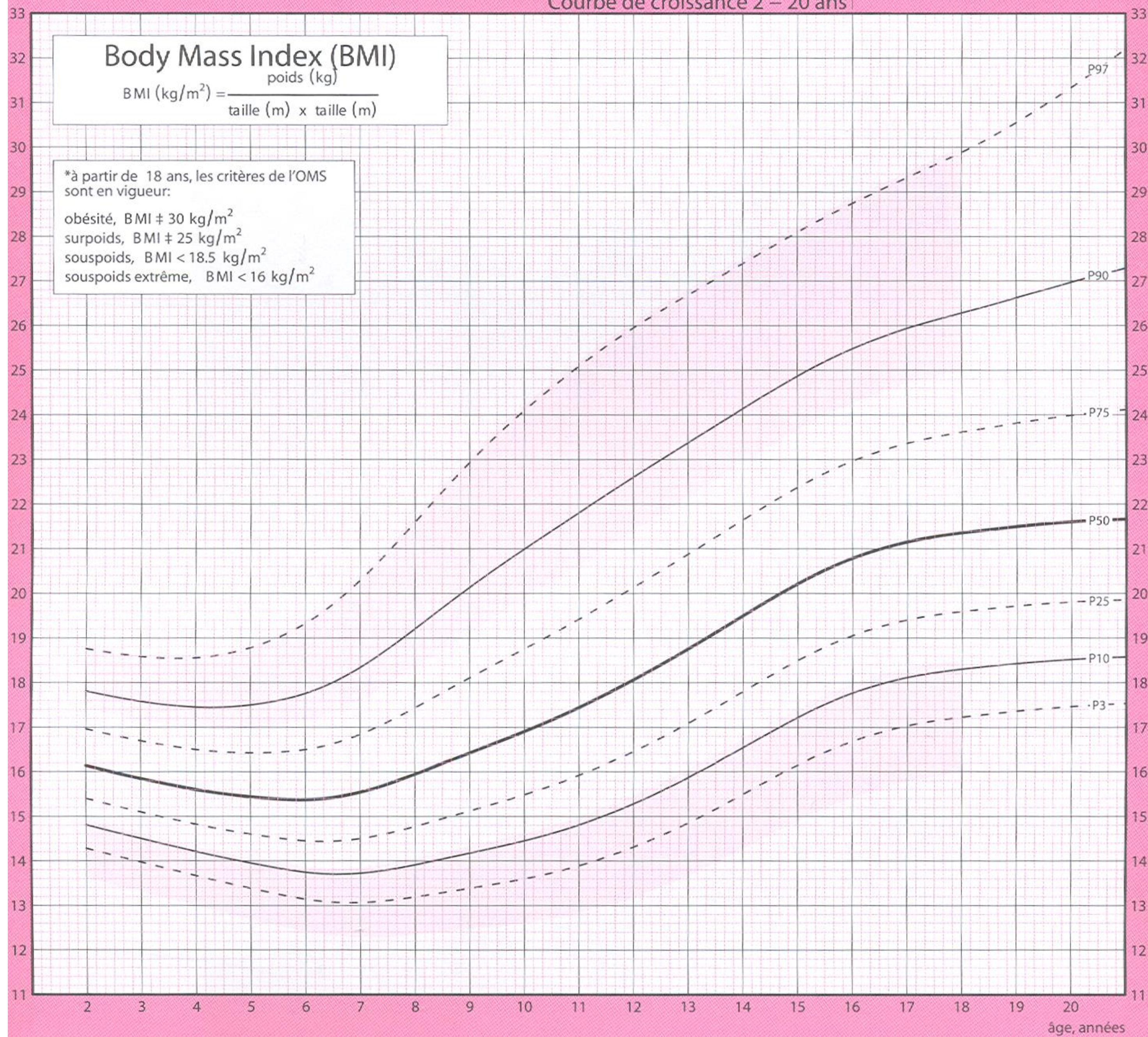
Figure 1. Stepped-care integrated care model for childhood obesity.

Definition ?

Overweight - Obesity:

Excess of adipose tissue associated with negative health consequences

IOTF, 1998


Courbe de croissance 2 – 20 ans
Body Mass Index (BMI)
BMI (kg/m²) = poids (kg) / taille (m) x taille (m)
*à partir de 18 ans, les critères de l'OMS sont en vigueur:
obésité, BMI ≥ 30 kg/m²
surpoids, BMI ≥ 25 kg/m²
souspoids, BMI < 18.5 kg/m²
souspoids extrême, BMI < 16 kg/m²
P97
P90
P75
P50
P25
P10
P3
âge, années

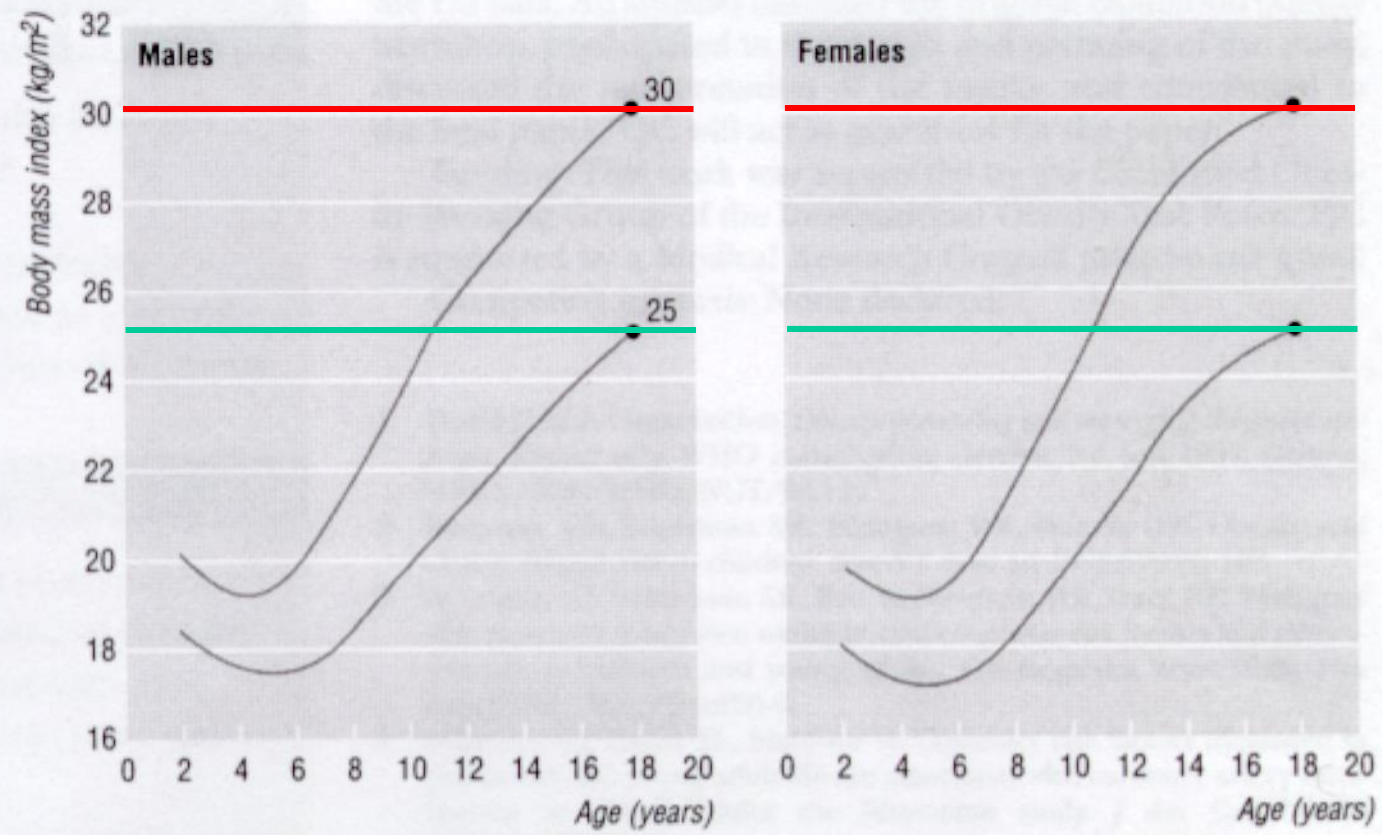
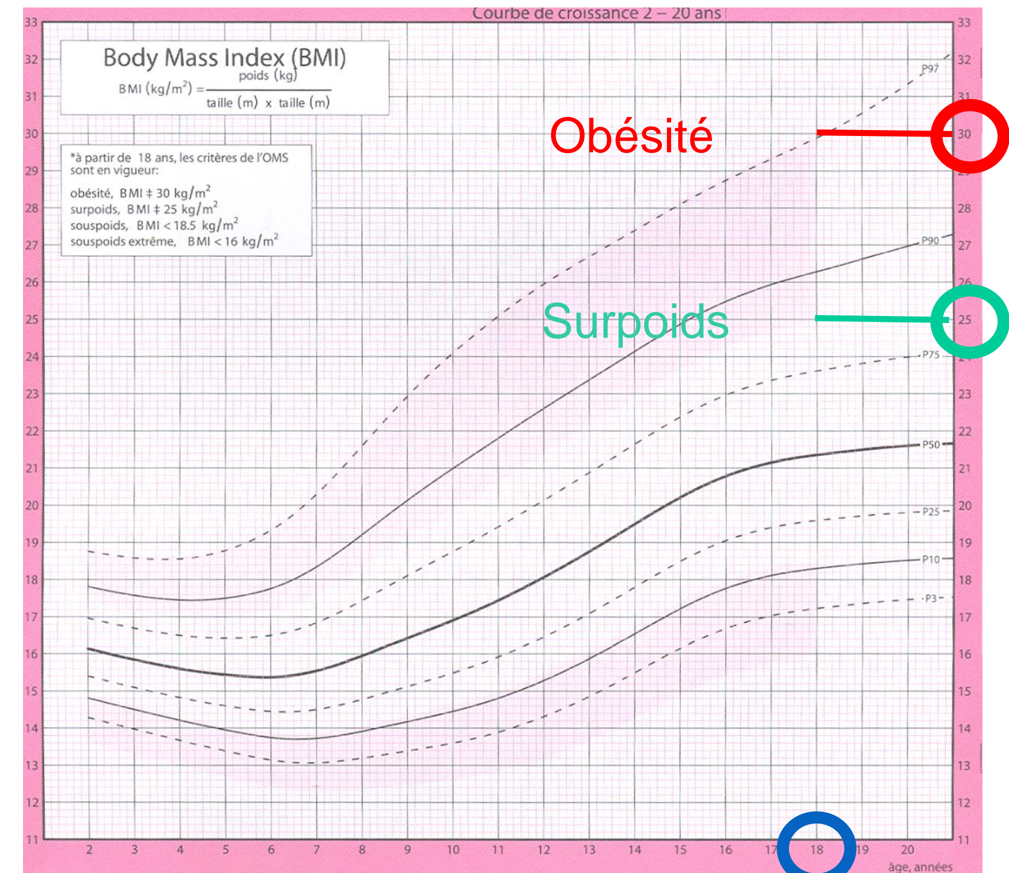


Fig 6 International cut off points for body mass index by sex for overweight and obesity, passing through body mass index 25 and 30 kg/m² at age 18 (data from Brazil, Britain, Hong Kong, Netherlands, Singapore, and United States)

Cole *et al.*, BMJ, 2000; Cole *et al.*, Pediatric Obesity, 2012

Appendix 7.2. International cut-off points for body mass index for overweight and obesity by sex between 2 and 18 years

Age (years)	Body mass index (overweight)		Body mass index (obesity)	
	Boys	Girls	Boys	Girls
2	18.41	18.02	20.09	19.81
2.5	18.13	17.76	19.80	19.55
3	17.89	17.56	19.57	19.36
3.5	17.69	17.40	19.39	19.23
4	17.55	17.28	19.29	19.15
4.5	17.47	17.19	19.26	19.12
5	17.42	17.15	19.30	19.17
5.5	17.45	17.20	19.47	19.34
6	17.55	17.34	19.78	19.65
6.5	17.71	17.53	20.23	20.08
7	17.92	17.75	20.63	20.51
7.5	18.16	18.03	21.09	21.01
8	18.44	18.35	21.60	21.57
8.5	18.76	18.69	22.17	22.18
9	19.10	19.07	22.77	22.81
9.5	19.46	19.45	23.39	23.46
10	19.84	19.86	24.00	24.11
10.5	20.20	20.29	24.57	24.77
11	20.55	20.74	25.10	25.42
11.5	20.89	21.20	25.58	26.05
12	21.22	21.68	26.02	26.67
12.5	21.56	22.14	26.43	27.24
13	21.91	22.58	26.84	27.76
13.5	22.27	22.98	27.25	28.20
14	22.62	23.34	27.63	28.57
14.5	22.96	23.66	27.98	28.87
15	23.29	23.94	28.30	29.11
15.5	23.60	24.17	28.60	29.29
16	23.90	24.37	28.88	29.43
16.5	24.19	24.54	29.14	29.56
17	24.46	24.70	29.41	29.69
17.5	24.73	24.85	29.70	29.84
18	25.00	25.00	30.00	30.00



Obesity:

BMI > BMI 30 kg/m^2 for age & sex

Cole TJ, Lobstein T. Extended international (IOTF) body mass index cut-offs for thinness, overweight and obesity. Pediatr Obes. 2012;7(4):284-94

Quel niveau:

- EOSS-P

Early detection
Primary prevention

- Pre-existing screening
- Community based approach
- Involvement states

1st Level
Physician
Monodisciplinary

- EOSS-P 0 and 1
- Monodisciplinary therapy with 1 or max 2 additional health care professionals (dietitian or psychologist)
- Intensive monodisciplinary aftercare

Case Coordinator

3th Level
Pediatric Expertise
Center for Obesity (PEO)

- EOSS-P (2) - 3
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2nd Level
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Obesity Center (PMOC)

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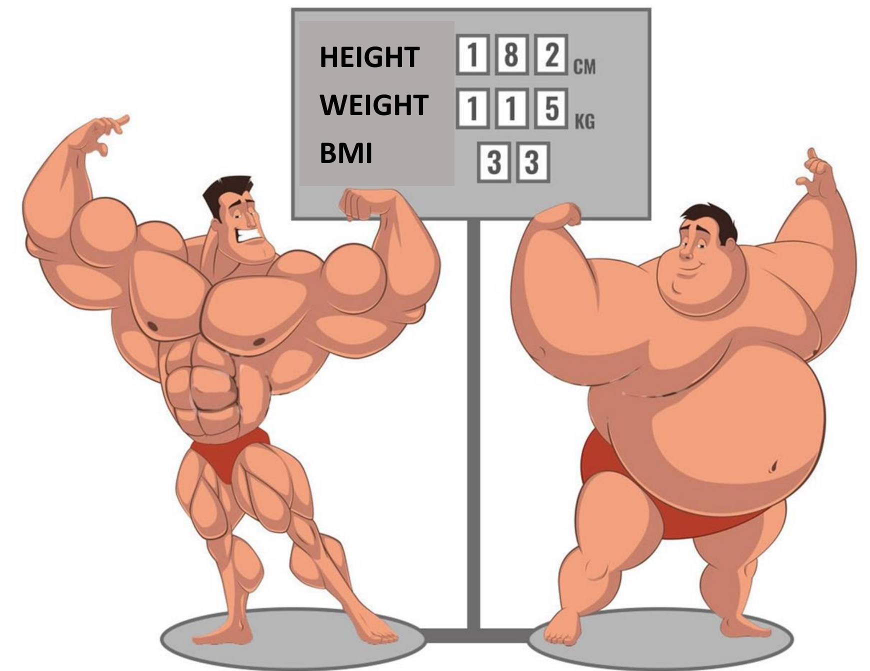
- Intensive multidisciplinary aftercare
- Advice and expertise function for support for first level

Figure 1. Stepped-care integrated care model for childhood obesity.

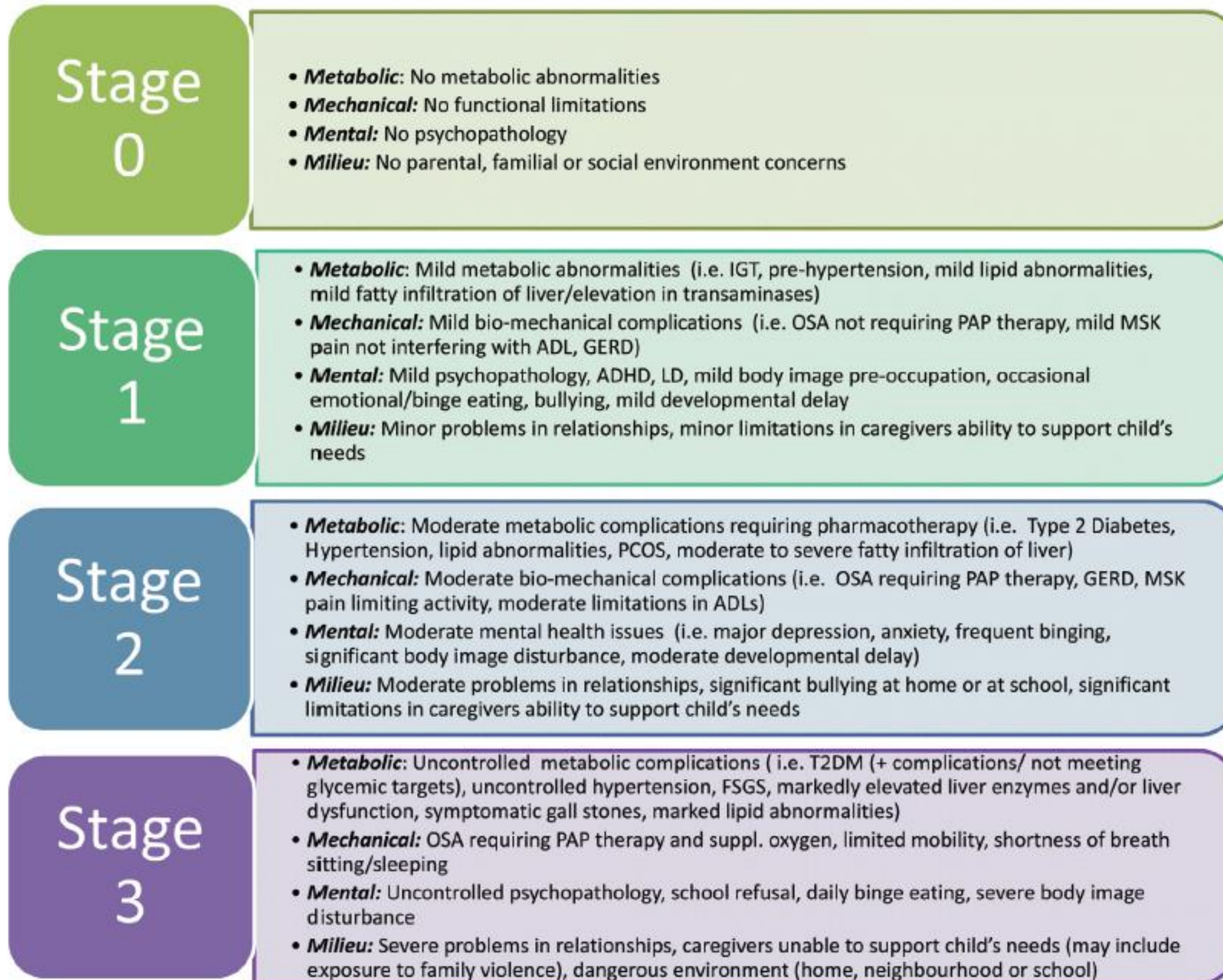
Mais qu'est-ce qui est important ?

How big or how (un)healthy?



Tailoring a stepped care based on the stage of obesity: size vs health risks?

- Stage 3: End-Organ Damage
- Stage 2: Established Comorbidty
- Stage 1: Preclinical Risk Factors
- Stage 0: No Apparent Risk Factors

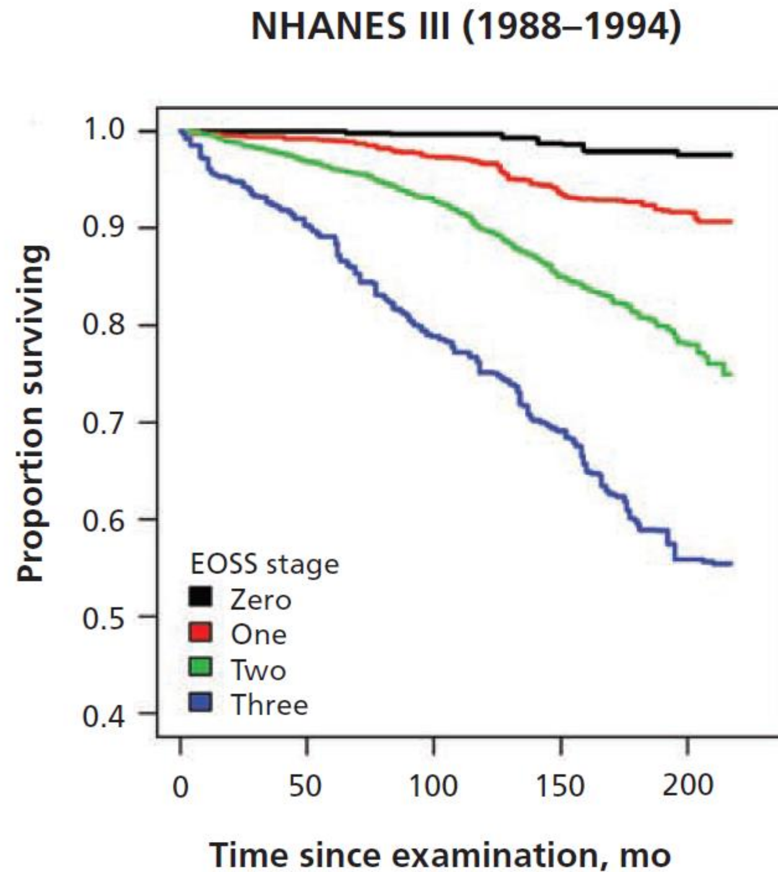


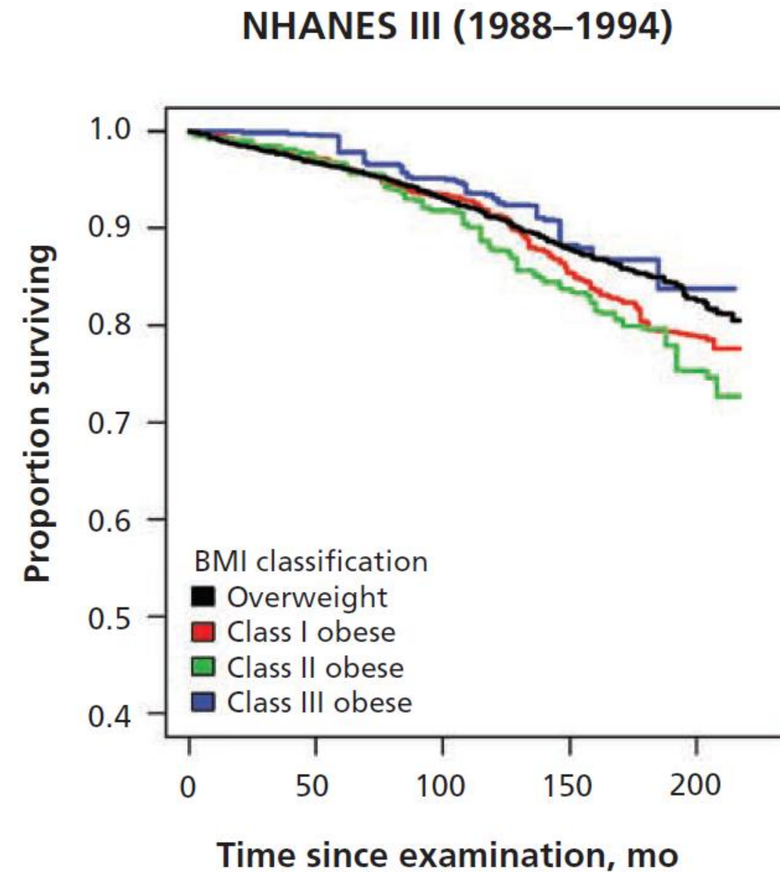
EOSS-P: the 4 Ms

- Evalue:
  - la sévérité de l'obésité
  - les barrières au traitement
- Détermine le niveau de soin approprié

Hadjiyannakis *et al.*, Paediatr Child Health 2016

EOSS is a stronger predictor of increasing mortality than BMI in a adult cohort





Padwal *et al.*, CMAJ 2011

ORIGINAL ARTICLE

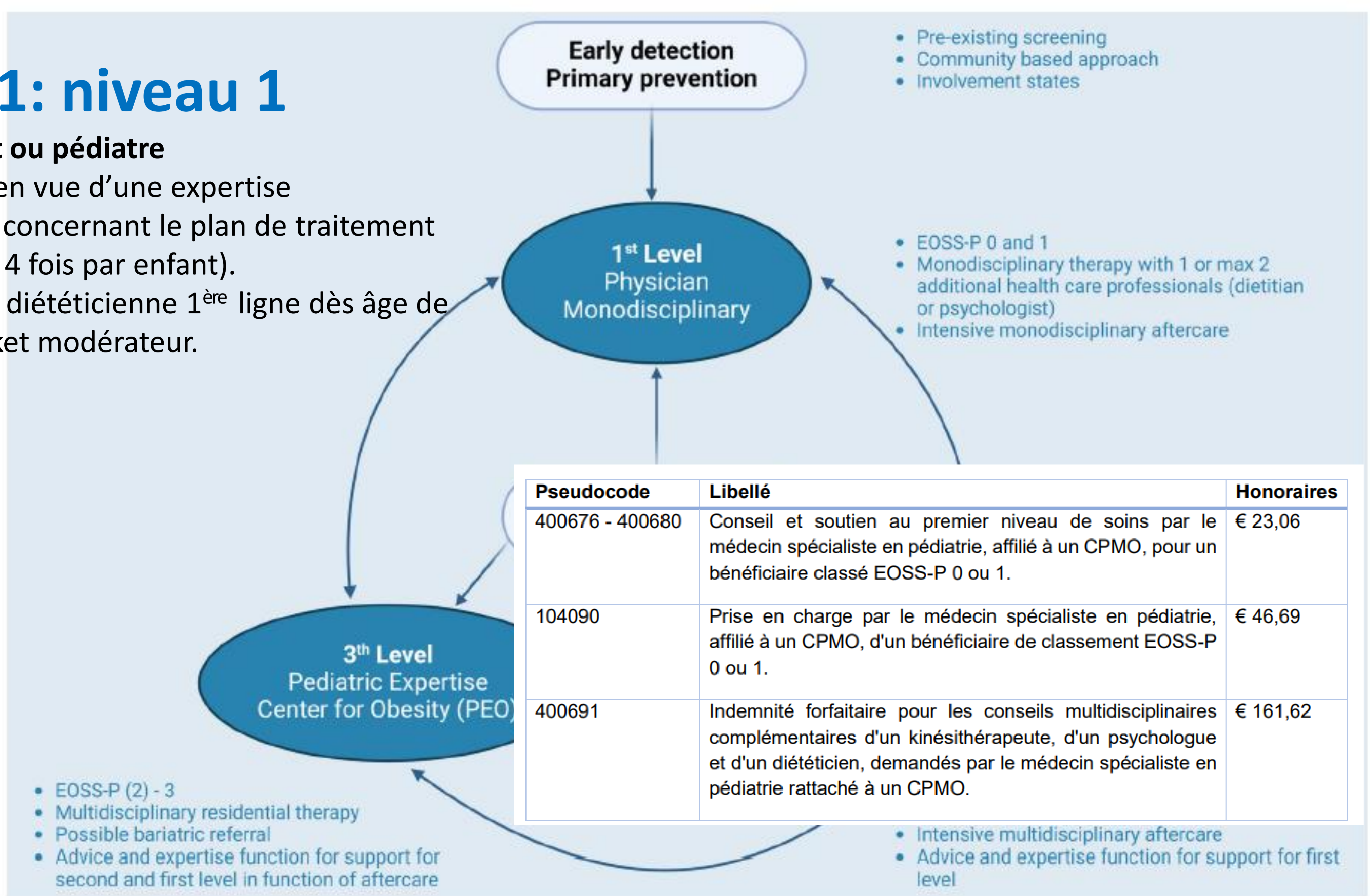
More than just body mass index: Using the Edmonton obesity staging system for pediatrics to define obesity severity in a multi-ethnic Australian pediatric clinical cohort

		BMI class (severity of obesity)							
		Overall		Class I		Class II		Class III	
EOSS-P domain		*n*	Column %	*n*	Column %	*n*	Column %	*n*	Column %
Overall EOSS-P	Stage 0	0	0.0	0	0.0	0	0.0	0	0.0
	Stage 1	6	1.8	2	1.9	1	0.7	3	3.7
	Stage 2	164	48.5	60	58.3	73	47.7	31	37.8
	Stage 3	168	49.7	41	39.8	79	51.6	48	58.5

Southcombe *et al.*, Obes Sci Pract. 2023

EOSS-P 0-1: niveau 1

- **médecin traitant ou pédiatre**
- avis d'un CPMO en vue d'une expertise complémentaire concernant le plan de traitement (max 1x/an, max 4 fois par enfant).
- Remboursement diététicienne 1ère ligne dès âge de 2 ans; pas de ticket modérateur.

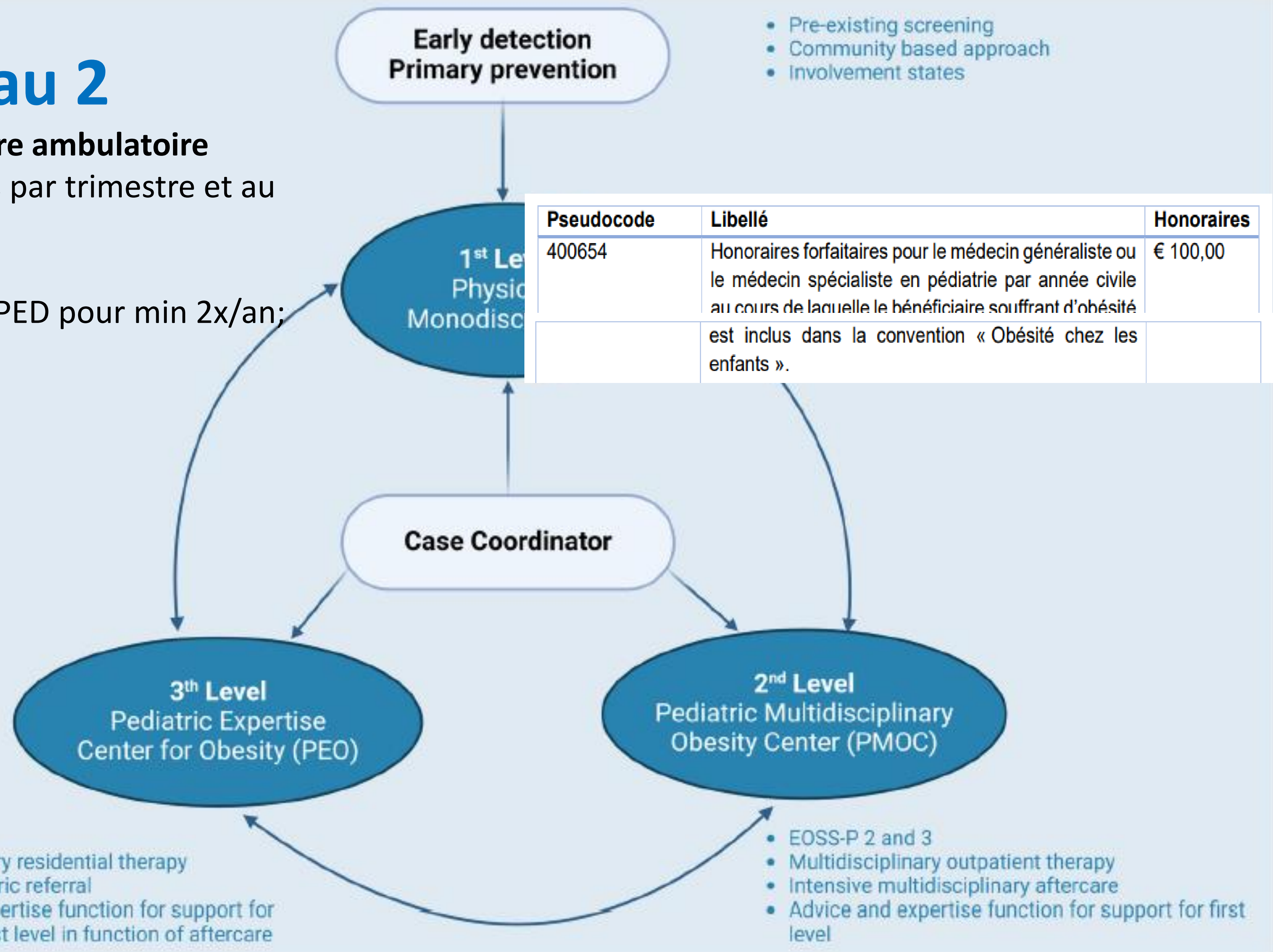


Pseudocode	Libellé	Honoraires
400676 - 400680	Conseil et soutien au premier niveau de soins par le médecin spécialiste en pédiatrie, affilié à un CPMO, pour un bénéficiaire classé EOSS-P 0 ou 1.	€ 23,06
104090	Prise en charge par le médecin spécialiste en pédiatrie, affilié à un CPMO, d'un bénéficiaire de classement EOSS-P 0 ou 1.	€ 46,69
400691	Indemnité forfaitaire pour les conseils multidisciplinaires complémentaires d'un kinésithérapeute, d'un psychologue et d'un diététicien, demandés par le médecin spécialiste en pédiatrie rattaché à un CPMO.	€ 161,62

Figure 1. Stepped-care integrated care model for childhood obesity.

EOSS-P 2-3: niveau 2

- **trajet de soins multidisciplinaire ambulatoire**
- 12 contacts/an, au moins 1 fois par trimestre et au maximum 1 fois par mois
- Forfait trimestriel-tiers payant
- Honoraire forfaitaire pour MT/PED pour min 2x/an; concertation avec CPMO



Pseudocode	Libellé	Honoraires
400654	Honoraires forfaitaires pour le médecin généraliste ou le médecin spécialiste en pédiatrie par année civile au cours de laquelle le bénéficiaire souffrant d'obésité est inclus dans la convention « Obésité chez les enfants ».	€ 100,00

Figure 1. Stepped-care integrated care model for childhood obesity.

EOSS-P 2-3: niveau 3

- **trajet de soins multidisciplinaire résidentiel**
- maximum 500 jours de 0 -18 ans
- Forfait journalier-tiers payant
- BMI IOTF 30 + 2 comorbidités
- Financement pour lien avec CPMO

Early detection
Primary prevention

- Pre-existing screening
- Community based approach
- Involvement states

1st Level
Physician
Monodisciplinary

- EOSS-P 0 and 1
- Monodisciplinary therapy with 1 or max 2 additional health care professionals (dietitian or psychologist)
- Intensive monodisciplinary aftercare

Case Coordinator

3th Level
Pediatric Expertise
Center for Obesity (PEO)

- EOSS-P (2) - 3
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- Possible bariatric referral
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2nd Level
Pediatric Multidisciplinary
Obesity Center (PMOC)

- EOSS-P 2 and 3
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Figure 1. Stepped-care integrated care model for childhood obesity.

Flexible:

- Case coordinator

Early detection
Primary prevention

- Pre-existing screening
- Community based approach
- Involvement states

1st Level
Physician
Monodisciplinary

- EOSS-P 0 and 1
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Figure 1. Stepped-care integrated care model for childhood obesity.

American Academy of Pediatrics

DEDICATED TO THE HEALTH OF ALL CHILDREN™

Clinical Practice Guideline for the Evaluation and Treatment of Children and Adolescents With Obesity

Sarah E. Hampl, MD, FAAP,[a] Sandra G. Ha
Sarah E. Barlow, MD, MPH, FAAP,[e] Christo
Ihuoma Eneli, MD, MS, FAAP,[h] Robin Hamr
Eneida Mendonca, MD, PhD, FAAP,[l] Marc
Eduardo R. Ochoa, Jr, MD, FAAP,[o] Mona S
Ashley E. Weedn, MD, MPH, FAAP,[r] Susan

Obesity has long been stigmatized as a reversible consequence of personal choices but has, in reality, complex genetic, physiologic, socioeconomic, and environmental contributors. An increased understanding of the impact of social determinants of health (SDoHs) on the chronic disease of obesity—along with heightened appreciation of the impact of the chronicity and severity of obesity-related comorbidities—has enabled broader and deeper understanding of the complexity of both obesity risk and treatment.[9,10]

PEDIATRICS Volume 151, number 2, February 2023:

Local, state, national and regional policies on and investment in:
- agriculture
- food (eg, costs and availability)
- transport
- food marketing
- food trade
- media influence

Public policy

- Safe recreation spaces
- Walkable neighbourhoods*
- Safe and accessible public transport
- Availability of healthy and affordable foods in local markets
- Fast food restaurants
- Food marketing exposure
- Accessible primary health care

Society

- Media influences on food marketing
- Media portrayals of weight and beauty and perpetuation of weight stigma
- Cultural norms around weight status, food, physical activity, and screen behaviours
- Race and ethnicity, including culturally diverse sub-groups, and First Nations peoples

Community and built environment

Child care and school

- School and child care food and physical activity environments
- Family engagement in school and care programmes
- Weight stigma or bullying

Family and peers

- Family socioeconomic position and structure (eg, single parent, multigenerational)
- Family food security
- Family modelling of, and preferences for, healthy eating, active recreation, screen behaviours, and sleep
- Parental weight status
- Family feeding and parenting practices
- Peer support for healthy lifestyles
- Family psychosocial stress
- Weight stigma or bullying

Individual

- Non-modifiable biology (eg, age, genes, sex)
- Race or ethnicity
- Early life risk or resilience factors (eg, birthweight, infant feeding, early life events)
- Knowledge, attitudes and beliefs with regard to weight-related behaviours
- Self-efficacy, body image, psychosocial health

Figure 1: **A socioecological model for understanding the dynamic interrelationships between various personal and environmental factors influencing child and adolescent obesity.**

Jebeile *et al*., Lancet, 2022

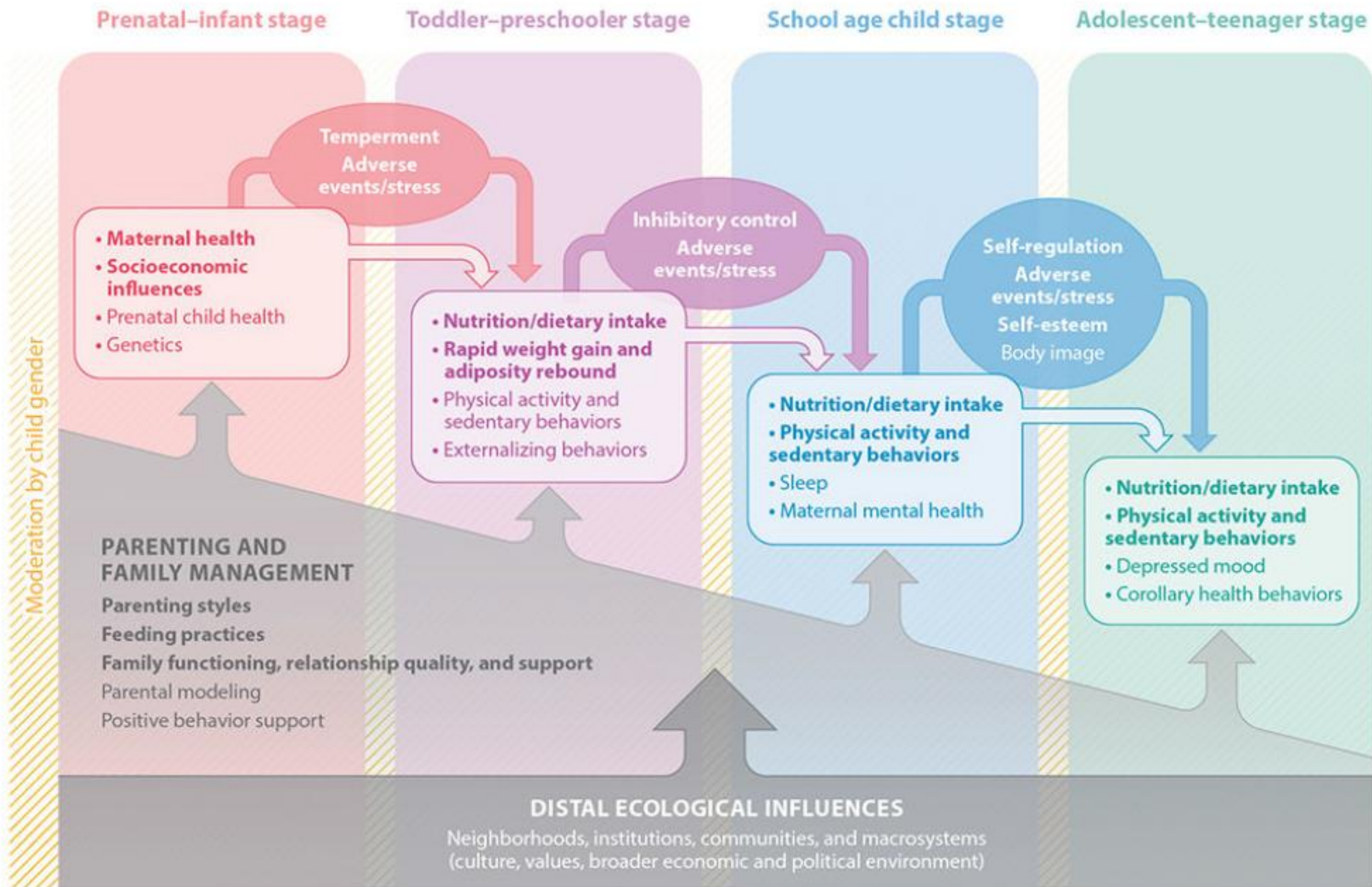
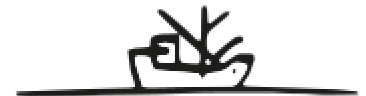


Figure 1. Developmental cascade model of pediatric obesity

Smith *et al*., Annu Rev Clin Psychol., 2020

Moving upstream in a river ?

- Overweight and obesity: one symptom of many complex challenges for these families Westergren et al. BMC Public Health (2021) 21:983
- Reduce the intervention to “food and move” is too short
- Efforts should rely on systemic mapping of the entire child health and family problems situation, involving parents and caregivers
- NOT one size-fit-all: obesities and not one obesity (individual situation and physiology)



Need **trained professionals** in patient-centred education:

- Avoid “you have to”, use motivational interviewing techniques
- See the family as competent to make changes and not as dysfunctional
- Respect the rhythm of the family

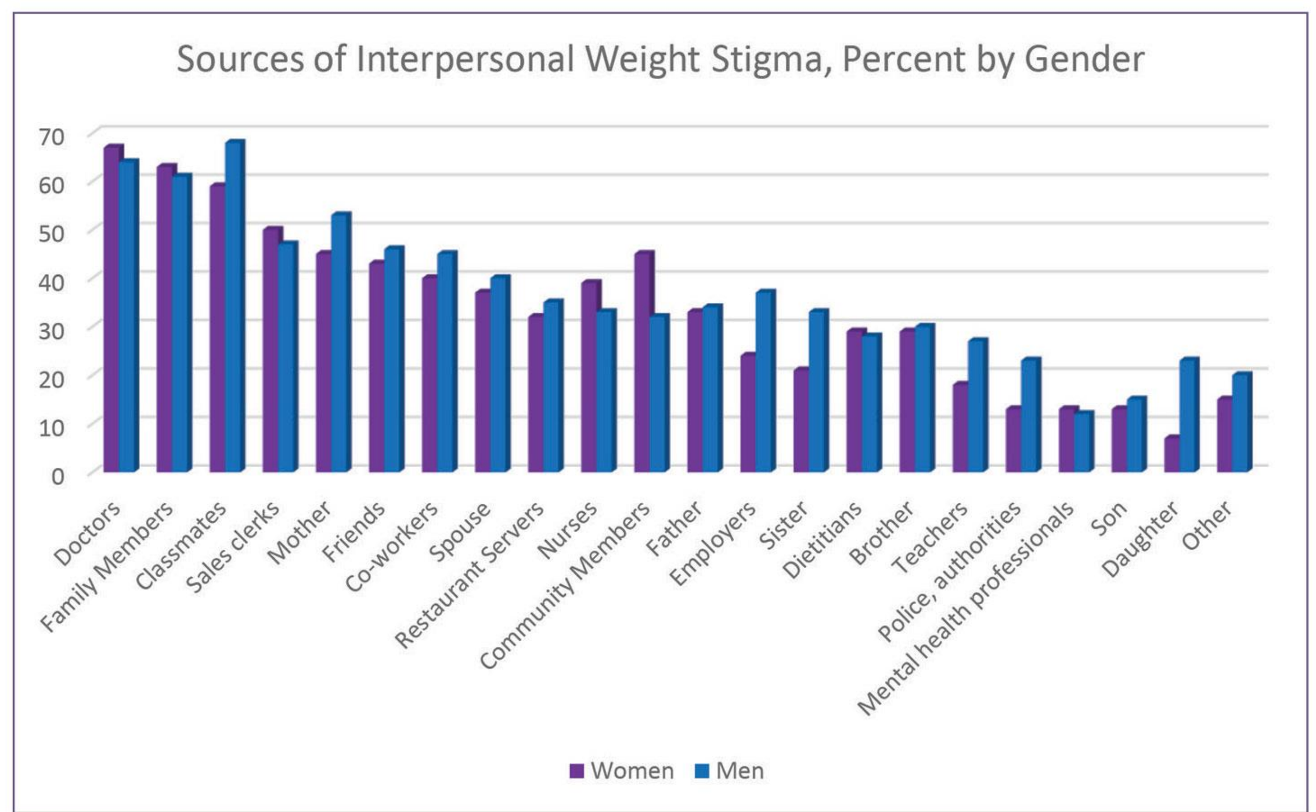


FIGURE 2. Sources of Interpersonal Weight Stigma. Physicians and family members were the most frequent sources of weight bias reported in a study examining experiences of weight stigmatization, sources of stigma, coping strategies, psychological functioning, and eating behaviors in a sample of 2,671 adults with overweight and obesity,

SOURCE: Puhl RM, Brownell KD. Confronting and coping with weight stigma: an investigation of overweight and obese adults. *Obesity*. 2006;14(10):1802–1815.

CONSENSUS STATEMENT

https://doi.org/10.1038/s41591-020-0803-x

OPEN

Joint international consensus statement for ending stigma of obesity

Key principles of obesity management

- Obesity is NOT a homogeneous disease !!!
- Obesity is a complex disease: « diet and move » is too short
- Obesity is a chronic condition
- More not (re)gaining than loosing weight
- Obesity is about improving health and well-being and not simply reducing weight on the scale
- Success is different for every individual
- Avoid stigma
- Address roots causes and remove blocks on the road

Difficult Roads

Often Lead

To Beautiful

Destinations

KeepCalmAndPosters.com

Merci de votre attention!

Save the date
07-08/02/2025
Wintersymposium

BASO
Belgian Association for the study of Obesity

« Le chemin est de trouver sa propre stratégie et ses ressources pour maximiser son bien-être. »
Alain Golay
BASO
Belgian Association for the study of Obesity