Network Coordinated Primary Care Intervention in obese children and adolescents: almost a decade of experience.

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Background

Significant increase of overweight or obesity (ow/ob) prevalence in children in the last decade. Consensus for multidisciplinary of care, most often evaluated for inpatient care.

Since 2001, French health authorities have developed a national program to organize outpatient care networks for the prevention and management of obesity in children and adolescents (REPOP, Réseau de Prévention et Prise en Charge de l’Obésité Pédiatrique).

Objective

To describe the evolution of body mass index (BMI) in children and adolescents followed by REPOP Ile-de-France.

To determine factors associated with the evolution of body size.

Methods

Eligible subjects were those included in REPOP Ile de France from 09/2003 to 12/2012. Analysis population had at least one follow-up visit after 3 months. Three analysis time points have been defined (T6, T12, T24):

Primary endpoint: evolution of BMI z-score.

Improvement defined as a decrease ≥ 10% from baseline, regardless of subsequent follow-up.

Cox models used to analyze the influence of clinical and familial characteristics.

Results: Study Population

Eligible n = 4125

Analysis n = 2468

Follow-up

T6 n = 2218

T12 n = 1400

T24 n = 710

Results: Factors involved in improvement (≥ 10% decrease of BMI z-score)

Improvement in 50% of patients in 9 months of follow-up.

Factors associated with improvement: initial lower BMI z-score and lower maternal BMI. Social factors (like fathers' job or area of residence) not associated with improvement.

<table>
<thead>
<tr>
<th>Modalities</th>
<th>Univariate HR [95% IC_{95%}]</th>
<th>Multivariable HR [95% IC_{95%}]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age at baseline</td>
<td>HR / 2 ans 0.97 [0.93:1.01] p=0.11</td>
<td></td>
</tr>
<tr>
<td>Sex</td>
<td>Male</td>
<td>1</td>
</tr>
<tr>
<td>Ob/Ob</td>
<td>Female</td>
<td>1</td>
</tr>
<tr>
<td>Maternal BMI</td>
<td>Overweight</td>
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<tr>
<td>BMI z-score</td>
<td>Obesity</td>
<td>0.94 [0.91:0.97] p&lt;0.0001 0.96 [0.93:0.99] p=0.01</td>
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<tr>
<td>Parental obesity</td>
<td>No</td>
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<tr>
<td>Parental Socio-Professional Category</td>
<td>Yes</td>
<td>1</td>
</tr>
</tbody>
</table>

Results: Follow-up

1. Evolution during follow-up

BMI z-score

%obesity, %WHR ≥0.5

2. At the last visit

(median duration 11.5 years)

BMI z-score: -0.18 (-0.40; -0.01)

%obesity 73.3% vs 62.1%, p<0.001

WC z-score: -0.16 (-0.40; -0.05)

%WHR ≥0.5 vs 50% 81.4%, p<0.001

Improvement in 1002 patients (40.6%)

Conclusion

Network coordinated primary care intervention is associated with clinical improvement of BMI and waist circumference in obese children and adolescents.

These results suggest that early identification and referral is associated with improved outcome. They will contribute to the improvement of the program by identifying the population at risk of loss of follow-up.

References:


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