health technology assessment

EXECUTIVE SUMMARY

MANAGEMENT OF OBESITY IN CHILDHOOD

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MEDICAL DEVELOPMENT DIVISION
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MOH/PAK

EXECUTIVE SUMMARY

Obesity in childhood has been identified as a problem in many affluent societies, particularly in countries where children consume unhealthy foods, snacks or beverages every day. Obesity is usually defined as an excess of body fat which, results in significant impairment of health.
Research in the UK suggests that the prevalence of overweight and obesity amongst children of all ages is increasing.

OBJECTIVE
To assess the safety, effectiveness, and cost implications of management of obesity in childhood.

RESULTS
Prevention programme
There is some evidence that multifaceted school based programmes that promote physical activity, modification of dietary intake, and targeting sedentary behavior may help children lose weight.

Screening methods
There is sufficient evidence to conclude that BMI has high sensitivity and specificity detecting overweight but not for detecting obesity.

There is insufficient evidence that the use of hydrodensitometry or air displacement plethysomography is effective in detecting body fat percentage.

With respect to MRI, there is evidence that MRI gives the best prediction of total body fat volume as well as patterns of intra-abdominal and subcutaneous fat distribution but the high cost of this procedure limits its use mainly to the research setting.

There is some evidence that Bioelectrical impedance (BIA) is suitable for population screening especially for measuring fat free mass in children aged 10-19 years.
The evidence on the effectiveness of dual energy x-ray absorptiometry (DEXA) is inconclusive.

However, there is evidence that waist circumference is a simple and effective measure for trunk fat mass.

There is also some evidence that skin fold thickness measurement, especially of the triceps, is effective in the screening for obesity.

Treatment
There is evidence that surgery is a safe and effective treatment for morbidly obese children to induce weight loss and also reduction in obesity together with related comorbidity.

With respect to pharmacological treatment, appetite suppressants and thermogenic drugs have not been approved for use in children. Digestive inhibitors like lipase inhibitors and fat substitutes are being used off label. There is some evidence suggesting that **Orlistat** may assist with weight loss in obese children, but insufficient evidence on the efficacy of **Subutramine.**

There also insufficient evidence to suggest dietary education, physical activity or a combination of both improves weight control.

RECOMMENDATION

Prevention

There is insufficient evidence to recommend in favour of or against community-based obesity prevention programs. However, in view of the major health risk associated with obesity, and the limited long-term effectiveness of weight-reduction methods, the prevention of obesity should be a high priority for health care providers.

Screening methods:

BMI is recommended for detecting overweight, while skin fold thickness measurements, especially of the triceps, may be considered for screening for obesity.

Treatment:

There is insufficient evidence to recommend in favour of or against weight-reduction therapy because of a lack of evidence supporting the long-term effectiveness of weight-reduction methods. However, surgery is recommended for treatment of morbidly obese children.