

## Adult Obesity: Management Practices of General Practitioners/ Family Physicians in Kingston and St Andrew, Jamaica

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### ABSTRACT

**Objective:** To determine the practices of Family Physicians/General Practitioners in Kingston and St Andrew regarding the management of adult obesity and compare their management to the 2013 American College of Cardiology/American Heart Association/ Task Force on Practice Guidelines and The Obesity Society (AHA/ACC/TOS) Guidelines for the Management of Overweight and Obesity in Adults.

**Methods:** A cross-sectional study was done of Family Physicians/General Practitioners in the Kingston and St Andrew area. A Census approach was used with the aid of a self-administered questionnaire and practices compared to the American Guidelines for Obesity Management.

**Results:** There were 117 respondents out of the 155 Family physicians/General practitioners. While most physicians were found to have medium to high level practice scores, 23% had low practice scores. Diagnosis of obesity using body mass index (BMI) was high (99%), but only 64% employed hormonal assays. Almost 36% did not refer patients with BMI > 40 kg/m<sup>2</sup> for bariatric surgery.

**Conclusion:** Assessed against existing guidelines, physicians were found generally to have medium to high practice levels regarding management of obesity, however, gaps remain to be closed.

**Keywords:** Family and general practitioners, obesity, Jamaica

## Obesidad en Adultos: Prácticas de su Tratamiento por Parte de los Médicos Generales/médicos de Familia en Kingston y Saint Andrew, Jamaica

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### RESUMEN

**Objetivo:** Determinar las prácticas de los médicos de familia/médicos generales en Kingston y Saint Andrew en relación con el tratamiento de la obesidad en adultos y comparar su tratamiento con las Pautas para el Tratamiento del Sobrepeso y la Obesidad en Adultos del Colegio Americano de Cardiología/Sociedad Americana del Corazón/Grupo de Trabajo para las Guías Prácticas y la Sociedad de la Obesidad (AHA/ACC/TOS) de 2013.

**Métodos:** Se realizó un estudio transversal de médicos de familia/ médicos generales en el área de Kingston y Saint Andrew. Se usó un enfoque de censo con la ayuda de un cuestionario autoadministrado y prácticas comparadas a las pautas americanas para el tratamiento de la obesidad.

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**Resultados:** Hubo 117 encuestados provenientes de los 155 médicos de familia/médicos generales. Si bien se halló que la mayor parte de los médicos tenían niveles de medio a alto en las puntuaciones de la práctica, el 23% tenía puntuaciones bajas de la práctica. El diagnóstico de la obesidad usando el índice de masa corporal (IMC) fue alto (99%), pero solamente el 64% empleó ensayos hormonales. Casi el 36% no remitió pacientes con IMC > 40 kg/m<sup>2</sup> para cirugía bariátrica.

**Conclusión:** Evaluados frente a las pautas existentes, los médicos generalmente mostraron niveles de práctica medios a altos con respecto al tratamiento de la obesidad. Sin embargo, quedan aún vacíos por llenar.

**Palabras clave:** Obesidad, médicos de familia, médicos generales, Jamaica

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## INTRODUCTION

It has been shown that obesity is responsible for 44% of diabetes burden, 23% of ischaemic heart disease burden and between 7% and 41% of certain cancer burdens [endometrial, breast and colon] (1). It also causes psychological issues such as stress, depression, low self-esteem, body dysmorphic disorder and social stigmatization (2). These problems all serve to shorten life expectancy (3) and because of its effect on morbidity and mortality, obesity increases healthcare costs, in-patient and out-patient services and associated investigations, medical and surgical treatments. Reduction of obesity-related costs is contingent on preventing obesity and limiting associated morbidity. Family physicians often witness weight gain occurring over years to decades. Being at the forefront of primary care provision they are opportunely placed to intervene, enable change and improve outcomes especially where there are established family doctor-patient relationships. Achieving this requires keeping abreast with and utilizing current best practices and guidelines in clinical practice (4).

Clinical practice guidelines outline consensually agreed actions/steps that standardize approaches to manage a disease. Although the Caribbean Health Research Council (CHRC) has developed several guidelines for the region for chronic diseases including Diabetes, Hypertension and Asthma, none exists for obesity. Internationally, there are few actual well-developed guidelines for the management of obesity. Three such guidelines are the American (5), Canadian (6) and European (7) Guidelines which share common features. The features of each management plan are very similar. Medical practitioners in Jamaica often referred to guidelines developed in the United States of America. In this paper, the American Guideline is the referent used.

Obesity management, as outlined by the American Guidelines (5) involves a comprehensive approach including co-morbidity assessments. The baseline management of obesity involves lifestyle intervention (dietary intervention and physical activity) along with needed pharmacotherapy, bariatric surgery and/ or psychotherapy.

Physician recommendations for weight-loss help induce desirable patient behaviour change, especially among those at high-risk (3). While there are variations in how obesity is managed internationally, there is little data on its management in practice in the Caribbean or Jamaica. This study sought to determine the practices of Family Physicians/General practitioners in Kingston and St Andrew, Jamaica, regarding the management of adult obesity and compare select aspects of the management to the American guidelines (2013 AHA (American Heart Association)/ACC (American College of Cardiology)/TOS (Task Force on Practice Guidelines and The Obesity Society) Guideline for the Management of Overweight and Obesity in Adults.

## SUBJECTS AND METHOD

### Study Design and Study Population

A cross-sectional study was undertaken in March and April 2015. A Census of primary healthcare doctors (both public and private) who number 155 in the Kingston and St Andrew area was done. This listing of physicians was obtained from the Kingston and St Andrew Health Department, Jamaica, the Caribbean College of Family Physicians registry and the business listing from the telephone directory. Physicians of other specialties practicing as primary care physicians were excluded from the study as their knowledge-base and continuous interaction with the patient may not be the same with general

practitioners or family physicians. Physicians were contacted either by telephone or approached at regular staff meetings held in the public sector or at continuing medical education sessions.

Self-administered questionnaires were used to obtain knowledge, attitudes and self-reported practices regarding the management of adult obesity. The questionnaire used was compiled from previously validated tools (8–11) as well as de novo questions based on information in the American guidelines on obesity management (6). The questionnaire consisted of five main parts. These respectively, related to (i) general demographic information regarding the physician (ii) the knowledge; (iii) the attitude, and (iv) the practices of primary care physicians towards obesity management, as well as (v) barriers to implementation of obesity management plans.

Regarding the section on management practices, protocols on obesity management, namely: American 2013 AHA/ACC/TOS Guideline for the Management of Overweight and Obesity, the Canadian Clinical Practice Guidelines on the Management and Prevention of Obesity in Adults and Children and the Management of Obesity in Adults: European Clinical Practice Guidelines were scrutinized. These guidelines had recurrent and similar domains related to dietary concerns, exercise regimen and supplementary management such as psychotherapy, pharmacotherapy and bariatric surgery. A 12-item instrument was developed capturing information related

to each of the aforementioned domains (Table 1). An associated scoring scheme is also displayed in Table 1 where one point was awarded if responses for each item or sub-item were in concord with the guidelines and 0 if they were not. An all-item summative ‘management of obesity score’ was then ultimately computed; possible scores ranged from 0 to 17.

The distribution of ‘management of obesity’ scores, were subsequently trichotomized to ‘low’, ‘medium’ and ‘high’ according tertiles; scores 0 to 10 (first tertile), 11 to 14 (second tertile) and 15 to 17 (third tertile). This system of tertile designation has been used in the evaluation of outcome variables in studies related to obesity research (12–14). The designations low, medium and high refer to the ordinal nature of the scores and although higher scores are suggestive of likely greater concord with the referent clinical guidelines, they cannot be deemed as directly equivalent to quality of practice.

Spearman’s correlation coefficient ( $\rho$ ) was used to assess relationships between Sociodemographic data and the management of obesity score. *P*-values less than 0.05 were considered statistically significant.

## RESULTS

### Sociodemographic characteristics

A total of 117 physicians took part in the study. There was an overall 75% response rate. Participant ages ranged from 21 years to 85 years (mean = 44.7 years,

Table 1: Scoring system consisting of twelve variables related to physician practice and American standards for obesity management in percentage.

Variables (Domain/item)	Responses and scoring
Assessment and diagnosis	
Diagnosis with BMI	Yes-1, No-0
Lab test to be done – (A) blood glucose, (B) hormonal assay, (C) lipid profile	A – 1, B – 1, C – 1
Treatment	
When to use drugs to lose weight – (A) BMI > 30 kg/m <sup>2</sup> , (B) Patient not on a diet, (C) Patient requests it	A – 1, B – 0, C – 0
When to use surgery to lose weight – (A) BMI > 40 kg/m <sup>2</sup> , (B) Patient not on a diet, (C) Patient requests it	A – 1, B – 0, C – 0
Is a mean weight-loss of 500 gm/ week acceptable weight-loss ?	Yes -1, No -0
Management advice and tools used	
Follow a personalised low calorie diet	A, MT – 2, S – 1, R, N - 0
Encouraging patient to keep a food diary	A, MT – 2, S – 1, R, N - 0
Encouraging regular physical exercise	A, MT – 2, S – 1, R, N - 0
Recommending behaviour modification	A, MT – 2, S – 1, R, N - 0
Preventing co-morbidities	A, MT – 2, S – 1, R, N - 0
Total (possible)	17

Key: A – Always, MT – Most times, S – Sometimes, R – Rarely, N- Never, BMI – body mass index

sd = 14.8). The median years in medical practice was 44 (IQR= 32–56). By highest level of education, 8.8% had completed postgraduate medical training. Figure 1 shows that most popularly reported sources for knowledge of obesity and its management were undergraduate school and CME sessions (74.8% each) and journal articles (60.9%). ‘Other’ sources (16.5%) of information included books, magazines, online courses or resources and personal experience.

Table 2 displays the level of concord of select domain items with the referent guidelines. Percentages were generally high > 90% with regard to assessment and diagnosis, acceptable weight-loss standard, encouraging physical activity and co-morbidity prevention, but moderate for most other items. The lowest figure was that pertaining to drugs for weight-loss (41%).

The distribution of summary management of obesity scores was positively skewed, median = 14, (IQR= 11–15), [Fig. 2].

The majority of physicians displayed medium or high levels of practice when managing obese patients (77%). However, almost one in four physicians (23%), displayed low practice levels in managing these patients (Fig. 3).

## DISCUSSION

The median practice score relative to the American Guidelines was 14 out of a possible 17 (82.3%), suggesting considerable adherence to the American Guidelines. The management of obesity involves assessment, nutritional advice, advice about activity levels or exercise regimen and use of supplementary measures (pharmacotherapy, psychotherapy and bariatric surgery).

With respect to assessment, nearly all physicians employed BMI in the diagnosis of obesity. Far fewer utilised hormonal assays in their management of obesity. We assert that differences in the use of these measures may relate to greater ease of use of BMI and the

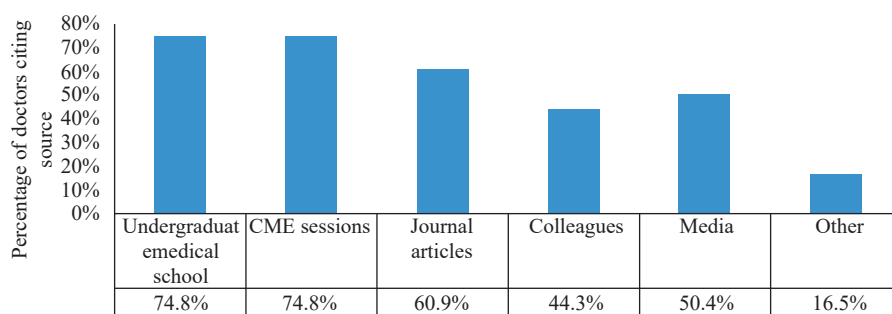


Fig. 1: Sources of knowledge of obesity and its management.

Table 2: Domain items and percentage concordance with American Guidelines for Obesity Management.

Variables	Response		
	Yes	No	
Assessment and Diagnosis			
Diagnosis with BMI (n = 115)	95.7	4.3	
Lab test to be done blood glucose (n = 116)	98.3	1.7	
Lab test to be done hormonal assay (n = 116)	60.3	39.7	
Lab test to be done lipid profile (n = 116)	97.4	2.6	
Treatment	Yes	No	
Prescribe weight-loss drugs when BMI greater than 30 kg/m <sup>2</sup> (n = 116)	41.4	58.6	
Refer for bariatric surgery when BMI greater than 40 kg/m <sup>2</sup> (n = 115)	64.3	35.7	
Weight-loss of 500 gm/week is acceptable (n = 113)	90.4	9.6	
Management advice and tools used	A/MT	S	R/N
Patient follows personalized low calorie diet (n = 108)	54.6	23.1	22.2
Encourage patient to keep food diary (n = 113)	66.4	19.5	14.2
Encourage regular physical activity (n = 116)	98.3	1.7	0
Recommend behaviour modification (n = 110)	63.6	18.2	18.2
Prevent co-morbidities (n = 108)	82.1	6.8	3.4

Key: A – Always, MT – Most times, S – Sometimes, R – Rarely, N – Never, BMI – body mass index

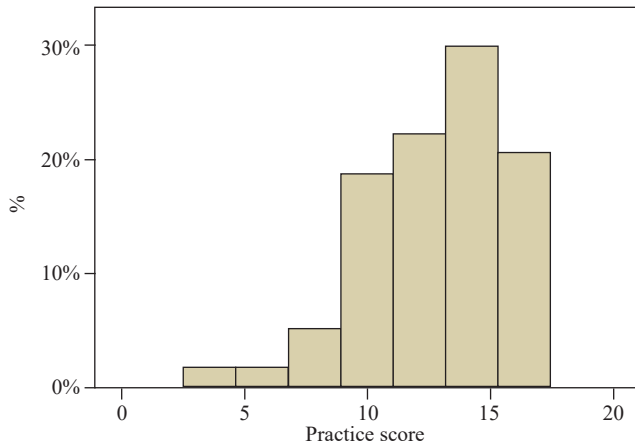


Fig. 2: Distribution of management of obesity practice scores for physicians (n = 117).

relatively higher cost and lower availability of hormonal assays. Additionally, they may employ waist-to-hip ratio and appearance of the patient for diagnosis as well. Guidelines have instructed that these parameters should be used for assessment of risk for co-morbidities (such as assessing the risk of diabetes). The data did show that physicians strongly agreed or agreed that they needed to prevent co-morbidities and arguably are more likely to co-opt these measures in assessing for obesity. In cases of high BMI due to increased muscular mass, the risk of developing cardiovascular disease may not be as high as in patients with similar BMI and a pattern of fat distribution centred on the torso or abdomen. Waist-to-hip ratio and waist circumference may be useful accessory measures in assessing such patients.

Critical pillars of obesity management are related to lifestyle change but adjunct measures such as weight-loss drugs and surgery may also be used to enhance treatment if indicated. In this study, whilst physicians were keen on dietary and level of activity changes, they were more hesitant to recommend the use of pharmacotherapy and bariatric surgery. A little more than half of the physicians did not recommend drugs when the BMI was greater than 30 kg/m<sup>2</sup>. According to the Endocrine Society Clinical Practice Guidelines for pharmacological management of obesity (15), pharmacotherapy should be used as an adjunct to diet, exercise and behavioural modification when the BMI is greater than or equal to 27 kg/m<sup>2</sup> with co-morbidity, or when the BMI is greater than 30 kg/m<sup>2</sup>. The guidelines state that drugs may increase the compliance with lifestyle changes and improve physical functioning, especially in persons who may have found increased physical activity difficult initially. Though they did not recommend

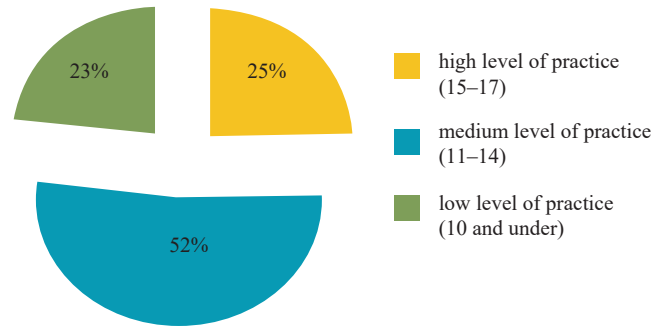


Fig. 3: Practice in the management of obesity (n = 117).

pharmacotherapy, some physicians commented that they would assess co-morbidities before recommending weight-loss drugs. Physicians appear to be pharmacotherapeutically conservative perhaps choosing that option in more severe cases, for example, where the patient was overweight or obese with co-morbidities, or where there is inadequate weight-loss after many attempts at lifestyle adjustment.

Only a few of the weight-loss drugs are available in Jamaica. These include Orlistat (Xenical), Lorcaserin (Belviiq) and Clobenzorex (Dinintel). In 2009, these drugs were known to cost US\$69 to US\$137 for a month's supply of drugs (16). Computed from the Jamaica Standard of Living Conditions (JSLC) survey 2008–2009, the mean monthly expenditure per capita was US\$183 (17). Purchasing these drugs could consume 38–75% of monthly expenditure. With no major economic upswing since then, this situation likely prevails. These drugs need to be used for months before adequate results are achieved. Adherence to such pharmacotherapy is difficult for most patients.

More than one-third of physicians did not indicate recommending bariatric surgery when the BMI was greater than 40 kg/m<sup>2</sup>. The latter observation seems to run counter to the guidelines especially where there are issues such as failure of medical therapy and existing co-morbidities. It is not clear whether this is due to: unfamiliarity with recommended guidelines or reservation because not enough data exist currently on the success rates and complications of the surgery in Jamaica. Our questionnaire did not allow for differentiating between these possibilities. Qualitative inquiries in future studies can help elucidate the rationale for not referring patients with BMI over 40 kg/m<sup>2</sup> for bariatric surgery.

This study has provided data regarding physician practice in the management of obesity. The data is self-reported. In future studies reported practice could be corroborated by checking patient data.



## CONCLUSION

According to the self-reported practices of the physicians in this study, 75% of them had medium to high levels of practice as it relates to the management of obesity among their patient population. While these figures are encouraging, the fight against obesity requires that all primary healthcare practitioners are on board, are *au fait* with the management of obesity and that the best techniques are brought to the battle. Efforts should be made to increase the proportion deemed 'high' levels of practice and increase familiarity with recommended guidelines. Based on the study, the key sources of information were CME meetings and undergraduate education. Greater attention should be placed on obesity management in both undergraduate and continuing education modules.

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