



SARAH CUSCHIERI
JULIAN MAMO

DIABETES TYPE 2 PREVALENCE IN MALTA

AN UPDATE AND MORE

ABSTRACT

Diabetes Mellitus Type 2 is a global burden. The University of Malta is currently undertaking a cross-sectional survey to update the prevalence of diabetes as well as conduct the first representative prevalence of obesity, hypertension, physical activity, smoking, alcohol and nutrition in Malta. Links and co-relations between these factors and genetics would be established. These are of public health importance.

Diabetes Mellitus type 2 (T2DM) is a disease of increasingly pandemic proportions. T2DM affected 56 million Europeans in 2013 with an estimated economic burden for the year of 56.3 million Euro.¹ Malta and its population is not exempt - in fact, back in 1981 the World Health Organization (WHO) had declared that Malta had a very high T2DM prevalence, comparable to that of the Pima Indians.²

Both environmental and genetic factors play a part in insulin secretion and sensitivity, and thus, to the development and control of the disease. The shift to a more sedentary lifestyle and the dietary changes from a more Mediterranean diet to a Westernized diet may result in insulin resistance and an increase in body weight, predisposing the population to develop T2DM.³

Two cross-sectional studies were conducted in Malta in 1964 and 1981 in order to establish the prevalence of T2DM among the population in Malta and as a basis for public health plans and services.

In 1981, using a nationally representative sample, the adult prevalence of T2DM was reported as 7.7% (1.8% newly diagnosed and 5.9% previously diagnosed).² By 2010, a pilot study - part of the European Health Examination Study - took a relatively small sample (n = 221) and found that 9.8% suffered from T2DM.⁴ Assuming a 95% degree of confidence, a sample size of 221 observations from a very large number of observations results in a maximum margin of error of 6.59%. This leaves some questions on its accuracy and hence these results must therefore be considered with caution.

During the past 33 years, there have not been any other nationally representative epidemiological studies to update the prevalence of T2DM in Malta. The time is right to update the situation on the prevalence of diabetes type 2 and to use a more reliable estimate for planning services and making health plans for the disease. A prevalence study is an opportunity to look at

the Maltese population's changing determinants and associated (changing) risk factors as well to provide the evidence-based infrastructure on which to base preventive strategies.

The University of Malta, with the help of the Ministry of Health and the private sector, is to undertake a health and wellbeing survey on a stratified, randomized and weighted representative population sample of 4000 adults living in Malta and Gozo. This will measure the associated anthropometric and biochemical markers, as well as the genetic factors linked with impaired glucose regulation and diabetes type 2.

“SAHTEK” - The University of Malta Health and Wellbeing Study fieldwork – started in November 2014 and will continue for a duration of 2 years. Invitation letters are being sent out one town after the other, as the study moves from one locality peripheral center (berġa) / health center to another. The chosen participants are being offered a free health check consisting of blood pressure, weight, height, hip and waist circumference measurements as well as blood testing for fasting blood glucose and lipid profile. A separate blood sample will be taken for genetic testing. Each participant would also take part in a short health-related interview. Data protection approval was granted from the Information and Data Protection Commissioner. The University of Malta Research Ethics committee approval was also obtained.

The study will establish the prevalence of T2DM in Malta including subgroups such as previously diagnosed diabetic type 2, newly diagnosed diabetes and pre-diabetes (impaired glucose tolerance and impaired fasting glucose). It will also establish the prevalence of hypertension and obesity while quantifying national rates for an improper dietary intake and for a lack of physical activity. It will also establish national smoking habits and alcohol consumption.

By means of subsequent nested case-control studies, links and correlations would be established between T2DM and different associated factors including obesity and genetics. This will lead to the development of risk scores to be utilized by both general medical practitioners and the general public in Malta in order to help determine the risks of developing pre-diabetes and diabetes. Ultimately, it will establish the financial and physical costs in relation to subjects living with diabetes and the added costs for those having the disease but who are not aware of it. ❌

FURTHER INFORMATION MAY BE ACCESSED ON WWW.SAHTEK.COM

