

PREVENTION AND SCREENING FOR DIABETES MELLITUS

*G.U. Eze

*Department of Community health, University of Benin Teaching Hospital

Correspondence:

Dr. G.U. Eze
Department of Community health
University of Benin Teaching Hospital
P.M.B 1111 Benin City
Edo State, Nigeria
Email: drzeegee@yahoo.com

INTRODUCTION

Public Health is the science and art of preventing diseases, promoting health and prolonging life, through organized effort of society.

Prevention refers to activities designed to protect patients or other members of the public from actual or potential health threats and their harmful consequences.

Prevention was initially construed narrowly in terms of protective measures like vaccination & improved nutrition that targeted only healthy people with the aim of preventing advanced disease.

Presently, there is a further extension of the definition to cover the treatment of sick individuals, reversal of damage and restoration of function.

LEVELS/STAGES OF PREVENTION

LEVELS	STAGES
Primordial	General Health Promotion
Primary	Specific Protection
Secondary	Early Diagnosis & Treatment
Tertiary	Surveillance
	Limitation of Disability
	Rehabilitation

Primordial prevention refers to prevention of exposure to risk factors. Some term it 'primary prevention in its purest form'. For example, The United States Preventive Service Task Force (USPSTF) recommends screening for type 2 diabetes in asymptomatic adults with sustained BP (treated or untreated) greater than 135/80mmHg. For Nigeria, there are certain organizations with policies which encourage their executives to join exercise clubs by paying the fees. This is a form of primordial prevention.

Primary prevention (general health protection & specific protection) refers to such activities as Health education against sedentary life style; encouragement of regular screening of at-risk individuals; Dietary modification as expressed in discouragement of excessive consumption of refined sugars especially among the middle aged and elderly. Regular exercise and Lifestyle modification are also at this level of prevention.

Secondary prevention (early diagnosis & treatment): Activities at

this level include screening, prompt treatment and sometimes surveillance. Screening refers to testing of an otherwise healthy person in order to detect disorders at an early stage or Testing for infection or disease in populations or individuals who are not seeking health care. Examples include urine test for glycosuria, FBS, RBS, 2HPP, OGTT, Haemoglobin A_{1c}

Types of Screening Programs

- *Mass screening* – screening of a whole or a sub-group of a population.
- *High risk or selective screening* – screening of high-risk groups based on research.
- *Multiphasic screening* – combining two or more screening tests to a population at one time.

Screening for DM using any of the programs is acceptable. Selective screening has the advantage of a higher yield, but Multiphasic screening might be more convenient.

Advantages of screening for DM

- Early diagnosis and prompt treatment prevents long term adverse outcomes of DM, including cardiovascular events, renal failure, visual impairment, and amputation of limbs.
- Reduced cost of treatment in cases where dietary and lifestyle modification might be adequate.

UNIVERSITY OF BENIN TEACHING HOSPITAL SCREENING PROGRAM

This laudable project was initiated by the Okpere administration. It began on the 4th of August, 2008 with free screening for all staff and spouses for the first 3 months and made open to other individuals and bodies afterward. Diseases being screened for are Cervical cancer using PAP smear; Breast cancer by Self Breast Examination after initial examination

by physician; Prostate cancer using PSA; Diabetes Mellitus using FBS; Hypertension using BP measurement; Hepatitis B and HIV.

Surveillance refers to the continuous scrutiny of the factors that determine the occurrence and distribution of disease and other conditions of ill health. To do this effectively there is a need for a Case Definition of the disease in question for easy recognition. Surveillance may be Active or passive. Periodic BMI measurements, as is done in UBTH screening clinic, can serve as passive surveillance for DM.

Tertiary prevention (limitation of disability & Rehabilitation)

Late presentation and poorly managed DM results in severe physical and financial burden. In the US there are support groups which provide educational, emotional & social support for diabetics. Addresses and phone numbers are usually available on-line for every state. In our setting, not too much is done for the diabetic who has disabilities secondary to DM.

CONCLUSION

The burden of non-communicable diseases is increasing in our environment leading to a double burden of Communicable and non-Communicable Diseases. We have quite a long way to go in providing care and support for diabetics but we can achieve meaningful strides by making the most of our current opportunities.

Bibliography

1. HMM handover note. Non-Communicable Disease Control Division, FMOH, Abuja 2005.
2. Longmore L, Wilkinson I, Torok E. Oxford Handbook of Clinical

- Medicine; 5th edition. Oxford. 2002; 8:282
3. Lucas AO, Gilles HM. Short Textbook of Public Health for the Tropics; 4th edition. Arnold.London, 2003; 1:2
 4. Park K. Park's Textbook of Preventive & Social Medicine; 18th edition. Barnasidas Bhanot, India. 2005; 4:114-5.
 5. The National Diabetes Education Program. Starting a diabetes support group. In: the diabetes monitor. Available at: www.diabetesmonitor.com/b153.htm. Accessed 23rd July, 2008.