



ARATUS HEALTH LIMITED

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Introduction

Pharmaceutical Society of Kenya and Aratus Health Limited, to celebrate World Diabetes Day (14 November 2016) held a Wellness Camp at Kiambu Hospital.

The purpose of this mass screening campaign at Kiambu Hospital was to have an impact in reducing the cost burden associated with Diabetes through early prevention, detection and management.

The objective was that those with impaired glucose tolerance were referred and advised appropriately on nutrition / diet, exercise and lifestyle changes so that they could revert to normoglycemia. In addition with this class of individuals to review their treatment regime and determine if any changes need to be made as a result. Those individuals with undiagnosed diabetes to be started on therapy / treatment and appropriate cardiovascular risk prevention to avert the morbidity and mortality associated with Diabetes.

Kiambu Hospital Screening Population Analysis

The 14th of November Wellness Camp, there were 209 individuals that were screened. Of the 209 persons screened, there were 55 males (26%) and 154 females (74%). From the breakdown of the M:F ratio, there needs be more effort to encourage the male population to be screened through education and awareness programs / events.

The age range of the 209 screened was between ages of 14 – 88 years of age. The table below shows that 43% of those screened were between the ages of 36-55 years of age. There were no patterns observed in the male population (55 number) if they were high in a specific age group. Females screened were more predominant of ages 26-55 (57%).

Table 1

Age Range	Total	Male	Female
14-25 years	21	5	16
26-35 years	36	9	27
36-45 years	43	12	31
46-55 years	47	11	36
56-66 years	39	11	28
66 years +	20	7	13

NOTE: The age of three individuals was 'Not Known'.

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Of the 55 screened male population there were 3 smokers (an insignificant number to draw any conclusions) within the ages of 34-37. These smokers also consumed alcohol. A 35 year old male smoker requested to join a smoking cessation program in order to quit smoking. Of the 3 smokers, 2 had members of their family with diabetes condition and cancer disease.

Of the 154 screened female population there were 'no' smokers observed. However, there were approximately 5 females that consumed alcohol (occasionally) – an insignificant number to draw any conclusions. One the female had been diagnosed diabetic 1 year ago (sugars of 33.1 mmol) and 2 others had immediate members of their family with diabetes (their fathers) as well as hypertension but with normal sugars.

Of the 209 screened population, a total of 22 notified the Kiambu team of consuming alcohol of which 17 (77%) were males and 5 were females. Of the 22 males, their Father, Mother, Grandfather or Grandmother was diabetic or hypertensive (approx. 7), which puts them at high risk for developing these diseases later in life. It is recommended that these individuals have routine yearly screenings of blood sugars and blood pressure.

Note: of the 22 males screened whom consumed alcohol, 2 were newly diagnosed diabetes with random sugars of 20.3 mmol and 21.7 mmol. Both males had either their Mother or Father who were diabetic. Their blood pressure readings were normal.

Disease Area Analysis

Of the 209 individuals screened, the breakdown of disease areas were as follows:-

Disease Area	Total	Comments
Diabetes	28 number (13%)	<ul style="list-style-type: none"> There are 94% of the 209 individuals tested at random blood glucose sugars. Approximately 28 (13%) individuals screened were diabetic. They had been diabetic for 2 months (newly diagnosed) to 8 years (managing their diabetes). Of which 11 (39%) were also hypertension. It can be concluded that diabetes with uncontrolled sugars are high risk of developing diabetes complications such as hypertension. 11 (39%) of individuals with diabetes had random uncontrolled sugars of > 11 mmols (between the ranges of 11 – 33.1 mmols). This class of diabetics (64%) were also hypertensive with values > 140 (between ranges of 148 – 201). These individuals require additional support through (i) treatment review by a clinical officer or a physician (ii) nutrition advice and (iii) exercise. Of the 179 individuals screened that non-diabetes, there were 5 new potential diagnoses of diabetes with random values ranging between 13 – 20 mmols. Further tests such as the HBA1C can be performed to confirm the diagnosis. Of the 179 individuals screened that were non diabetic, 37 of those had family members who were diabetic.
Hypertensive	42 number (20%)	<ul style="list-style-type: none"> There were 42 individuals who had the pre-existing condition of High Blood Pressure (Hypertension). Some of these had been hypertensive from 8 months to 19 Years. In addition to hypertension, only 5 individuals also had a heart condition. Hypertensive individuals had systolic values range between 102 – 247, whereas diastolic values ranged from between 50-173. Where the readings were > 180/110 (3 individuals, ages 30-62, new diagnosis < 3 years) they

		<p>required immediate and emergency attention. A review of their medication and also further investigation into their health. NOTE: all 3 were also overweight and require nutrition education for weight loss.</p> <ul style="list-style-type: none"> • Of the 167 (80%) that were not hypertensive, 27 individuals had BP > 145 systolic values. These were potentially new cases of diagnosis for hypertension.
Breathing Difficulties	37 number (17%)	<ul style="list-style-type: none"> • There were 37 individuals reporting breathing difficulties, majority of them being asthmatic. • Other conditions seen in this category of individuals were chest infections and / or pneumonia. • Only 2 individuals from this group were Diabetic, in insignificant number to draw any conclusions.
Cancer	10 number (5%)	<ul style="list-style-type: none"> • Diabetes doubles the risk of cancers such as Liver, Pancreas and Endometrial. It also increases the risk of colorectal, breast and bladder cancer by 20 – 50%. • There were 10 individuals that reported ‘Cancer’, although they did not specify what type. NOTE: For future camps, we should train our staff to capture these on the forms. • Of the 10 individuals – 2 were Diabetic. • There are 13 individuals of the sample of 209 screened whom had family members with Cancer. The following cancers were observed:- Bone, Liver, Lung, Prostate, Stomach and Throat. Of these 13 individuals, 3 were hypertensive an insignificant number to draw any conclusions.
Other	58 number (28%)	<ul style="list-style-type: none"> • There were 58 individuals that reported Other conditions. These were mainly (i) Headaches (ii) Allergies (iii) Eye Problems (iv) Arthritis and (v) general aches and pains. • NOTE: Only 2 of the individuals in this class of population were Diabetics. • Interesting to note that 48 of these individuals were either overweight and/or obese and require nutritional advice and guidance.
BMI	137 number (66%)	<ul style="list-style-type: none"> • More than 50% of the population screened were either overweight and / or obese. • An article published by the Standard reported – 7 November 2016 that ‘A third of Kenya’s women are either overweight or obese, the Ministry of Health has said. The ministry noted that there was a shift in the trend of obesity from minors to adults mainly due to poor feeding habits among the latter’. • Of the 137 overweight / obese individuals 114 were women (83%). The age ranges of 16 – 78 years. A majority of the cases were between the ages of 25-45 (44) and 46-65 (49).