

Global Risk Assessment in Resource Constrained Countries: Kenya *Heart and Sole*

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Background: Global risk assessment has become an important part of comprehensive CV evaluation and guides treatment. Most global risk tools require laboratory measurement of lipids; a test not readily available in resource-constrained countries. The Gaziano Risk Score (GRS) is a non-lab based model which includes age, gender, diabetes, smoking, systolic BP; and substitutes BMI for cholesterol. In comparative effectiveness analysis the GRS has similar predictive value compared to the Framingham score.

Objectives: The purpose of this study was to add risk stratification using clinical estimations of the number of CV risk factors (CVRF) and the GRS to our community-based CV screenings.

Methods: Community based participatory research: a convenience sample of consecutive patients at 5 Kenyan clinics were screened for CVRF by trained US/Kenyan teams using protocols for physiologic and behavioral measures. Clinical data were abstracted, entered onto excel spreadsheets and imported into Stata[®] for analysis. US/Kenyan IRB approval was obtained:

Results: 801 individuals (mean age 54 [\pm 17.5], 77% female, 98% black) were screened and found to have high rates of HTN (55.6%), DM (9.2%), and BMI \geq 25 (53.8%). The prevalence of smoking was 5.3%, CVD 3.61% and dyslipidemia 2.81%. The majority, (61.4%) had 2+ CVRF. The GRS (risk of developing CVD in the next 10 years); low risk (<10%), moderate risk (10-20%), and high risk (>20%) was (35.2%, 22.4%, and 42.4%) respectively. Clinician calculations of the GRS were 75% accurate.

Conclusions/Implications: In those individuals who presented for community CV screening the prevalence/clustering of risk factors was high. This has implications for practice and policy. At the individual level it identifies those at high risk for complications and targets therapy; at the population level it can help identify the mean risk in the population which can help guide appropriate policies for access, care delivery and cost in resource-constrained countries.