Contribution of AHN in policy implementation for the control of CVD in Africa

Pr Habib Gamra

WHF Summit – Khartoum - October 11th, 2017
Cameroon Heart Foundation
Uganda Heart Research Foundation
Seychelles – Individual membership
Ghana Society of Hypertension and Cardiology
Kenyan-Heart National Foundation
Mauritius Heart Foundation
Ivorian Heart Foundation
Ethiopian Heart Association
The Heart Foundation of Zimbabwe
Heart Foundation of Mozambique
Nigerian Heart Foundation
Rwanda Heart Foundation
Heart and Stroke Foundation South Africa
Sudan Heart Foundation
Tunisian Heart Foundation
Zambia Heart Foundation
National Heart Foundation of Tanzania
Our mission

• Increase networking between African countries.
• Advocate for increased awareness
• Advocate for increased access to health care
• Spearhead policies and programs to promote cardiovascular health
• Promote heart healthy lifestyles
• Disseminate and promote research findings
AHN Role in CVD prevention

1. Awareness and Education
2. Access to Care
3. Rheumatic Heart Disease
4. Tobacco control
Awareness and Education

(selected examples)
Consensus Summit: Lipids and Cardiovascular Health in the Nigerian Population


Link to the publication at:-
http://www.sciencedomain.org/issue/2815
Consensus Summit: Lipids and Cardiovascular Health in the Nigerian Population


ABSTRACT

Aims: To issue a consensus statement on Lipids and Cardiovascular Health and the impact of their interrelationship in Nigerian Population.

Study Design: Experts from a range of relevant disciplines, deliberated on different aspects of Lipids and Cardiovascular Health in the Nigerian Population at a Summit.

Place and Duration of Study: The Summit was held in April 2016 at the Nigerian Institute of Medical Research.
RWANDA HEART FOUNDATION

Member of the African Heart Network and the World Heart Federation

PoBox: 6692 - KIGALI - RWANDA
www:rwandaheartfoundation.org
Facebook: rwanda heart foundation
“KIGALI CAR FREE DAY “ INITIATIVE FOR MASS SPORTS , NCDS AWARENESS AND CHECK UP

• “Kigali CAR-FREE-DAY “(KFCD) started in 2016 with the celebration of World Heart Day

• Created by Kigali City Council, in partnership with the MoH/Rwanda Biomedical Center (RBC), AHN, WHO Rwanda, the National Police and the Rwanda NCD Alliance (Rwanda Heart Foundation, Rwanda Diabetes Association and other 10 NGOs involved with NCDs)

• Every first Sunday of the month since May 2016, the city’s main roads are closed to cars and used for physical activities for all such as running, biking, aerobic gym...

• Now attended by > 3000 people every month, it is becoming one of the leading sports and health awareness events in many cities of Rwanda.
CAR FREE DAY AND WHD 2017 CELEBRATION

Kigali Car Free Day
Jogging-Walking-Cycling...

SUNDAY 01 October 2017
From 07:00 - 10:00 am

Health Check up
South Africa
• Two (2) initiatives are worthy of mention
• The Salt Reduction Campaign AND the Schools Health Promotion Initiative

**THE SALT REDUCTION CAMPAIGN**

• Building on a previous campaign called Salt Watch funded by the National Department of Health SA, the HSFSA was able to run another exciting funded campaign
• The Campaign was entitled: “Your body does not need the extra salt”

• The primary aim was to use print, digital, social media and television advertising as a means of communicating with the public at large that adding extra salt or discretionary salt to prepared food is harmful because of its relationship with hypertension increasing CVD risk

• The campaign was launched in the first week of September 2017 to coincide with Heart Awareness Month and is on-going targeting lower socio-economic groups who are most vulnerable

• The link to the 20 second ad is: https://www.youtube.com/watch?v=YaHNq8w9Nhk

• Please check the web-site for more detailed information: www.heartfoundation.co.za
Site Code: M8186

YOUR BODY DOESN'T WANT THE EXTRA SALT

heartfoundation.co.za
SCHOOLS HEALTH PROMOTION (SHP) INITIATIVE

• The SHP initiative packaged together an exciting programme for 13 selected schools in 4 out of 9 provinces in SA over the first 2.5 weeks of Heart Awareness Month. Reach was approximately 20 000 children and adults combined

• The core components were:
  * A health talk about the importance of a healthy lifestyle
  * A skipping demonstration by a competitive skipper
  * Health Risk Assessments conducted by our team
School Health Promotion Initiative
School Health Promotion Initiative
TUNISIA
PREVENTION OF NON-COMMUNICABLE DISEASE
THE “TOGETHER IN HEALTH PROJECT’
UnitedHealth and NHLBI Collaborating Centers of Excellence

The NHLBI and UnitedHealth Chronic Disease Initiative are working together to establish a network of 11 Collaborating Centers of Excellence.
Study Design: Quasi experimental design
Pre Post with a control group

Intervention Group
Sousse Jawhara & Riadh
Schools, Work places Health centres, Community

Pre intervention Assessment
healthy Diet habits
promoting physical activity
smoking cessation & control
Post intervention Assessment

Control Group
M’saken
Schools, Work places Health centres, Community

Pre intervention Assessment
Usual intervention
Tunisian Revolution January 2011

2009
2010
2013
2014
Intervention program
Results (pre-post assessment)

Studied population in schools of the region of Sousse

<table>
<thead>
<tr>
<th></th>
<th>Intervention site n (resp rate %)</th>
<th>Control site n (resp rate %)</th>
<th>Total n (resp rate %)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pre Assessment</strong></td>
<td>Schools n=15</td>
<td>1929 (93.1)</td>
<td>4003 (94.6)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2074 (96.0)</td>
<td></td>
</tr>
<tr>
<td><strong>Post Assessment</strong></td>
<td>Schools n=15</td>
<td>2178 (92.2)</td>
<td>4283 (93.0)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2105 (93.9)</td>
<td></td>
</tr>
</tbody>
</table>
## Pre - Post assessment: Eating habits in schools

<table>
<thead>
<tr>
<th></th>
<th>Intervention group n (%)</th>
<th>Control group n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consume vegetables daily</td>
<td>pre 544 (28.4)</td>
<td>830 (40.3)</td>
</tr>
<tr>
<td></td>
<td>post 576 (32.4)</td>
<td>591 (35.2)</td>
</tr>
<tr>
<td></td>
<td><em>p</em> 0.008</td>
<td>0.001</td>
</tr>
<tr>
<td>Consume fruits daily</td>
<td>pre 1067 (55.8)</td>
<td>1182 (57.6)</td>
</tr>
<tr>
<td></td>
<td>post 1055 (59.3)</td>
<td>983 (58.2)</td>
</tr>
<tr>
<td></td>
<td><em>p</em> 0.03</td>
<td>0.72</td>
</tr>
</tbody>
</table>
### Pre-post assessment of physical activity

<table>
<thead>
<tr>
<th></th>
<th>Intervention group</th>
<th>Control group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre n(%) Post n (%) p</td>
<td>Pre n (%) Post n (%) p</td>
</tr>
<tr>
<td>Do recommended level of physical activity*</td>
<td>280 (14.7) 223 (12.7) 0.07</td>
<td>196 (9.5) 137 (8.1) 0.12</td>
</tr>
</tbody>
</table>

*at least 60 minutes of moderate physical activity daily or equivalent.*
## Pre-post assessment of tobacco use

<table>
<thead>
<tr>
<th></th>
<th>Intervention group</th>
<th>Control group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre n(%)</td>
<td>Post n (%)</td>
</tr>
<tr>
<td>Tobacco use</td>
<td>110 (5.7)</td>
<td>60 (3.4)</td>
</tr>
</tbody>
</table>
WORKPLACES
### Results (pre-post assessment)

**Studied population workplaces of the region of Sousse**

<table>
<thead>
<tr>
<th></th>
<th>Intervention site n (resp rate %)</th>
<th>Control site n (resp rate %)</th>
<th>Total n (resp rate %)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pre Assessment</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Workplaces</td>
<td>914 (76.7)</td>
<td>861 (72.5)</td>
<td>1775 (74.6)</td>
</tr>
<tr>
<td>n=6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Post Assessment</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Workplaces</td>
<td>1008 (69.7)</td>
<td>1015 (77.5)</td>
<td>2023 (73.4)</td>
</tr>
<tr>
<td>n=6</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Pre - post assessment: Eating habits and physical activity in workplace

<table>
<thead>
<tr>
<th></th>
<th>Intervention group n (%)</th>
<th>Control group n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consume 5 fruits and vegetables daily</td>
<td>pre</td>
<td>347 (38.7)</td>
</tr>
<tr>
<td></td>
<td>post</td>
<td>494 (49.9)</td>
</tr>
<tr>
<td>$p$</td>
<td></td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Do recommended level of physical activity*</td>
<td>pre</td>
<td>250 (28.2)</td>
</tr>
<tr>
<td></td>
<td>post</td>
<td>388 (38.7)</td>
</tr>
<tr>
<td>$p$</td>
<td></td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

*at least 30 minutes of physical activity 5 days/week.
## Pre-post assessment of tobacco use

<table>
<thead>
<tr>
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<th></th>
<th>Control group</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre n(%)</td>
<td>Post n (%)</td>
<td>Pre n (%)</td>
<td>Post n (%)</td>
</tr>
<tr>
<td>Tobacco use</td>
<td>350 (39.2)</td>
<td>407 (40.5)</td>
<td>250 (31.7)</td>
<td>308 (30.6)</td>
</tr>
</tbody>
</table>

- $p = 0.56$ for Tobacco use
- $p = 0.64$ for Tobacco use
<table>
<thead>
<tr>
<th></th>
<th>Intervention group</th>
<th>Control group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre n(%)</td>
<td>Pre n (%)</td>
</tr>
<tr>
<td>Hypertension</td>
<td>137 (16.0)</td>
<td>97 (14.2)</td>
</tr>
<tr>
<td></td>
<td>Post n (%)</td>
<td>Post n (%)</td>
</tr>
<tr>
<td></td>
<td>121 (12.3)</td>
<td>228 (22.5)</td>
</tr>
<tr>
<td></td>
<td>p</td>
<td>p</td>
</tr>
<tr>
<td></td>
<td>0.02</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>
COMMUNITIES
# Results (pre-post assessment)

**Studied population in neighborhoods of the region of Sousse**

<table>
<thead>
<tr>
<th></th>
<th>Intervention group n (resp rate %)</th>
<th>Control group n (resp rate %)</th>
<th>Total n (resp rate %)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pre Assessment</strong></td>
<td>940 (73.5)</td>
<td>940 (73.1)</td>
<td>1880 (73.3)</td>
</tr>
<tr>
<td><strong>Post Assessment</strong></td>
<td>1001 (74.3)</td>
<td>976 (62.5)</td>
<td>1977 (67.9)</td>
</tr>
</tbody>
</table>
## Pre-Post Assessment: Eating Habits and Physical Activity Among Adults

<table>
<thead>
<tr>
<th>Intervention Group</th>
<th>Control Group</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pre n(%)</strong></td>
<td><strong>Post n (%)</strong></td>
</tr>
<tr>
<td>Consume 5 fruits and vegetables daily</td>
<td>368 (39.4)</td>
</tr>
<tr>
<td>Do recommended level of physical activity</td>
<td>141 (15.1)</td>
</tr>
</tbody>
</table>
## Pre-post assessment of tobacco use

<table>
<thead>
<tr>
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<th></th>
<th>Control group</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre n(%)</td>
<td>Post n (%)</td>
<td>p</td>
<td>Pre n (%)</td>
</tr>
<tr>
<td>Tobacco use</td>
<td>242 (26.2)</td>
<td>232 (23.2)</td>
<td>0.13</td>
<td>135 (14.4)</td>
</tr>
</tbody>
</table>
## Pre-post assessment of hypertension

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre n(%)</td>
<td>Post n (%)</td>
</tr>
<tr>
<td>Hypertension</td>
<td>325 (35.8)</td>
<td>311 (31.4)</td>
</tr>
</tbody>
</table>
Challenges Encountered

January 2011: Serious political events
Conclusion

- Education/Individual change is not enough

- Need commitment of decision makers to adopt a comprehensive program
A 3-Year Workplace-Based Intervention Program to Control Noncommunicable Disease Risk Factors in Sousse, Tunisia

Sana Bhiri, MD, Jihene Maatoug, MD, Nawel Zammit, MD, Zineb Msakni, BS, Imed Harrabi, MD, Souad Amimi, MD, Nejib Mrizek, MD, and Hassen Ghannem, MD
World Heart Day
South Africa
Heart Awareness Month, culminated in World Heart Day in an exciting way and was a joint initiative with the Hatter Institute (Prof Karen Sliwa) and SA Heart Association (Prof Liesl Zuhlke):

- Landmarks around the country lit up in red
- Iconic landmark was Table Mountain
- Other landmarks were The Cape Wheel, Coastlands The Ridge in Durban and Selected Life Hospitals around the country
World Heart Day 2017
World Heart Day 2017
NIGERIA
Official Launch of National Heart Awareness Programme by Hon. Minister of Health, Prof. Isaac Adewole @ Fed. Min. of Health, Abuja, Nigeria
Federal Ministry of Health, Nigerian Heart Foundation & World Health Organization (Nigeria) - World Heart Day 2017 Free Health Screening, Abuja, Nigeria
SUDAN
KENYA
Access to Care
Our research

• Aim to support/lead research – focus on operational & translational research
• 2014-2015: Essential medicines survey
• 9 countries
• Assess availability of equipment/guidelines/medicines
• Results presented various meetings including WCC
• To assess the availability of equipment for diagnosis of CVD at PHC level.
• To assess the availability of guidelines for management of CVD at PHC level.
• To assess the availability of medicines for CVD and diabetes at PHC level.
Survey on the availability of essential equipment, guidelines and medications for cardiovascular disease in primary health care facilities in nine African countries

Pascal Bovet, Ministry of Health, Victoria, Republic of Seychelles & University Hospital, Lausanne, Switzerland; Habil Gama, Tunisian Heart Foundation & F. Bourguiba University Hospital & University of Monastir, Tunisia; Elizabeth Gatumia, Kenyan National Heart Foundation, Nairobi, Kenya; Dismand Houniato, University Hospital of Abomey Calavi, Cotonou, Benin; Charles Mondo, Mulago National Hospital, Kampala, Uganda; Awad Mohamed, University Hospital, Cartoum, Sudan; Vash Mungal-Singh, Heart and Stroke Foundation of South Africa, Cape Town, South Africa; François Ndikumwenayo, University Hospital, Bujumbura, Burundi; Ibrahim Ali Toure, University Hospital Abdou Moomouni, Niamey, Niger; Bola Ojo, African Heart Network, Lagos, Nigeria; Christelle Crickmore, African Heart Network, Cape Town, South Africa.

**AIM**
- To assess the availability of equipment for diagnosis of CVD at PHC level.
- To assess the availability of guidelines for management of CVD at PHC level.
- To assess the availability of medicines for CVD and diabetes at PHC level.

**METHODS**
- The survey was coordinated and funded by the African Heart Network (a WHF affiliate).
- The survey was conducted in 9 countries.
- Random selection of government health centers at primary health care level (i.e. not hospitals) with at least 3 health centers in urban areas & 3 in smaller cities/rural areas.
- Approval was obtained from appropriate health authorities in each country.
- Data were collected between 2014-2016.
- Assessment was conducted in each of the selected health centers.
- Information on the equipment and guidelines available at the health centers was based on a structured questionnaire administered to 2 senior managers of the health center.
- Health centers were informed of the visits by survey officers.
- 2 survey officers administered a structured questionnaire to 2 senior staff members in each health center (i.e. no contact with patients).
- Information on medications available in the health center was based on counting all CVD medications available in the dispensary of the health center during the survey visit.

**RESULTS**
- Table 1. Characteristics of health centers (HC)
  - Countries are ranked along GDP/capita (int $): Burundi (BUR), Niger (NIG), Uganda (UGA), Benin (BEN), Kenya (KEN), Sudan (SUD), Tunisia (TUN), South Africa (RSA) and Seychelles (SEY).
  - In each country, HC were staffed with at least 1 doctor on average.
  - HC reported 13-233 patients/day.
  - All countries reported to provide care to hypertensive or DM patients.

- Table 2. Proportion of health centers (HC) with guidelines
  - A list of essential meds. was found in nearly all HC in all countries.
  - Guidelines for hypertension and diabetes were found in a majority of HC in most countries except in countries with lowest GDP.
  - Guidelines for other CVD conditions (MI, cholesterol) were found mostly in the few countries with the highest GDP.
  - WHO PEN Guidelines were found only a few HC in few countries.

- Table 3. Proportion of heath centers with basic equipment
  - A device for BP measurement was found in nearly all HC in all countries.
  - A large cuff was found in only a few HC in few countries of higher GDP.
  - A glucometer was found in a majority of HC in most countries.

- Table 4. Proportion of health centers with CVD medications
  - Furosemide was found in most HC in most countries (of note furosemide is not suitable for hypertension treatment in most patients).
  - The availability of other classes of antihypertension medications was low in low GDP countries and high in higher GDP countries.
  - The availability of glucose lowering medications in HC, including insulin, increased largely with a country’s GDP.
  - A same strong GDP gradient was found for aspirin and statins.

**CONCLUSION**
- Basic equipment, guidelines and medications for CVD were largely inadequate at primary health care level in a majority of countries in the African region, but the situation was adequate in a few countries with higher GDP in the region.
CONCLUSIONS (1/3): SUMMARY

- Basic equipment, guidelines and medications for CVD were largely inadequate at primary health care level in a majority of countries in the African region.
- The situation was adequate in a few countries with higher GDP in the region.
- This may suggest that adequacy in resources to address NCDs is largely dependent on a GDPO’s country (sufficient resources).
- A big advantage of this survey is that it based on actual assessment of situation in health centers (i.e. assess if guidelines are present, counting medications in randomly selected health centers), and not on “official reports” or “official policy” which may not adequately represent the actual situation at PHC level in countries.
Rheumatic Heart Disease

(selected example from Kenya)
Tobacco Control

(selected example from Nigeria)
Nigerian Heart Foundation celebrates World No Tobacco Day 2017 with World Health Organization (Nigeria), United Nations Information Centre, United Nations Association of Nigeria, Youth Action on Tobacco Control and Health and eleven junior and senior secondary schools in Lagos
Presentation of gift to first prize winner of World No Tobacco Day 2017 Art Competition- Lagos, Nigeria
AHN future plans & Collaboration

Short-term and medium-term:
• Essential medicines survey publication & phase 2
• Tobacco survey
• Tobacco roadmap for Africa
• AHN congress
An Invitation

Tunisia – March 30 – 31, 2017