

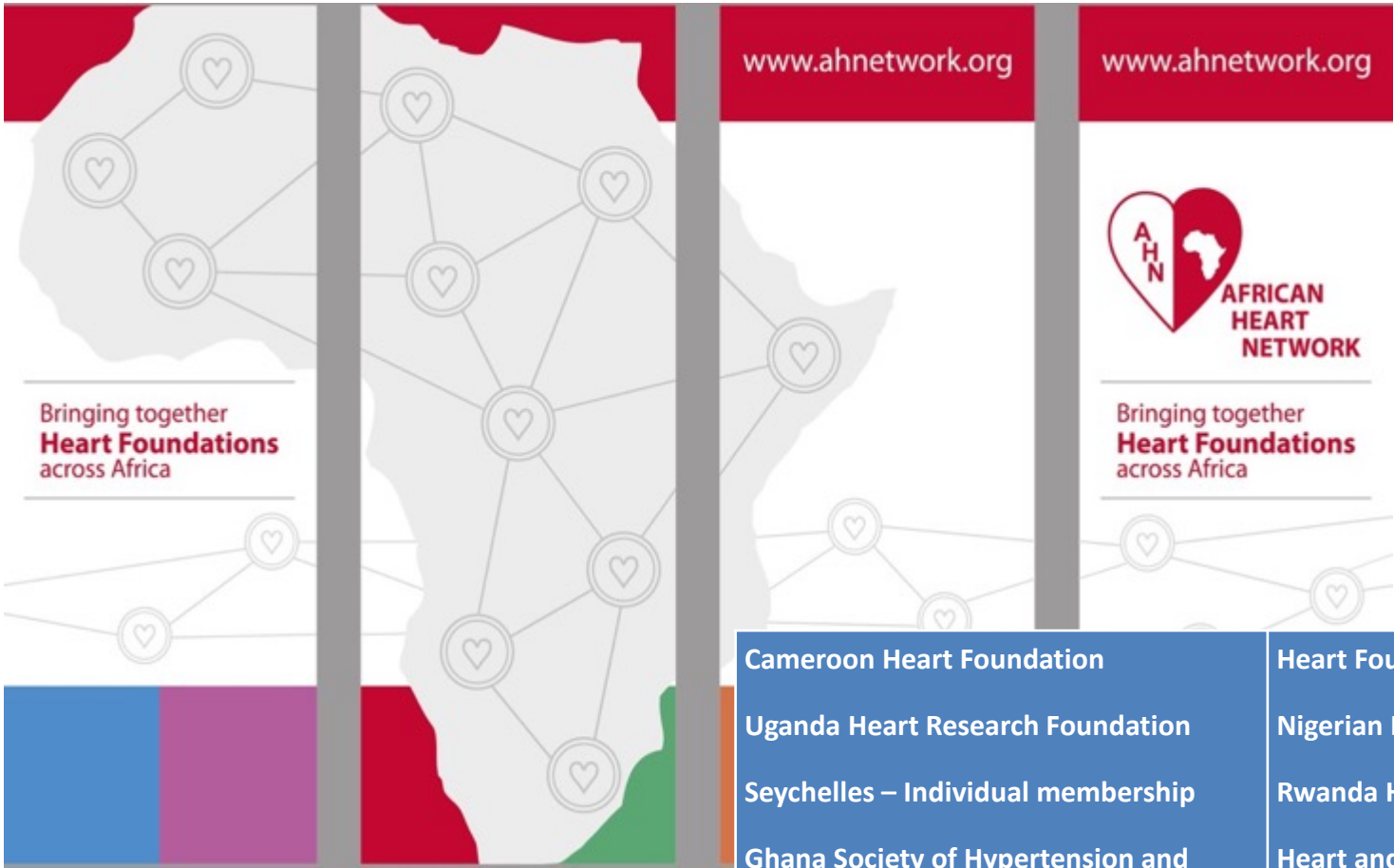


# **AFRICAN HEART NETWORK**

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

**Pr Habib Gamra**

WHF Summit – Khartoum - October 11<sup>th</sup>, 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**

- Nigerian Heart Foundation Consensus Summit: Lipids and Cardiovascular Health in the Nigerian Population, published online on July 17th 2017 in the European J. of Nutrition and Food Safety.

Link to the publication at:-

<http://www.sciencedomain.org/issue/2815>



## *European Journal of Nutrition & Food Safety*

7(2): 109-119, 2017; Article no.EJNFS.2017.007  
ISSN: 2347-5641

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# Consensus Summit: Lipids and Cardiovascular Health in the Nigerian Population

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O. Idigbe<sup>2</sup>, A. Isah<sup>5</sup>, C. O. Isokpunwu<sup>6</sup>, O. Mobolaji-Lawal<sup>1</sup>, A. Nasidi<sup>7</sup>,  
O. J. Odia<sup>8</sup>, O. B. Ogunmoyela<sup>9</sup>, O. Okojie<sup>6</sup>, B. J. C. Onwubere<sup>10</sup>,  
A. Osibogun<sup>11</sup>, R. Schilpzand<sup>12</sup> and O. O. Akinkugbe<sup>1</sup>

## 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](http://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





THE HEART  
AND STROKE  
FOUNDATION  
SOUTH AFRICA

# South Africa

# RECENT PREVENTION INITIATIVES WITH POLICY IMPLICATIONS

- 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](http://www.heartfoundation.co.za)





# RECENT PREVENTION INITIATIVES WITH POLICY IMPLICATIONS

## 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”







# National Heart Lung and Blood Institute

National Institutes of Health

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Monday, October 05, 2009



## National Heart, Lung, and Blood Institute Global Health Initiative

### UnitedHealth and NHLBI Collaborating Centers of Excellence

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NHLBI'S GLOBAL  
COMMITMENT

#### UNITEDHEALTH AND NHLBI COLLABORATING CENTERS OF EXCELLENCE

About The Centers Of  
Excellence

GLOBAL ALLIANCE FOR  
CHRONIC DISEASES

NHLBI GLOBAL HEALTH  
PROGRAMS

PARTNERS IN GLOBAL



### Working Together



UnitedHealth Group

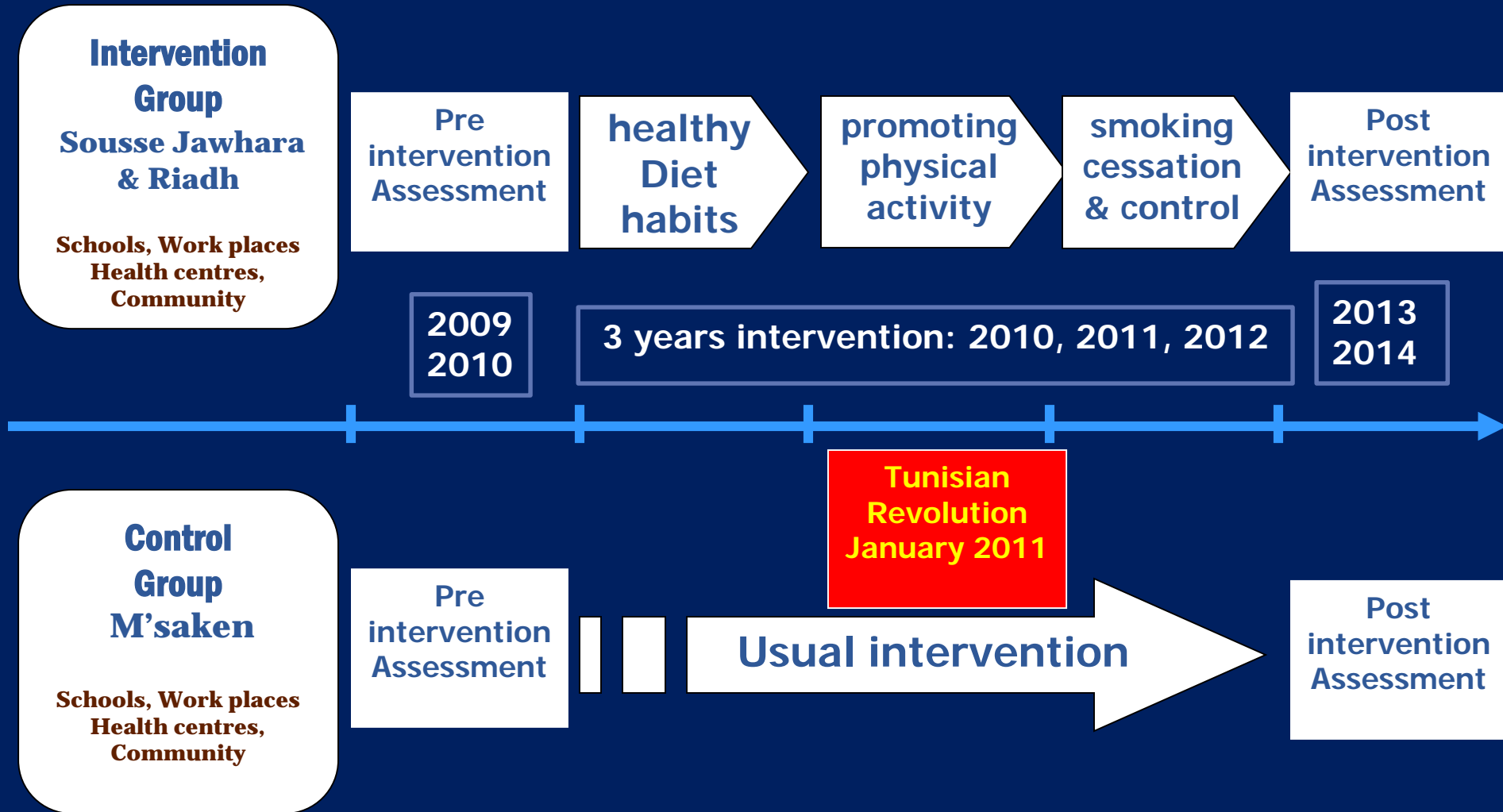
The NHLBI and UnitedHealth Chronic Disease Initiative are working together to establish a network of 11 Collaborating Centers of Excellence.

### News Releases

» [NHLBI Funds Centers of Excellence in Developing Countries and Collaborates with UnitedHealth's Chronic](#)

# Study Design: Quasi experimental design

## Pre Post with a control group






# Intervention program

# Results (pre-post assessment)

Studied population in schools of the region of Sousse

		Intervention site n (resp rate %)	Control site n (resp rate %)	Total n (resp rate %)
Pre Assessment	Schools n=15	1929 (93.1)	2074 (96.0)	4003 (94.6)
Post Assessment	Schools n=15	2178 (92.2)	2105 (93.9)	4283 (93.0)

# Pre - Post assessment: Eating habits in schools

		Intervention group n (%)	Control group n (%)
Consume vegetables daily	pre	544 (28.4)	830 (40.3)
	post	 576 (32.4)	 591 (35.2)
	<i>p</i>	0.008	0.001
Consume fruits daily	pre	 1067 (55.8)	1182 (57.6)
	post	1055 (59.3)	983 (58.2)
	<i>p</i>	0.03	0.72




# Pre-post assessment of physical activity

	Intervention group			Control group		
	Pre n(%)	Post n (%)	p	Pre n (%)	Post n (%)	p
Do recommended level of physical activity*	280 (14.7)	223 (12.7)	0.07	196 (9.5)	137 (8.1)	0.12

\*at least 60 minutes of moderate physical activity daily or equivalent.

# Pre-post assessment of tobacco use

	Intervention group			Control group		
	Pre n(%)	Post n (%)	p	Pre n (%)	Post n (%)	p
Tobacco use	 110 (5.7)	60 (3.4)	<0.001	127 (6.1)	84 (4.9)	0.09





**WORKPLACES**

# Results (pre-post assessment)

## Studied population workplaces of the region of Sousse

		Intervention site n (resp rate %)	Control site n (resp rate %)	Total n (resp rate %)
Pre Assessment	Workplaces n=6	914 (76.7)	861 (72.5)	1775 (74.6)
Post Assessment	Workplaces n=6	1008 (69.7)	1015 (77.5)	2023 (73.4)

# Pre - post assessment: Eating habits and physical activity in workplace



		Intervention group n (%)	Control group n (%)
Consume 5 fruits and vegetables daily	pre	347 (38.7)	363 (45.4)
	post	 494 (49.9)	 578 (58.9)
	<i>p</i>	<0.001	<0.001
Do recommended level of physical activity*	pre	250 (28.2)	257 (31.1)
	post	 388 (38.7)	 415 (36.6)
	<i>p</i>	<0.001	0.01

\*at least 30 minutes of physical activity 5 days/week.

# Pre-post assessment of tobacco use

	Intervention group			Control group		
	Pre n(%)	Post n (%)	<i>p</i>	Pre n (%)	Post n (%)	<i>p</i>
Tobacco use	350 (39.2)	407 (40.5)	0.56	250 (31.7)	308 (30.6)	0.64

# Pre-post assessment of hypertension

	Intervention group			Control group		
	Pre n(%)	Post n (%)	p	Pre n (%)	Post n (%)	p
Hypertension	137 (16.0)	121 ( 12.3) 	0.02	97 ( 14.2)	228 (22.5) 	<0.001

**COMMUNITIES**







# Results (pre-post assessment)

Studied population in neighborhoods of the region of  
Sousse

	Intervention group n (resp rate %)	Control group n (resp rate %)	Total n (resp rate %)
<b>Pre Assessment</b>	<b>940 (73.5)</b>	<b>940 (73.1)</b>	<b>1880 (73.3)</b>
<b>Post Assessment</b>	<b>1001 (74.3)</b>	<b>976 (62.5)</b>	<b>1977 (67.9)</b>

# Pre - post assessment: Eating habits and physical activity among adults

	Intervention group			Control group		
	Pre n(%)	Post n (%)	p	Pre n (%)	Post n (%)	p
Consume 5 fruits and vegetables daily	368 (39.4)	579 (58.4) 	<0.001	483 (51.4)	663 (67.9) 	<0.001
Do recommended level of physical activity	141 (15.1)	400 (40.1) 	<0.001	141 (15.0)	375 (38.5) 	<0.001

# Pre-post assessment of tobacco use

## Intervention group

## Control group

Pre n(%)

Post n (%)

p

Pre n (%)

Post n (%)

p

Tobacco use

242 (26.2)

232 (23.2)



0.13


135 (14.4)

178 (18.3)



0.02

# Pre-post assessment of hypertension

	Intervention group			Control group		
	Pre n(%)	Post n (%)	p	Pre n (%)	Post n (%)	p
Hypertension	325 (35.8)	311 (31.4)	 0.04	274 (29.3)	296 (30.3)	0.62

# Challenges Encountered

## January 2011: Serious political events



# Conclusion

- Education/Individual change **is not enough+++**
- Need commitment of decision makers to adopt  
*a comprehensive program*

ORIGINAL ARTICLE

# 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*

Hassen Ghannem<sup>1</sup>

<sup>1</sup>Department of Epidemiology, University Hospital Farhat Hached

<sup>2</sup>Department of Pediatrics, University Hospital Farhat Hached of Sousse.

Msakni<sup>1</sup>, Imed Harrabi<sup>1</sup>, Larbi Chaieb<sup>1</sup>, Habib Gamra<sup>2</sup> and



# World Heart Day





THE HEART  
AND STROKE  
FOUNDATION  
SOUTH AFRICA

South Africa

# WORLD HEART DAY 2017

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):

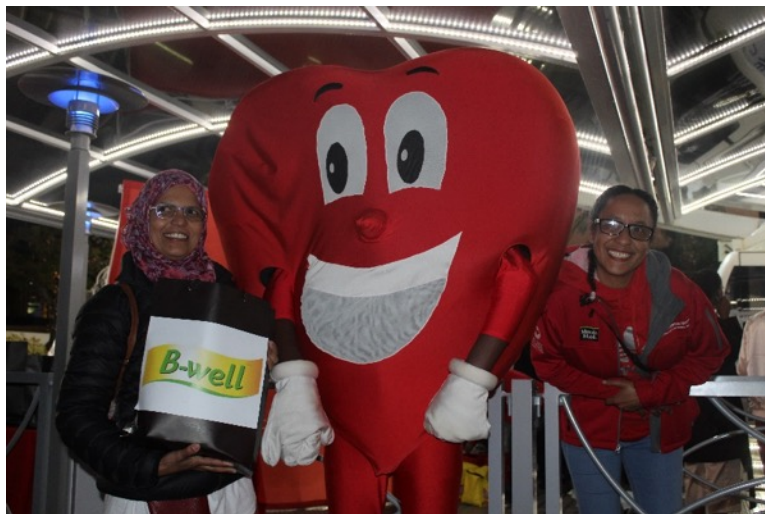
- Landmarks around the country lit up in red
- Iconic landmark was **Table Mountain**
- Other landmarks were **The Cape Wheel, Coastlands The Ridge in Durban and Selected Life Hospitals around the country**

# World Heart Day 2017





# World Heart Day 2017





NIGERIA

# Federal Ministry of Health, Nigerian Heart Foundation & World Health Organization (Nigeria) - World Heart Day 2017 Ministerial Press Briefing – Abuja, 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





# 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.

# 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; **Habib Gamra**, Tunisian Heart Foundation & F. Bourguiba University Hospital & University of Monastir, Tunisia; **Elizabeth Gatumia**, Kenyan National Heart Foundation, Nairobi, Kenya; **Dismand Houinato**, University Hospital of Abomey Calavi, Cotonou, Benin; **Charles Mondo**, Mulago National Hospital, Kampala, Uganda; **Awad Mohamed**, University Hospital, Kartoum, 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 Moumouni, 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.

Country	BUR	NIG	UGA	BEN	KEN	SUD	TUN	RSA	SEY
GDP/capita (Int\$ in 2015)	818	1080	2003	2113	3208	4344	11428	13165	26277
Health centers (n)	6	10	8	10	6	6	5	6	6
Nurses (n)	8.3	6.3	13.8	2.0	13.0	3.2	4.0	14.0	10.5
Doctors (n)	2.5	1.3	1.3	0.2	2.8	3.8	2.2	2.8	3.5
Pharmacists (n)	2.0	1.0	0.9	0.8	1.2	2.7	1.0	0.7	3.2
Patients per day (n)	68	60	126	13	233	114	54	170	160
Patients treated for HBP per day (n)	2	4	7	2	6	23	14	62	16
Patients with diabetes treated per day (n)	1	5	2	0	3	17	14	27	6
Percent patients with DM or HBP from all patients	3.7	15.0	7.3	14.7	3.9	34.9	51.7	52.3	13.8

	BUR	NIG	UGA	BEN	KEN	SUD	TUN	RSA	SEY
List of essential medications (%)	100	80	100	100	83	50	60	100	100
Guideline for blood pressure (%)	0	20	50	40	83	50	100	100	100
Guideline for diabetes (%)	0	10	38	20	67	33	100	100	100
Guideline for myocardial infarction (%)	0	0	13	0	17	33	40	100	100
Guideline for cholesterol (%)	0	10	0	0	17	17	20	100	100
Guideline for rheumatic heart disease (%)	0	0	38	0	33	33	0	100	100
WHO PEN package (%)	0	0	13	10	17	0	40	0	0

	BUR	NIG	UGA	BEN	KEN	SUD	TUN	RSA	SEY
<b>Equipment</b>									
Device to measure blood pressure (%)	67	100	100	100	100	100	100	100	100
Large cuff is available (%)	0	0	0	70	50	17	20	67	100
Glucometer for capillary glucose (%)	83	40	50	20	100	50	80	100	100

	BUR	NIG	UGA	BEN	KEN	SUD	TUN	RSA	SEY
<b>Hypertension</b>									
Thiazide diuretic (%)	0	0	13	20	83	67	60	100	100
Furosemide (%)	33	90	25	40	50	83	100	100	100
Aldosterone (%)	0	0	0	0	0	50	60	50	100
Beta-blocker (%)	50	0	13	0	17	83	100	100	100
Calcium channel blocker (%)	50	20	25	10	67	83	100	83	100
ACE inhibitor (%)	33	30	0	0	67	83	100	100	100
Angiotensin receptor blocker (%)	0	0	0	0	17	67	20	0	100
Aldomet (%)	17	10	0	90	83	33	80	83	100
<b>Diabetes</b>									
Oral antidiabetic medications (%)	0	10	50	0	100	83	100	100	100
Insulin (%)	50	20	38	0	0	83	100	67	100
<b>Other</b>									
Aspirin (%)	0	40	25	60	50	83	100	100	100
Cholesterol lowering medication (%)	0	10	0	0	0	83	100	100	100

## 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 health 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 country's GDP (sufficient resources)**
- **A big advantage of this survey is that it is 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)



**KENYAN - HEART  
NATIONAL FOUNDATION**

*a holistic approach to excellent heart health*



# 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





[www.ahnnetwork.org](http://www.ahnnetwork.org)



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africanhnetwork/](https://www.facebook.com/groups/africanhnetwork/)