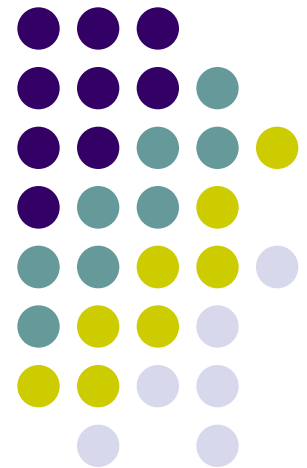


# 2009 CDC/IUHPE Cardiovascular Health Promotion Annual Seminar

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Nigeria Team 2  
University College Hospital, Ibadan



## Nigeria Team 2



2004	2005	2006
Adewole Adebisi Olulola Oladapo Toyin Ogunkunle Grace Adekoya Olufunke Hassan Olubola Odunlami Adesola Ogunniyi	Adewole Adebisi Lukman Owolabi Waheed Abass Yetunde Adeniyi Tunde Ajobo Shade Oguntola Adesola Ogunniyi	Joko J. Olarerin Oyedunni Arulogun Ayodele A. Olofin Abiodun M. Adeoye Nse A. Odunaiya Adesola Ogunniyi

# First CDC-IUHPE Seminar 2004

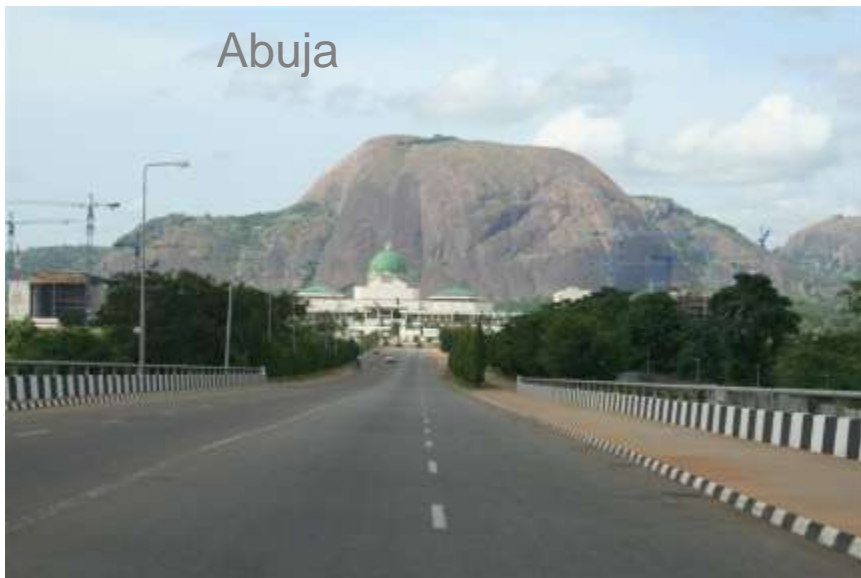
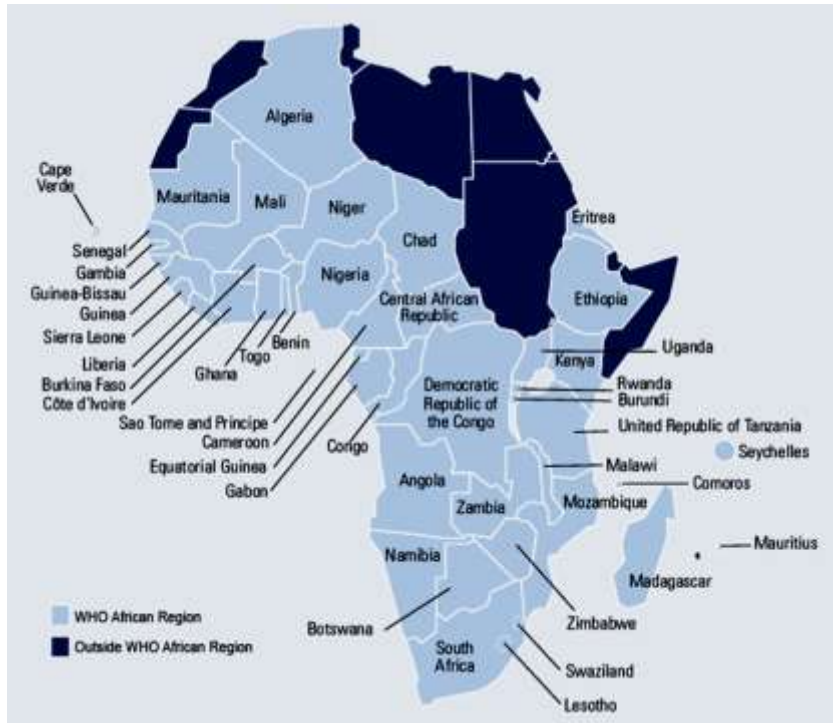


# 2005 Activities



# 2006 Seminar





# Ibadan



# Research Theme



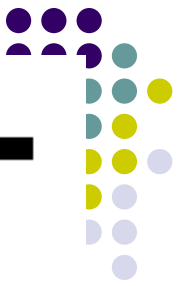
Worksite Health Promotion





## Background

- Paid employment and improved family income associated with better living standards.
- Departure from traditional ways of life results in increased consumption of refined food that contain a lot of salt and fats
- Massive influx of fast-food restaurants in hospital neighborhood
- Optimal performance of staff at work impaired by poor health.

**Viewpoint**

## **Disease burden in sub-Saharan Africa: what should we conclude in the absence of data?**

*Richard S Cooper, Babatunde Osotimehin, Jay S Kaufman, Terrence Forrester*

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Chronic disease has emerged as an important health issue in many developing countries.<sup>1,2</sup> Given the apparent predictability of disease patterns, the opportunity arises to model the epidemiological transition. The knowledge acquired could inform policy targeted at current public-health issues and prevent future epidemics.

studies are often used to obtain information about population dynamics, for example, infant mortality in Africa. However, investigations of adult health are more difficult, given a lower event rate, greater mobility, and more heterogeneity in the symptoms and signs of illness and causes of death than in children. Another necessary component of health analysis is defining prevalence, but

Lancet 1998, 208

# Aims and Objectives



- General
  - To promote cardiovascular health in UCH community.
- Specific
  - To provide baseline data on knowledge, beliefs, attitudes and practice of UCH workers about CVD.
  - To obtain data on prevalence of risk factors for CVD amongst UCH workers.
  - To design appropriate interventions based on data obtained
  - To evaluate the outcomes/impact of the interventions



## Research Questions:

How healthy are workers at the University College Hospital, Ibadan?

What risk factors for cardiovascular morbidity are prevalent in the staff?

What appropriate interventions can be designed/ developed to promote cardiovascular health amongst staff?



# Dietary intervention I

Objective	<ul style="list-style-type: none"><li>● To assess the acceptability of low salt diet</li></ul>
Activity	<ul style="list-style-type: none"><li>● Dietary intervention I (a pilot trial of acceptability low salt diet)</li></ul>
Resources	<ul style="list-style-type: none"><li>● Volunteers</li><li>● Test meals (lunch for 14 days)</li><li>● Urinary sodium estimation kits</li><li>● Dietician</li><li>● Kitchen Staff</li><li>● Laboratory scientist</li></ul>



# Dietary Intervention II

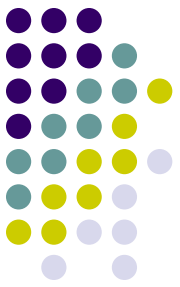
Objective	<ul style="list-style-type: none"><li>● To encourage increased dietary intake of fruits</li></ul>
Activity	<ul style="list-style-type: none"><li>● Dietary intervention II</li></ul>
Expected Outcome	<ul style="list-style-type: none"><li>● Increased fruit consumption</li></ul>

# Physical Activity Intervention



Objective	<ul style="list-style-type: none"><li>● To encourage increased physical activity</li></ul>
Activities	<ul style="list-style-type: none"><li>● Physical Activity intervention<ul style="list-style-type: none"><li>● Park and walk campaign</li><li>● Use of staircase rather than elevators campaign</li><li>● Walking campaigns</li><li>● Use of health club facilities</li></ul></li></ul>





# Methodology

- Advocacy visits - hospital management; Staff Medical Services and Staff Associations/Unions
- Development of research questionnaire – BRFSS/STEPS
- Training of field staff
- Approval by Institutional Ethical Review Board
- Compilation of staff list from Admin Dept.
- Random selection of staff (1/5)
- Informed consent from study participants.
- Administration of questionnaire (started May 2,2006)





## Methodology contd.

- Baseline anthropometric measurements:
  - height
  - weight
  - waist circumference
  - hip circumference
- Blood pressure
- Fasting blood samples for:
  - Lipids (cholesterol, HDL- cholesterol)
  - Sugar
- Incentives



## Methodology contd.

- Data Entry and Analysis
- Identification and treatment of members of staff at high for CVD
- Dissemination of Results of baseline study for sensitization
- Focus Group Discussions for identification of key intervention issues and strategies
- Planning and Implementation of key intervention
- Evaluation



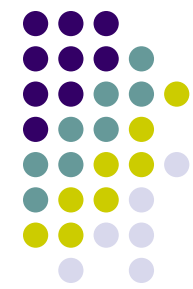
Glucometer



Electronic Sphygmomanometer



# Results



## Age and Sex Distribution

Age group (yrs.)	Male	Female	Total (%)
<20	1	0	1 (0.2)
20-29	23	11	34 (5.7)
30-39	54	94	148 (24.6)
40-49	93	133	226 (37.6)
50-59	99	88	187 (31.2)
≥ 60	3	1	4 (0.7)
<b>Total</b>	<b>273</b>	<b>327</b>	<b>600</b>

*Range: 18 – 64years; Mean = 44.2 years*



# Departments Represented

Section	Frequency	%
Nursing	166	27.7
Medical	77	12.8
Administrative	73	12.2
Maintenance	29	4.9
Laboratory	20	3.3
Unspecified	234	39.0
Total	599	99.9



## Blood Pressure Readings:

BP readings (mm Hg)	Frequency	%
<120	334	55.7
120-139	181	30.2
140-159	63	10.5
$\geq 160$	20	3.3
<i>Diastolic</i>		
<80	412	68.7
80-89	121	20.2
> 90	65	10.8



## Hypertension in Staff

Frequency of HBP	17.4% (104/598)
Ever told had HBP	16.8% (101/600)
On special diet for HBP	3.5% (21/600)
Traditional therapy	0.7% (4/600)





## Age group and HBP diagnosis

Age group (in yrs.)	HBP present*	HBP absent	Total
< 20	0 (0)	1	1
20 – 29	0 (0)	34	34
30 – 39	17 (11.6)	130	147
40 – 49	37 (16.4)	189	226
50 – 59	49 (26.3)	137	186
60 - 69	1 (25.0)	3	4
Total	104 (17.4)	494	598

*Proportions in parentheses*



## HBP frequency by gender

Gender	HBP present*	HBP absent	Total
Male	62 (22.7)	211	273
Female	42 (12.9)	283	325
Total	104 (17.4)	494	598

*Proportions in parentheses*

# Blood Sugar



Values (mg/dl)	Frequency	%
<100	574	97.5
100-125	7	1.2
$\geq 126$	8	1.3
Total	589	100



## Age group and Diabetes

Age group (in yrs.)	Normal BS value	IGT	Diabetes	Total
<20	1	0	0	1
20 – 29	34	0	0	34
30 -39	142	0	1	143
40 -49	212	6	4	222
50 - 59	181	1	3	185
60 – 69	4	0	0	4
Total	574	7	8 (1.4%)	589

# Gender and Diabetes



Gender	Normal	IGT	DM	Total
Male	287	0	3	270
Female	307	7	5	319
Total	574	7	8	589



# Lipid profile

Cholesterol (mg/dl)	Frequency	%
< 100	50	13.3
100 – 199.9	273	72.8
> 200	52	13.9
Total	375	100.0

## HDL

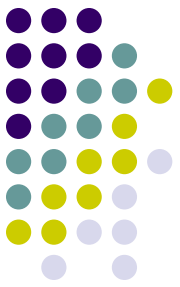
< 35	69	18.9
35 – 99	268	73.4
> 100	28	4.7



# BMI Classification

BMI values	Frequency	%
< 20	79	13.2
20 – 24.9	241	40.2
25 - 29.9	161	26.9
30 – 34.9	85	14.2
> 35	33	5.5
Total	599	100.0

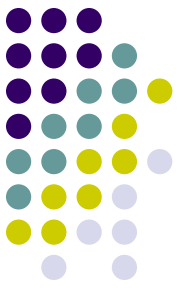
*Mean = 25.6*



# BMI Classification

<b>BMI values</b>	<b>Female</b>	<b>Male</b>
< 20	27	52
20 – 24.9	165	76
25 - 29.9	41	120
30 – 34.9	15	70
> 35	0	33
<b>Total</b>	<b>326</b>	<b>273</b>





## Waist/Hip Ratio

- Abnormal if  $> 1.0$  in Male and  $> 0.9$  Female
- 478 (81.3%) study participants in normal range
- 110 (18.7%) were abnormal
- No gender difference was evident (abnormal in 49/270 Male (18.1%) and 61/318 Female (19.2%))
- High frequencies of abnormal values in 5<sup>th</sup> and 6<sup>th</sup> decades of life (40/224 or 17.9% and 50/185 or 27% respectively).



## Frequencies of other risk factors:

- Work involves moderate activity 579/600 (96.5%)
- Fruits eaten regularly 468/600 (78.0%)
- Ever consumed alcohol 209/599 (34.8%)
- Ever smoked daily 72/590 (12.0%)
- Family history of stroke 17/600 ( 2.8%)
- Currently smoking 11/600 ( 1.8%)



## Highlights of Results

- Hypertension in 17.4% of staff and many were already aware
- Higher frequency of hypertension in male and older members of staff especially in the 6<sup>th</sup> decade.
- Frequency of diabetes is low (1.3%) and another 1.2% have impaired glucose tolerance. The latter were female. Age association with blood sugar elevation observed.






## Highlights of Results

- 33% of staff have abnormal fasting lipid levels (13.9% elevated cholesterol and 18.9% low HDL)
- 43.6% have elevated BMI, though level of physical activity appears to be high (*major risk factor needing attention*)
- Fruit and vegetable consumption very high
- Smoking is not a major problem but alcohol consumption may be...



# Correspondence with SMS



## UCH Cardiovascular Health Promotion Initiative

(Sponsored by Center for Diseases Control and Prevention/International Union for Health Promotion and Education)

July 1, 2006

The Head  
Staff Medical Services Department  
University College Hospital  
Ibadan.

Dear Dr. Olofin,

**Re: Cardiovascular Health Promotion Initiative: Preliminary Report**

You will recall that we commenced this Health Promotion Initiative among UCH Staff in May 2006. We now have some preliminary lipid assay results which necessitate some intervention to avoid any acute cardiovascular illness in the respective individuals. I have selected those with cholesterol values above 200 mg/dl.

Names	Section	Cholesterol (mg/dl)	HDL
Joseph OYEDIRAN	Radiology	202	52
Ruth O. ADEKUNLE	Radiology	349	13
Olanrewaju ALADE	Engineering	231	66
Kayode ADIGUN	Engineering	428	105
Joseph O. EMIOLA	Medicine	220	97
Elisha K. ASAKA	Medicine	205	111
Rasheed OYEKANMI	Stores & Supplies	252	81
Ahmed A. ALAO	Medical Records	276	50
Mohammed BELLO	Medicine	258	45
Oladele ALOFE	Medical Records	202	54
Joseph M. OMOLOLA	Engineering	219	120
Yekeen A. OLASUPO	Biomedical	225	122
Florence IKHADONU	Medicine	232	109
Jimoh LAMIDI	Engineering	205	144
Doyin EJIRANTI	Medicine	246	112
Felicia IJEH	Medicine	212	95
Julius IZAYE	Medicine	224	80
Kehinde SALAU	Medicine	236	42

Majeeun S. ISHOLA	Medical Records	214	78
Felix NWAEBINI	Medical Records	221	70
Titilayo GLATUNBOSUN	Medical Records	209	75
Grace AKINDE	Laundry	220	77
Direnke A. AJIBOLA	Medicine	310	74
Ayubemi FASORO	Nursing	207	100
Fehintola OGUINDE	Nursing	204	72
Kayode OGUINDEJI	Nursing	221	100
Adeyi MAKINDE	Nursing	267	45
Veronica EGWUONWU	School of Nursing	227	101
Sansu ANIMASAUN	School of Nursing	272	117
Cecilia OKEKE	School of Nursing	212	55
Sansan AJANI	School of Nursing	211	90
Elizabeth ONYEAGHALA	School of Nursing	209	101
Emily K. ADESSINA	School of Nursing	240	68

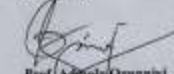
  

Very Low Cholesterol/HDL			
Joshua ESAN	Catering	67	11

It is our intention to provide periodic reports for prompt attention (i.e., dietary advice, life style modification and/or medications) so as to promote the health of our staff. Detailed laboratory results will be provided at the completion of the data collection phase for inclusion in the respective staff case files.

With regards,

Yours truly,



**Prof. Adesola Ogunniyi**  
Team Leader

S/N	NAME	DEPT	CHOL	HDL	PHONE NO
36	OLAJA JOHNSON	ENGINEERING	232	41	08065693594
37	SALJU FAUSAT	NURSING	214	90	08052117111
38	IDOWU MARY	NURSING	74*	20*	08023451117
39	AKADI JULIANA	NURSING	246	90	08052073118
40	SANSI SOLA	NURSING	98*	23*	08029834469
41	AKINADE BIBINICE	NURSING	265	119	
42	OLUWALE S. NDAY	F.T.C.H.S.	210	72	08035686616
43	AJILORU ESTHER	NURSING	99*	19*	08062497953
44	OGUNSEYI IDOWU	NURSING	39*	48	02-2012706
45	OLARINDE FUNLAYO	ADMIN.	137	20*	08055121197
46	ONISADE OMOLARA	NURSING	89*	17*	08077626456
47	OLANISYAN OLANIKE	NURSING	146	37	08053501864
48	ANIMASAUN ADKE	NURSING	102	27*	08014379745
49	BAMI OLAYINKA	MEDICAL	134	36	0803508864
50	OLUWADARE DAMILOLA	NURSING	166	50*	08034579976
51	OGUNTAN OLUFUNKE	MEDICAL	103	25*	08035154589
52	OGUNKUNLE ADEBOWALE	ADMIN	134	36*	08056138175
53	Dr Olofin, A OLOFIN	STAFF CLINIC	226	133	

\* Low cholesterol values; low HDL levels



# Problems

- Commitment
- Competing interests
- Collecting fasting blood samples
- Cooperation
- Computer/electricity problems



# Prospects

- Health Awareness Promotion
- Multiplying Effect
- Partnership with Staff Health Development
- Policy Change (futuristic) – mandatory medical exams etc.



