

CERTIFICATE COURSE IN THE MANAGEMENT OF HYPERTENSION

CCMH - AFRICA



CONTINENTAL FACULTY MEET

REPORT

NAIROBI KENYA

25th - 26 Feb. 2018



PUBLIC
HEALTH
FOUNDATION
OF INDIA



Centre for Chronic Disease Control
WHO Collaborating Centre for
Surveillance, Capacity building
and Translational Research in
Cardio-Metabolic Diseases





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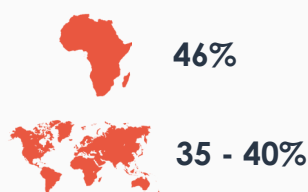
Abbreviations

ABPM	Ambulatory Blood Pressure Monitoring
ACE-i	Angiotensin-Converting-Enzyme inhibitor
ARB	Angiotensin II Receptor Blockers
AU	African Union
BIHS	British & Irish Hypertension society
BP	Blood Pressure
CCMH	Certificate Course in Management of Hypertension
CCDC	Centre for Chronic Disease Control
CKD	Chronic Kidney Disease
DALYs	Disease Adjusted Life Years
DBP	Diastolic Blood Pressure
ECG	Electrocardiogram
eGFR	Estimated Glomerular Filtration Rate
HT	Hypertension
HIV	Human Immunodeficiency Virus
ISH	International Society of Hypertension
LVH	Left Ventricular Hypertrophy
MI	Myocardial Infarction
NNT	Number Needed to Treat
OSA	Obstructive Sleep Apnea
PAD	Peripheral Artery Disease
PASCAR	Pan-African Society of Cardiology
PCPs	Primary Care Physicians
PHFI	Public Health Foundation India
RAAS	Renin Angiotensin Aldosterone System
SBP	Systolic Blood Pressure
WHO	World Health Organization

EXECUTIVE SUMMARY

WHO

People affected by HTN
(Adults \geq 25 years)



Hypertension has been long recognized as one of the major risk factors for cardiovascular disease (CVD) and premature deaths worldwide. The World Health Organization estimated that the number of people affected by hypertension is highest in Africa, at about 46% of adults aged 25 years and older compared to 35 to 40% elsewhere in the world (1). Many hypertensive Africans are unaware of their status and are rarely treated or poorly controlled, making them at highest risk for stroke, heart and renal disease (2-4). African Union member states at the 2004 Addis Ababa meeting described hypertension as one of the continent's greatest health challenges after HIV/AIDs. An urgency was recognized to develop and share best practices, including affordable and effective community-based programs to screen and treat hypertension.

PASCAR

Action Plan Target 6

Reduce prevalence of raised BP by 25% via increased task sharing and capacity building; hence CCMH.

The Pan-African Society of Cardiology through a consortium of experts made a situation analysis, identified roadblocks/solutions to the management of hypertension and customized the World Heart Federation roadmap to Africa (6). Target six of the action plan aims to achieve a 25% relative reduction in the prevalence of raised blood pressure via promoting a task-sharing approach with adequately trained community health workers (shift-paradigm). Certificate Course in Management of Hypertension is one of such effort which aims to strengthen the technical competencies of Primary Care Physicians (PCPs) in the management of hypertension and associated complications.

The course is a joint certification program implemented by the Pan-African Society of Cardiology (PASCAR) in collaboration with the academic partners, Public Health Foundation India (PHFI), British & Irish Hypertension Society, International Society of Hypertension, Centre for Chronic Disease Control (CCDC) and Knowledge



Better HTN Management

partners; African Union and the World Heart Federation. It is a unique training program in Africa, designed to provide exceptional education to physicians who seek to improve their practice in management of hypertension.

This capacity building initiative has been created to address several issues that arise when it comes to the management of hypertension such as lack of availability of doctors (very low doctor to patient ratio), concentration of specialists in the urban areas and inadequate training in management of hypertension at the graduate level (MD/MBBS).

References

1. WHO. A global brief on hypertension [Internet]. [cited 2015 Dec 20]. Available from
2. http://www.who.int/cardiovascular_diseases/publications/global_brief_hypertension/en/
3. Atakite F, Erqou S, Kaptoge S, Taye B, Echouffo-Tcheugui JB, Kegne AP. Burden of undiagnosed hypertension in sub-Saharan Africa: A systematic review and meta-analysis. *Hypertension* 2015; 65(2): 291-298.
4. Adeloye D, Basquill C. Estimating the prevalence and awareness rates of hypertension in Africa. A systematic analysis. Schnabel RB (ed). *PLoS One* 2014; 9(8): e104300.
5. Dzudie A, et al. Roadmap to achieve 25% hypertension control in Africa by 2025. *Cardiovascular Journal of Africa*. 2017; 28(4):261-72.
6. Dzudie A, Kegne AP, Muna WFT, Ba H, Menanga A, Kouam Kouam C, et al. Prevalence, awareness, treatment and control of hypertension in a self-selected sub-Saharan Africa urban population; a cross-sectional study. *Br Med J Open* 2012; 2(4): 1- 10

Program Overview

Certificate Course in Management of Hypertension is a joint certificate program, implemented by PASCAR in collaboration with our academic partners PHFI, CCDC, BIHS and ISH.

It is a unique course in terms of evidence based learning, an up-to-date curriculum with inputs from continental experts and regional faculty, on the job training, pan-African presence and robust monitoring & supervision strategy. The total duration of the course is 6 months with a once- a month contact session, which will be scheduled on a designated weekend at regional centers across Africa.

CCMH has been customized and conceptualized to be conducted in multiple regional centers spread across several countries in 4 union territories (English, French, Arabic and Portuguese). It aims to train 25,000 primary care physicians and 50,000 non-prescribers (nurses/ community health workers) with a class ratio of 1:15 in every center.

The backbone of CCMH is its 6 international experts, 20 regional faculty and keen observers. The first cycle of the course will commence all across the English union territory of Africa on the 25th April 2018



Figure 1: Organs of the CCMH program

Objectives of the Meet

The panel of Continental Experts for the CCMH cycle included renowned and eminent cardiologists and Medicine Specialists. This panel acts as an advisory body for the course content, curriculum review & finalizing the course modalities. The continental expert consultation meet was a platform where all panel members came together to achieve the following objectives:

- O1** To review course curriculum for the CCMH cycle
- O2** To present and discuss possible changes, updates and corrections pertaining to each module especially in an African context
- O3** To acquire feedback from all of the continental expert panel and include wherever possible.
- O4** To finalize the course curriculum by taking mutual consensus from the Continental Expert Panel & academic partners

Role of Continental Expert Panel Members

As a Continental Expert, the panel members are required to:

1. Attend the Continental Expert Consultation Meet to review and finalize the curriculum and the effective course delivery methods.
2. Attend Regional Faculty Meet to apprise them about the course curriculum and teaching pedagogy.
3. Conduct and evaluate two technical sessions at the designated centers during the course (May 2018-March 2019) cycle wherever feasible.
4. Participate in monitoring and evaluation of the technical sessions wherever feasible.

CONTINENTAL EXPERT MAP

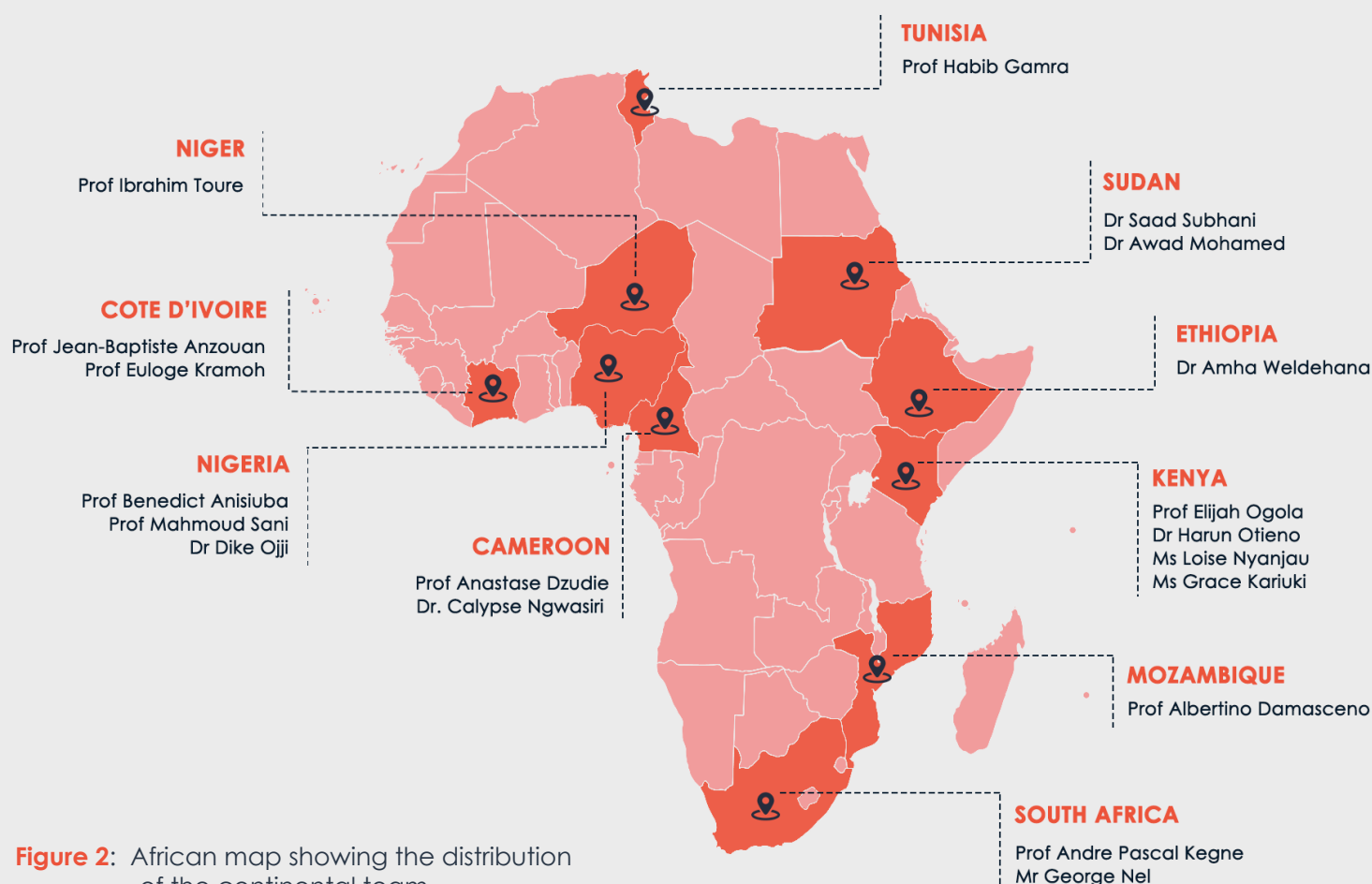


Figure 2: African map showing the distribution of the continental team.

ORGANIZERS, PARTNERS AND ATTENDEES

The Continental Expert Consultation meet was organized by the Pan-African Society of Cardiology on the 25th and 26th of February 2018 in Kenya at Radisson Blu Hotel, Upper Hill, Nairobi. The meeting was graced with the presence of 24 experts, 6 of whom were international experts – Prof Neil Poulter (President of the International Society of Hypertension), Prof Francesco Cappuccio (President of the British & Irish Hypertension Society), Dr Sandeep Bhalla (Program Director CCCI & CCMH program for India) and other representatives from the BIHS and PHFI.

Amongst the Regional Experts were Dr Saad Subhani (President of the Pan-African Society of Cardiology), Prof. Dzudie Anastase (Chair of the Hypertension Task Force of PASCAR), along with colleagues from PASCAR. A full list of all the attendees is included in Annexure B

Program partners present during the meet were:



Figure 3: Program Partners.

SESSION DESIGN

The sessions for the International Expert Meet of CCMH Cycle were designed in a systematic and methodical manner in order to achieve the objectives of the meet. The meeting was broadly divided into two main sessions; Program Overview Session and Module Review Sessions. The meet commenced with a welcome address and opening remarks by Prof. Dzudie Anastase (Chair of the Hypertension Task Force for PASCAR) followed by individual introduction of the experts. Sessions pertaining to the CCMH Cycle program and various modalities were discussed which included the following presentations:

I**Overview of Hypertension in Africa:**

Prof Dzudie Anastase

II**Program Overview of CCMH Cycle:**

Dr Sandeep Bhalla

III**CCMH Curriculum design & protocol and Group work guidelines:**

Dr Arun Jose

IV**Overview of PHFI's Capacity Building Initiative:**

Dr Sandeep Bhalla

A video conference call was made between the CCMH partners and the editor of the Cardiovascular Journal for Africa (PASCAR's mouth piece and local news outlet).

The second set of the plenary sessions were the Module Review Sessions, which comprised of review and discussion by the experts on the draft course curriculum. The experts were divided into groups which also included one rapporteur to facilitate the discussion and record notes. To streamline the process even further, each group was allocated a separate module to review and propose feedback upon, so as to reach mutual consensus amongst the group for that particular module.

After the initial group discussions, one representative from each group presented their respective modules to the other experts so as to get their suggestions and inputs. The feedback was noted by respective rapporteur to be collated and incorporated in the modules.

The list of groups of the experts including the rapporteur and the corresponding topic is attached in Annexure.





EXPERTS AT WORK





BRAINSTORMING SESSIONS



PROCEEDINGS OF THE MEET

Prof Anastase Dzudie in his opening remarks welcomed the gathering and thanked all the stakeholders for their support and commitment. He gave a brief overview of hypertension in Africa and the roadmap to achieving 25% control by 2025. In his remarks, he stressed upon target 6 of the 10 point PASCAR action plan which is promoting a task-shifting/sharing approach (shift paradigm) with CCMH Africa being one of such initiatives. He apprised the gathering about the vast coverage of these courses with enormous success in India and explained how a similar approach will be customized in an African context.

Prof Neil Poulter in his introduction familiarized the gathering about the International Society of Hypertension. He talked about the ISH being committed to promoting and encouraging the advancement of scientific research and its application for the prevention & management of cardiovascular diseases around the world. He added that the two key aspirations of the ISH are to support younger members (organization members) and reach out to as many countries globally as possible (where he particularly highlighted the MMM survey).

Prof Francesco Cappuccio presented

opening remarks on behalf of the BIHS, highlighting briefly the partnership between BIHS and CCMH and the journey in making this initiative possible. He further went on to say that it's been a total collaborative effort by BIHS with a vision to educate.

Dr. Saad Subhani in his opening address gave a brief presentation of the organization PASCAR, expatiating that it is an organization of physicians and surgeons across Africa involved in prevention and treatment of cardiovascular diseases. He further spoke briefly on the organigram, with special focus on the task forces. He finally presented a copy of the letter which had led to the creation of the organization. Prof Elijah Ogola who was the chairperson for the meet welcomed the audience to Nairobi and congratulated the PHFI for their marvelous work and relentless effort to share their ideas with other partners.

Dr. Sandeep Bhalla (Program director CCCI) gave the program overview of the CCMH Africa. He began by welcoming the dignitaries and all the guests attending the meet. He spoke briefly about the journey of the this capacity building initiative started by the PHFI in the year 2015 and how the program received an overwhelming response from participants and announced



Release of CCMH Africa Course Brochure

with great pleasure the compliance rate success of the program and how several government institutions are adopting the program for the training of their medical officers. He outlined the salient features of the course and briefed the audience on the course modalities.

In his second presentation he gave a rundown of the course implementation and proposed methods to facilitate this task. A video conference call was made between the CCMH partners and the editor in chief of the Cardiovascular Journal for Africa (PASCAR's mouth piece and local news outlet) where an in-depth discussion of the course outline, objectives and ambitions were discussed. Each partner explained her organization's contribution to the course

and how they aimed for a collative educational review. The laudable effort was well comprehended and applauded by the CVJA editor who promised her support and collaboration. This was followed by the release of the CCMH Africa course

brochure and a gift session between the PHFI and PASCAR executive partners.

Later, Dr. Arun Jose () apprised the gathering about the CCMH Africa course design protocol and group working guidelines.

To accomplish the objectives of the meet, four group experts were formed for the 1st day to review modules 1, 2, 3 and 4 with one rapporteur from each group to facilitate the discussion and to record notes and comments. Each group pf experts then reviewed the designated module and suggested changes in that particular module. In the final session, one representative from each group presented their suggested changes to the rest of the audience for their feedback. The session witnessed intense discussions and general consensus was sought on each topic.



Gift sessions between PHI partners and other contributing partners

After the in-depth brainstorming sessions, the curriculum was reviewed meticulously and the active involvement of the experts was noteworthy. The meeting concluded with closing remarks for Day 1 by Mr. George Nel (Chief Executive officer of PASCAR) followed by networking dinner.

The second day of the international expert consultation meet started with a brief overview of day 2 activities by Dr. Calypse Ngwasiri (Course Administrator CCMH Africa) followed by an open discussion on

the possible challenges faced during the roll out and program implementation. After brief discussion and suggestions by the experts, the challenges were collectively grouped into:

- Creation of an organizational structure
- Translation of the PASCAR roadmap and CCMH modules into Arabic French/Portuguese
- Format for reporting and feedback from regional faculty and observers
- Funding
- Documentation

Collectively, it was agreed that proposed solutions will be country dependent and every expert was urged to study their country's situation and provide feedback during the Regional Faculty meet.

This was followed by the review session for module 5,6,7,8 and 9. The experts were again divided into five groups with one rapporteur to facilitate discussion and for recording notes. One representative from each group presented their suggested changes to the rest of the audience for their feedback in

the same manner as day1.

Prof. Francesco Cappuccio and Prof. Anastase Dzudie gave their closing remarks and thanked the esteemed gathering. The meeting concluded with networking dinner



CURRICULUM OVERVIEW

The groups of international and continental experts formed comprised of four to five experts along with one rapporteur to facilitate. Each group assessed the allotted modules and presented their feedbacks which helped in the restructuring of the modules.

Based on the discussion, major key revisions in the curriculum were as follows:

- Readjustment of content and slides
- To incorporate more African pictures and

case studies

After these keynotes, suggestions were made regarding the restructuring of the titles and sub-titles of the modules, while new topics were proposed, addition of more case studies and African images.

The compilation of the feedbacks pertaining to each module was collated by the course administrator to be later used as a foundation for finalization of the curriculum.

MODULE 1

Introductory Overview of HTN

- 1 A lot of contextualization was made with regard to the epidemiology of hypertension in Africa citing appropriate studies where possible.
- 2 Section of suboptimal management of htn was replaced with African data.
- 3 Slides on guidelines for the management of htn were replaced data from the roadmap.

MODULE 2

Screening and Initial Evaluation of HTN

- 1 Slides deemed inappropriate for the module were deleted
- 2 Section on the procedure for BP measurement was removed and created as an appendix together with video references from the ISH and BISH.
- 3 It was suggested that units be given both in mg/dl and mmol/l
- 4 Section on Q-risk scores for evaluation of htn was replaced

with WHO/ISH risk score which is appropriate for the African setting.

5 Contentious argument on the need to discourage use of wrist BP devices which have been shown to be inaccurate.

6 Images modified and changed/ data contextualized to the African scenario where necessary.

7 Additional information on different BP Profiles..... white coat, masked etc.

MODULE 3

Non-Pharmacological Management of HTN

1 A general comment was made to change the module title to Health behaviors and lifestyle in the treatment of hypertension.

2 It was suggested that the term 'healthy diet' should be explained to mean low saturated fat and high fiber.

3 Few changes were made to the order of the sub-titles, keeping diet related factors together.

4 It was suggested that the GBD data of NCDs, particularly CVD

should be updated to more recent publications.

5 It was advised that the PURE data be used as provides information not only on salt and its actual correlation to at BP but also actual events.

6 Pictures and examples of common African food remedies/ exercises were introduced

MODULE 4

Approach to Pharmacotherapy of HTN- Part 1

1 The continental panel suggested that more emphasis should be laid on the ASCVD and WHO/ISH risk scores as they are more commonly applied in SSA.

2 Slides on various treatment algorithms were revised and updated with reference to the PASCAR roadmap algorithm.

3 It was also agreed that the roadmap recommendation for patient referral be adopted in this module

4 Slides 49-53 were substituted with slides on the Cochrane Collaboration.

MODULE 5

Approach Pharmacotherapy of HTN – Part 2

- 1 Terms used for the various drug classes be kept uniform throughout the module eg Aldosterone antagonists, thiazide-like diuretics, etc.
- 2 It was also suggested that the drug classes be arranged in alphabetical order starting with those available in Africa while removing those unavailable.
- 3 The expert panel made suggested changes in the dosing of various drugs.
- 4 Clinical images pertaining to an African context were suggested.
- 5 Formatting errors were flagged by the panel and changes were incorporated according to the suggestions.
- 6 Some slides deemed irrelevant and confusing to the PCPs were dropped.

MODULE 6

Complications of HTN

- 1 General suggestion was that the order of the sub-topics should be changed to present acute and life threatening conditions first; Stroke-CKD- HF-CAD- Retinopathy- AAD.
- 2 Few formatting issues brought to notice were changed.

It was suggested that the slide on HF etiologies be replaced with the THESUS-HF.
- 3
- 4 The link to calculate eGFR needs to be provided for PCPs with a correction formula for blacks/sex.
- 5 The AASK trial was reviewed for figures pertaining to the African population regarding absolute benefits on BP reduction and the NNT with eGFR< 60ml/min.
- 6 Laboratory investigations which are unavailable in many primary health care centers were excluded from the slides eg serum uric acid.

MODULE 7

HTN Management in Special Populations and Difficult – To- Treat HTN

- 1 HIV infection and Chronic inflammatory disease was added to the list of sub-titles.
- 2 The experts suggested that Osler's sign and PA/PRA ratio are confusing and should be deleted.
- 3 A few changes were suggested to the slides on OSA pertaining to the scoring system and classification (Epworth Sleepiness Score was preferred to the STOP-BANG score).
- 4 Slides on renovascular hypertension were replaced with those of renal parenchymal disease as it is more common in Africa.
- 5 Graphs and figures of resistant hypertension and hypertension in children were replaced by more recent studies carried out in Africa.
- 6 It was suggested that more information be added on Htn and CKD, HIV infection and Htn and Post-operative hypertension and the expert panel agreed same

MODULE 8

Innovations in the management of HTN

- 1 A general comment was made to provide references on the cardioprotective advantages of ASPIRIN.
- 2 Clinical images pertaining to the African context were suggested.

MODULE 9

Setting Up of a Comprehensive Life Style Clinic

- 1 Prevalence of healthy life-styles in Africa was added while Alcohol abuse was included as a modifiable risk factor.
- 2 Section on the pyramid of balanced diet was replaced with African meals.
- 3 Some slides deemed irrelevant to the PCPs were dropped.

Prof Neil Poulter
giving opening
remarks on
behalf of ISH.



**Prof Francesco
Cappuccio** giving
opening remarks
on behalf of
BISH.



Dr Saad Subhani
giving opening
remarks on
behalf of
PASCAR





Prof Anastase Dzudie
addressing the August
gathering



Dr Sandeep Bhalla giving his
opening remarks on behalf of
PHFI



**Mr George
Nel** giving his
opening remarks



Video
Conference
Call between
Partners and
Editor of CVJA



Dr Arun Jose
giving a brief
on curriculum
design &
protocol & group
work guidelines



Module Review Group I

(L to R) Prof
Chritian Delles,
Prof Albertino
Damasceno, Prof
Euloge Kramoh, Dr
Harun Otieno and
Ms Loise Nyanjau



Module Review
Group II
(L to R) Dr
Shongwe
Stevens, Prof
Mahmoud Sani
and Dr Brice
Kitio



Module Review
Group IV

(L to R) Dr Awad
Mohamed,
Prof Ibrahim
Toure, Dr Amha
Weldehana and
Prof Neil Poulter



Module Review
Group V

(L to R) Dr Saad
Subhani, Prof
Andre Pascal, Prof
Benedict Anisiuba,
Prof Jean-Baptiste
Anzouan and Prof
Habib Gamra



Module Review
 III L to R: Prof.
 Ogola Elijah,
 Prof. Francesco
 Cappuccio and
 Dr. Dike Ojji



**Prof Mahmoud
 Sani** delivering
 the revisions for
 Module 2

Audience listening
 to Prof Mahmoud
 Sani delivering
 the revisions for
 Module 2



**Prof Anastase
Dzudie** issuing
vote of thanks



Group Picture

Group Picture



DAY 1 – 25th February, 2018

8:30am to 9:00am

REGISTRATION

TIME

TOPIC

PRESENTER

9:00 am to 9:10 am

Welcome Address

Prof. Anastase Dzudie

9:10 am to 9:25 am

Pan African Society of Cardiology

Dr Saad Subhani

9:25 am to 9:40 am

Public Health Foundation of India

Prof. D. Prabhakaran

9:40 am to 9:55 am

International Society of Hypertension

Prof. N. Poulter

9:55 am to 10:10 am

British and Irish Hypertension Society

Prof Francesco Cappuccio

10:10 am to 10:20 am

Release of CCMH Course Brochure and Group Photograph

10:20 am to 10:50 am

Press Conference

10:50 am to 11:00 am

TEA BREAK

11:00 am to 11:30 am

CCMH - Overview of the initiative in India

Dr. Sandeep Bhalla

12:00 pm to 12:40 pm

Monitoring and Evaluation guidelines, CCMH App

Dr. Sandeep Bhalla and Dr Arun Jose

12:40 pm to 1:15 pm

Curriculum design & protocol, Session Conduction Guidelines

Dr. Arun Jose

1:15 pm to 2:00 pm

LUNCH

MODULE REVIEW SESSIONS

2:00 pm to 2:15 pm

Module Review Groups and Guidelines

Dr. Arun Jose

2:15 pm to 3:45 pm

Curriculum Review by groups

All 4 groups

3:45 pm to 4:45 pm

Presentation of content changes – Module 1

National Expert Group I

4:45 pm to 5:45 pm

Presentation of content changes - Module 2

National Expert Group- II

5:45 pm to 6:45 pm

Presentation of content changes – Module 3

National Expert Group- III

6:45 pm to 7:45 pm

Presentation of content changes – Module 4

National Expert Group- IV

7:45 pm to 8:00 pm

Concluding Remarks for Day 1

PASCAR representative- TBD

8:00 pm Onwards

Networking Dinner

DAY 2 – 26th February, 2018

8:00 am to 9:25 am

BREAKFAST

TIME

TOPIC

PRESENTER

8:30am to 8:35am

Brief overview of Day 2 activities

Dr. Calypse Ngwasiri

8:35am to 10:00am

PASCAR roll out plan

Dr. Calypse Ngwasiri

MODULE REVIEW SESSIONS

10:00 am to 11:00 am

Curriculum Review by groups

All 5 groups

11:00 am to 11:15 am

Tea Break

11:15 am to 12:15 pm

Presentation of content changes –
Module 5

National Expert Group I

12:15 pm to 1:15 pm

Presentation of content changes
- Module 6

National Expert Group- II

1:15 pm to 2:00 pm

Lunch

2:00 pm to 3:00 pm

Presentation of content changes –
Module 7

National Expert Group- III

3:00 pm to 4:00 pm

Presentation of content changes –
Module 8

National Expert Group- IV

4:00 pm to 5:00 pm

Presentation of content changes –
Module 9

National Expert Group- V

6:00 pm to 6:15 pm

Concluding Remarks and Vote of
thanksProf Anastase Dzudie
Prof Francesco Cappuccio

LIST OF ATTENDEES

S.No	Name	Organization
1	Dr Amha Weldehana	Addis Ababa University Medical School
2	Prof Francesco Cappuccio	British & Irish Society of Hypertension
3	Prof Christian Delles	British & Irish Society of Hypertension
4	Dr. Calypse Ngwasiri	Clinical Education Networking & Consultancy
5	Dr Brice Kitio	Guidelines Advisory Network for Africa
6	Prof Neil Poulter	International Society of Hypertension
7	Dr. Bernard Gitura	Kenyan Cardiac Society
8	Ms. Loise Nyanjau	Kenyan Ministry of Public Health
9	Ms. Grace Kariuki	Kenyan Ministry of Public Health
10	Prof. Anastase Dzudie	Pan-African Society of Cardiology
11	Prof Elijah Ogola	Pan-African Society of Cardiology
12	Prof Benedict Anisiuba	Pan-African Society of Cardiology
13	Prof Albertino Damasceno	Pan-African Society of Cardiology
14	Prof Habib Gamra	Pan-African Society of Cardiology
15	Prof Ibrahim Toure	Pan-African Society of Cardiology
16	Prof Jean-Baptiste Anzouan	Pan-African Society of Cardiology
17	Prof Andre Pascal Kegne	Pan-African Society of Cardiology
18	Prof Euloge Kramoh	Pan-African Society of Cardiology
19	Prof Mahmoud Sani	Pan-African Society of Cardiology
20	Dr. Harun Otieno	Pan-African Society of Cardiology
21	Dr. Dike Ojji	Pan-African Society of Cardiology
22	Dr. Awad Mohamed	Pan-African Society of Cardiology
23	Dr. Saad Subhani	Pan-African Society of Cardiology
24	Mr. George Nel	Pan-African Society of Cardiology
25	Dr. Arun Jose	Public Health Foundation India
26	Dr. Sandeep Bhalla	Public Health Foundation India
27	Dr. Shongwe Steven	WHO African Region

MODULE REVIEW GROUPS

Continental National Expert Group 1

SURNAME

- | | |
|---|-----------------------|
| 1 | Brice Kitio |
| 2 | Albertino Damasceno |
| 3 | Christian Delles |
| 4 | Jean-Baptiste Anzouan |
| 5 | Harun Otieno |
| 6 | Loise Nyanjau |

Module Number 05

Pharmacotherapy of Hypertension – Part 2

Module Number 09

Setting up of a comprehensive life style clinic

Continental National Expert Group 2

SURNAME

- | | |
|---|---------------------|
| 1 | Elija Ogola |
| 2 | Dike Ojji |
| 3 | Francesco Cappuccio |

Module Number 03

Non- Pharmacological Management of Hypertension

Module Number 06

Complications of Hypertension

Continental National Expert Group 3

SURNAME

- | | |
|---|-----------------|
| 1 | Anastase Dzudie |
| 2 | Neil Poulter |
| 3 | Amha Weldehana |
| 4 | Ibrahim Toure |
| 5 | Awad Mohamed |

Module Number 04

Pharmacotherapy of Hypertension – Part 1

Module Number 07

Hypertension management in special populations and Difficult-To-Treat hypertension

Continental National Expert Group 4

SURNAME

1 Saad Subhani

2 Mahmoud Sani

3 Habib Gamra

Module Number 02

Screening and Initial Evaluation and Hypertension

Module Number 08

Innovations in the management of hypertension

Continental National Expert Group 5

SURNAME

1 Benedict Anisiuba

2 Euloge Kramoh

3 Grace Kariuki

4 Andre Pascal Kegne

Module Number 01

Introductory Overview of Hypertension



Disclaimer: PASCAR, PHFI, ISH & BISH, hereby decalre that this jointly designated “ Certificate Course in Management of Hypertension for Africa” is not a recognized medical qualification. PASCAR, PHFI, ISH & BISH offering this course hereby decalre that they are not a medical college or a university and are offering this course in accordance with the provisions of the Pan-African Society of Cardiology Grants commission Act. Kindly note that the CCMH is not a degree but only a certificate course with the objective to train doctors and nurses in the early diagnosis, prevention and management of hypertension. Successful participants are advised not to mention/ call themselves as 'Hypertsnion Specialists' anywhere after the completion of the course. Participants are strongly advised not to use the affix 'CCMH' adjacent to their names or in their boards/displays claiming to be hypertension specialists.

Decision taken by PASCAR for selection and enrollment of participants will be final.