Public Health Education in East & Central Africa

A Situational Analysis

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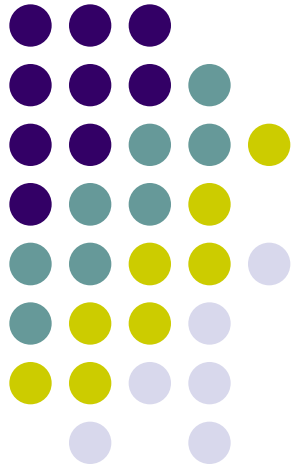

Objectives

- Described the environment & policy context within which PH training is carried out.
- Examined the present academic curricula using the standard ASPH criteria as a benchmark.
- Examined the resources on hand to support the current curriculum and areas of shortfall

Methods

- This study employed:
  - In-depth interviews with key stakeholders
  - extensive desk review of grey literature, including administrative documents, and SPH websites.
- Interviews were conducted at the schools except Ethiopia where we conducted telephone interviews.
- **Interviewees included:**
  - Deans/Directors
  - Heads of Department
  - SPH faculty (professors and assistants),
  - Administrators

Respondents


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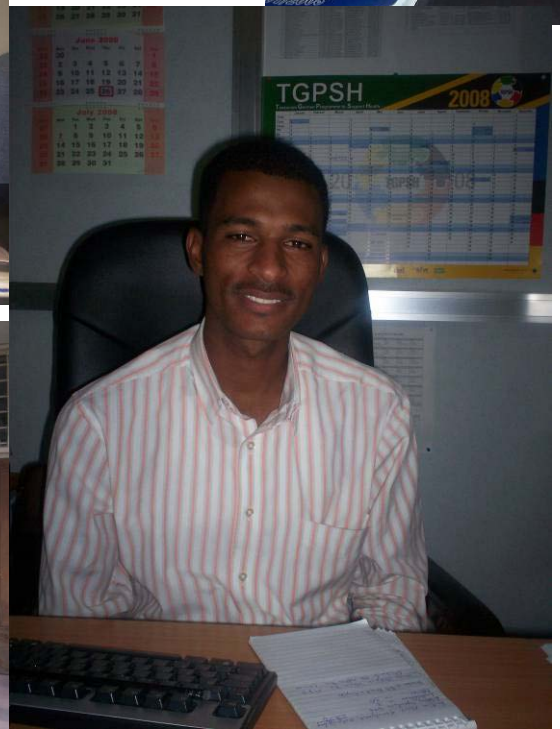
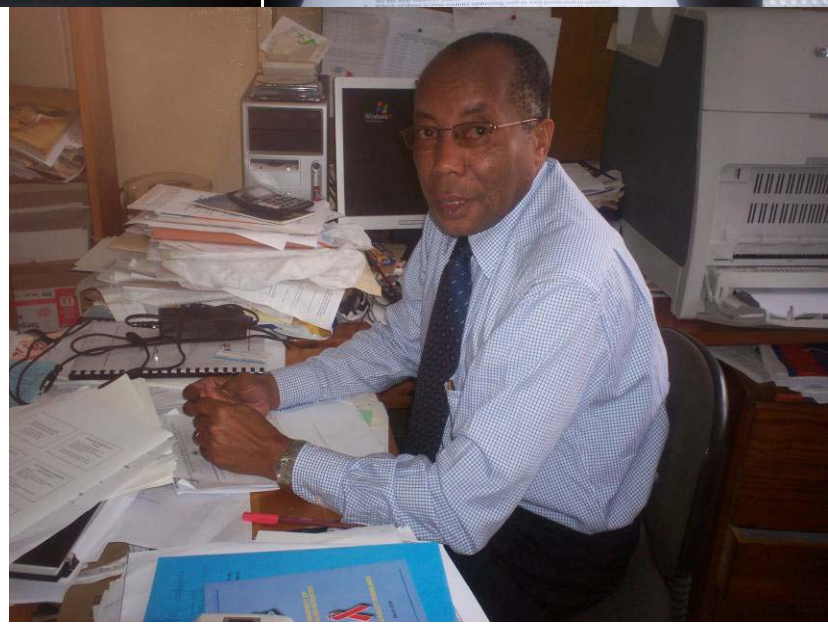
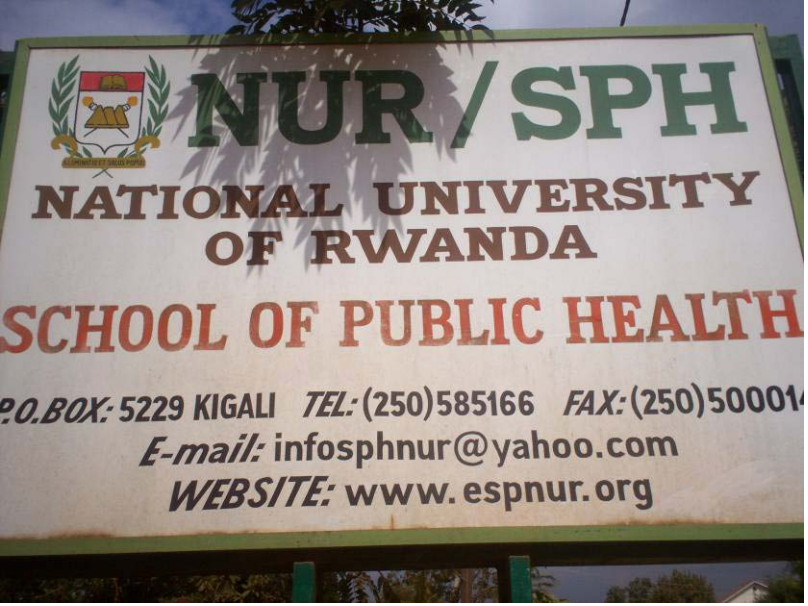

TGPSH
2008

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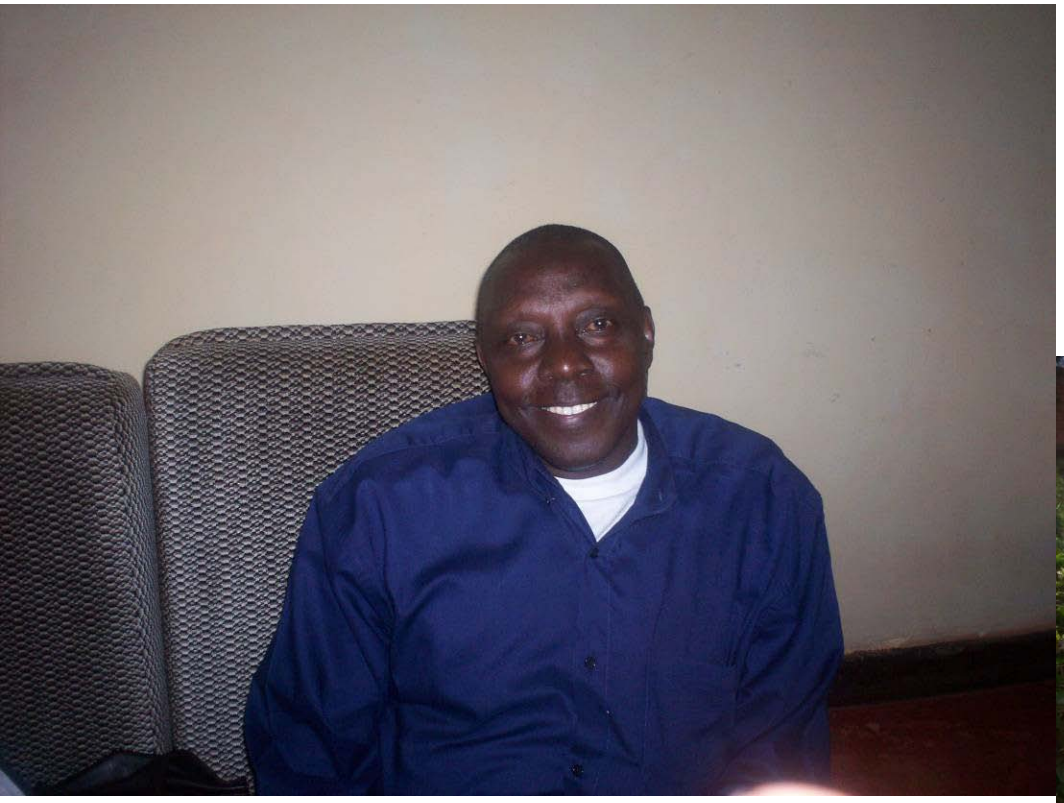



URUGAGA RW'ABAGANGA
BO MURWANDA
ORDRE DES MEDECINS
DU RWANDA (OMR)
RWANDA MEDICAL COUNCIL
(RMC)

Makerere University
School of Public Health

Respondents at Makerere University School of Public Health

Findings

- Public health context
- Academic environment
- Governance issues
- Curriculum assessment

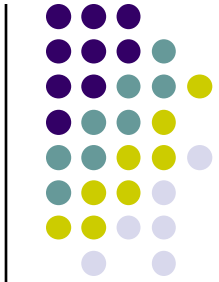
Public health context

- Public health challenges
- Relationships with MOH
- With training institutions
  - Within the country
  - Regional
  - Overseas
- Barriers & solutions

Public health challenges

- Infectious diseases
- Non-communicable diseases
- Maternal mortality
- Infant mortality
- Access to health services
- Human resources for health
- Funds for health e.g. last year alone the funds for HIV were 3 times the total MOH budget.
- Disasters

Position of the country in addressing the challenges

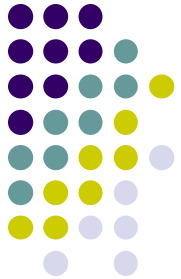


- Attempting to address all challenges at the same time & yet have limited resources e.g.
  - HR
  - Finances

Relationship with the MOH

- In 6/7 SPH the MPH prog were in response to a request by the MOH.
- Overall, informal relationships exist with the MOH esp at individual level.
- Most respondents felt that this could be made more formal by marketing the SPH.

Relationships with other training Institutions



- Local- Most SPH saw other institutions within their countries as competitors.
  - This was true across Depts, across schools/faculty within the same university.
- Regional – more open at the regional and thought this could be made stronger thru exchange of faculty & students.
- Overseas- few collaborations

Academic environment

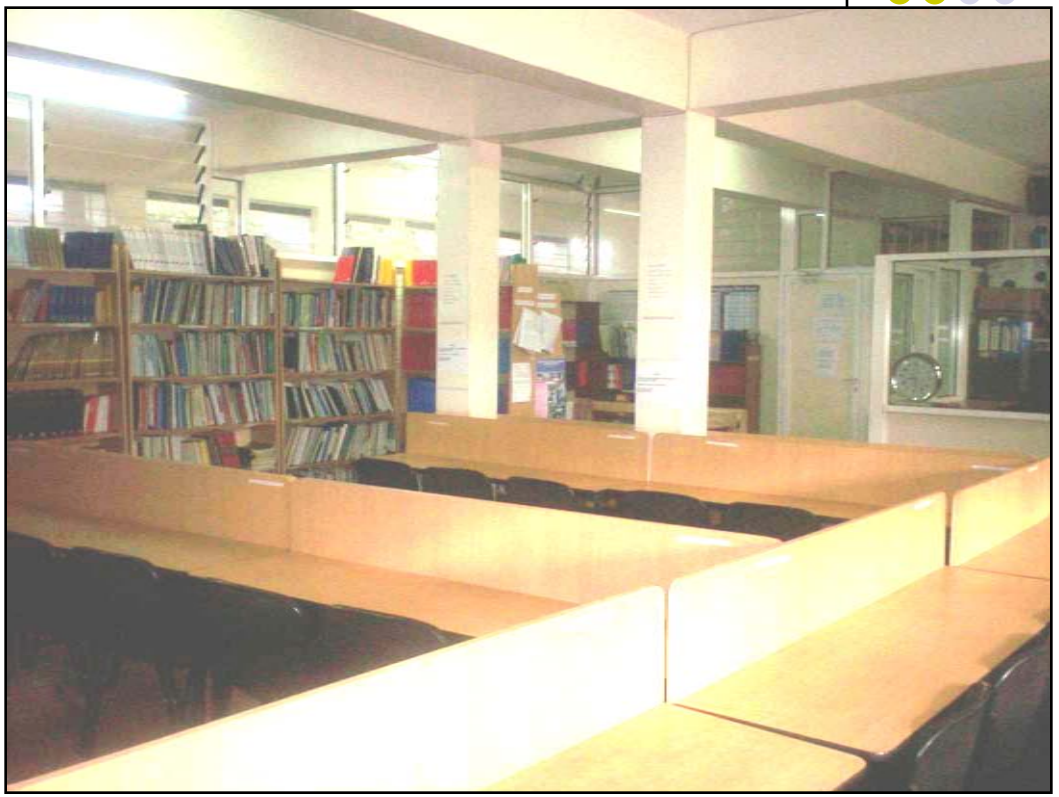
- Human resource
- Infrastructure

Human resource

Number of Academic Staff by School

Post/Title	SPH						Total
	Muh	Mak	Rwa	Nair	Moi	Kinsh	
Professor	2	0	0	1	0	9	12
Associate Professor	5	4	2	4	1	0	16
Senior Lecturer	10	6	1	3	3	0	23
Lecturer	11	10	5	7	10	7	50
Assistant Lecturer	13	18	3	0	3	23	60
Adjunct/Fellows	0	6	0	0	4	0	10
Teaching Assistants	8	6	4	0	0	0	18
Total	49	50	15	15	21	39	189
Establishment	-	58	60	19	34	-	171+

Infrastructure



Inside the resource centre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Available Infrastructure by School

Facility	Number of facilities (capacity)					
	Muh	Mak	Rwa	Nair	Moi	Kinsh
Laboratories	3 (90)	1 (7)		0	0	2 (60)
Lecture rooms/theatres	4 (120)	5 (190)		2 (50)	0	3 (90)
Offices and other rooms	0	43 (94)		19 (24)	5 (6)	>20 (51)
Library/resource centre	0	1 (33)	1 (40)	1 (10)	1 (10)	1 (not sit in)
Data management centre/computer lab	1 ()	1 (15)		1 (10)	0	2 (28)
Field attachment/training sites	0	14 (28)		0	0	1
Health Centre	0	1		3	18	0
Total	7 (210)	66 (368)		26 (97)	34	29 (229)

Financial

- Gov’t pays all salaries though limited
- Collaborations/consultancies

Governance

- Status- 3/7 schools are fully autonomous
- Positive
  - Democratic with regular change of leadership
  - Financial autonomy

- Negative
  - Limited allocation funds
  - Delays in communication
  - PH is not a priority in the University

Public Health training

- Competencies
- Weaknesses
- Strengths
- opportunities

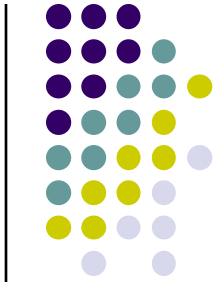
Competencies

- Structure of the program
- Domains

Structure of program

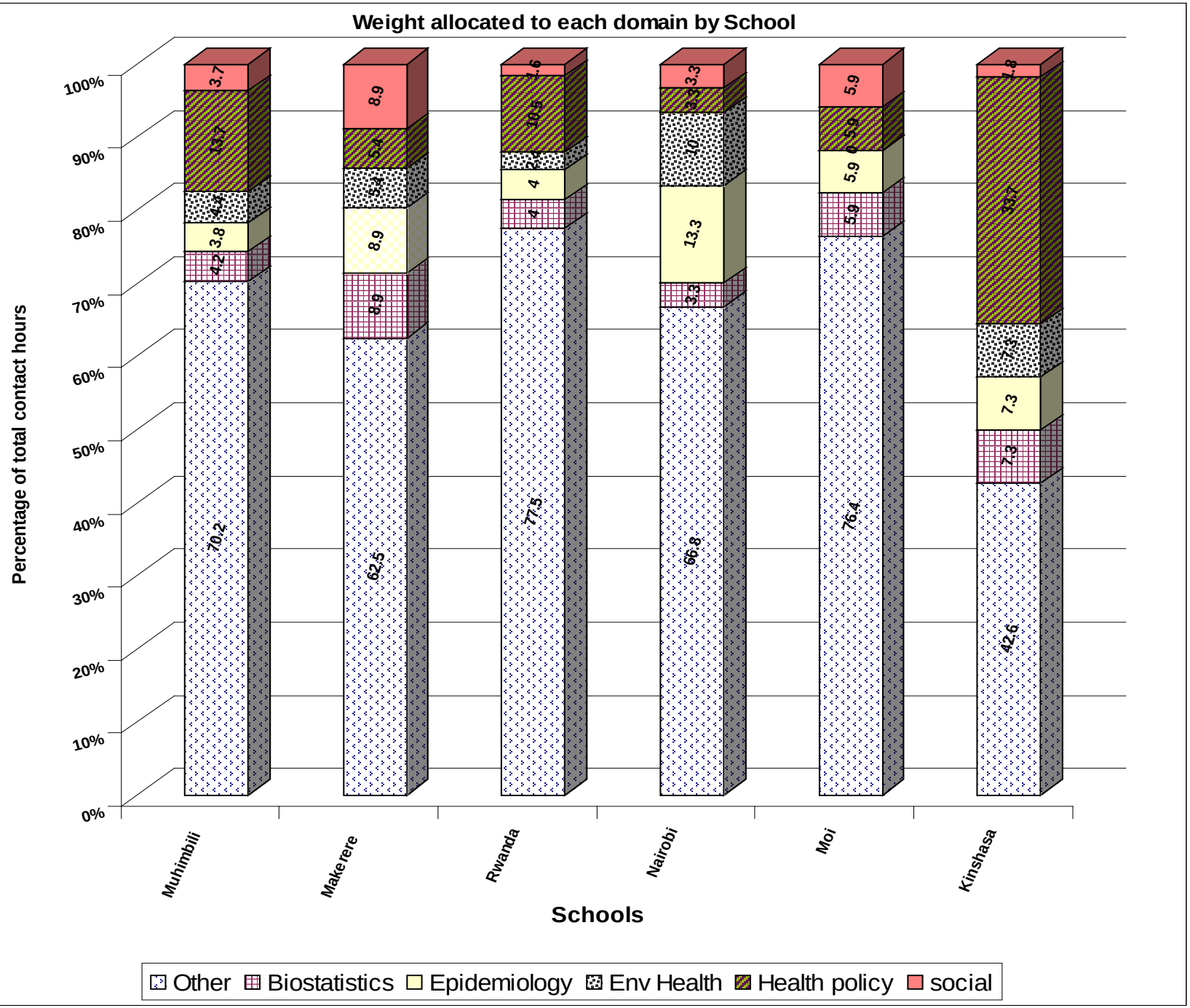
School	Duration (yrs)	Nature
Muhimbili	1	Modules- integrated
MUSPH (Fulltime & DE)	2 & 3 (resp)	All is compulsory
NURSPH Part-time & Evening	2	All is compulsory
Moi –fulltime Part-time	2 5	Core & tracks
Nairobi (evening- part time)	2	Core & tracks
Kinshasa Executive (evening) regular	 2 1	All is compulsory
Jimma	2	Tracks

Domains



- Duration or contact hours by discipline (weight)

Competencies/skills acquired by graduates


Weight allocated to each domain by School
Percentage of total contact hours
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
3.7
13.7
4.4
3.8
4.2
70.2
8.9
5.4
8.9
8.9
62.5
1.6
10.5
4
4
77.5
3.3
3.3
10
13.3
3.3
66.8
5.9
5.9
5.9
5.9
76.4
1.8
35.1
7.3
7.3
7.3
42.6
Muhimbili
Makerere
Rwanda
Nairobi
Moi
Kinshasa
Schools
Other
Biostatistics
Epidemiology
Env Health
Health policy
social

Skills acquired by discipline

COMPETENCIES	Schools					
	Yes or No					
	Muh	Mak	Rwa	Nair	Moi	Kinsh
BIOSTATISTICS	Y	Y	Y	Y	Y	Y
Describe role of Biostatistics in Public health	Y	Y	Y	Y	Y	Y
Describe concepts of Probability, random variation and other statistical probability distributions.	Y	Y	Y	Y	Y	Y
Describe statistical methods	Y	Y	Y	Y	Y	Y
Distinguish between scales of measurement and their implications	Y	Y	Y	Y	Y	Y
Summarize descriptive public health data	Y	Y	Y	Y	Y	Y
Apply statistical methods for inference	Y	Y	Y	Y	Y	Y
Apply descriptive and inferential methodologies by study design.	Y	Y	Y	Y	-	Y
Apply basic informatics techniques with vital statistics & public health records in description of public health characteristics in research and evaluation.	Y	Y	Y	Y	-	Y
Interpret results of statistical analyses found in public health studies.	Y	Y	Y	Y	Y	Y
Develop written and oral presentations based on statistical analyses for both public health professionals and educated lay audiences.	N	Y	N	N	-	[28] N

COMPETENCIES	SCHOOLS					
	Yes or No					
	Muh	Mak	Rwa	Nair	Moi	Kinsh
EPIDEMIOLOGY	Y	Y	Y	Y	Y	Y
Identify key sources of data	Y	Y	Y	Y	Y	Y
Identify the principles and limitations of public health screening programs	Y	Y	N	Y	Y	N
Describe public health problem in terms of magnitude, person, time and place.	Y	Y	Y	Y	Y	Y
Explain the importance of epidemiology for informing scientific, ethical, economic and political discussion of health issues	N	Y	Y	Y	N	Y
Discuss the ethical and legal principles pertaining to the collection, maintenance, use and dissemination of epidemiological data.	Y	Y	N	N	Y	Y
Apply the basic terminology and definitions of epidemiology	Y	Y	Y	Y	Y	Y
Calculate basic epidemiology measures	Y	Y	Y	Y	Y	Y
Communicate epidemiologic information to lay and professional audiences	N	Y	N	N	N	N
Draw appropriate inferences from epidemiologic data.	Y	Y	Y	Y	N	Y
Evaluate the strengths and limitations of epidemiologic data.	Y	Y	Y	Y	N	Y

COMPETENCIES	Schools					
	Yes or No					
	Muh	Mak	Rwa	Nair	Moi	Kinsh
ENVIRONMENTAL HEALTH SCIENCES	Y	Y	Y	Y	N	Y
Describe the direct and indirect human, ecological and safety effects of major environmental and occupational agents.	N	Y	Y	Y		Y
Describe genetic, physiologic and psychosocial factors that affect susceptibility to adverse health outcomes following exposure to hazards	N	P	P	N		N
Describe national regulatory programs, guidelines and authorities that control environmental health issues	Y	Y	N	N		Y
Specify current environmental risk assessment methods	Y	Y	Y	Y		Y
Specify approaches for assessing, preventing and controlling environmental hazards	Y	Y	Y	Y		Y
Explain the mechanisms of toxicity in eliciting a toxic response to various environmental exposures.	Y	Y	N	Y		Y
Discuss various risk management and risk communication approaches in relation to environmental justice and equity	Y	Y	N	N		Y

COMPETENCIES	Schools					
	Yes or No					
	Muh	Mak	Rwa	Nair	Moi	Kinsh
HEALTH POLICY AND MANAGEMENT	Y	Y	Y	Y	Y	Y
Identify the main components of the organization, financing, & delivery of health services & public health systems	Y	Y	Y	Y	Y	Y
Describe the legal/ethical basis for public health & health services	N	N	-	N	N	Y
Explain methods of ensuring community health safety & preparedness	N	N	Y	N	N	N
Discuss the policy process for improving the health status of populations	Y	Y	Y	N	N	Y
Apply principles of strategic planning, development, budgeting, management / evaluation in organizational & community initiatives	Y	Y	Y	P	Y	Y
Apply principles of strategic planning & marketing to public health	Y	Y	Y	P	Y	Y
Apply quality & performance improvement concepts to address organizational performance issues	Y	Y	Y	N	Y	Y
Apply systems thinking for resolving organizational problems	Y	Y	Y	Y	Y	N
Communicate health policy & management issues using appropriate channels & technologies	Y	Y	Y	N	Y	Y
Demonstrate leadership skills for building partnerships	Y	Y	N	N	Y	N

COMPETENCIES	Schools					
	Yes or No					
	Muh	Mak	Rwa	Nair	Moi	Kinsh
SOCIAL AND BEHAVIOURAL SCIENCES	Y[2]	Y	Y	Y	Y	Y
Identify basic theories, concepts & models from a range of social & behavioral disciplines that are used in public health research & practice	Y	Y	Y	Y	Y	Y
Identify the causes of social & behavioral factors that affect health of individuals & populations	Y	Y	Y	Y	Y	Y
Identify individual, organizational & community concerns, assets, resources & deficits for social & behavioral science interventions.	Y	Y	Y	Y	Y	Y
Identify critical stakeholders for planning, implementation & evaluation of public health programs, policies & interventions.	Y	Y	Y	Y	N	Y
Describe steps & procedures for the planning, implementation, & evaluation of public health programs, policies & interventions	Y	Y	Y	Y	N	Y (HP)
Describe the role of the social & community factors in both the onset & solution of public health problems	Y	Y	Y	Y	Y	Y
Describe the merits of social & behavioral science interventions & policies	Y	Y	Y	Y	N	Y
Apply evidence based approaches in the development & evaluation of social & behavioral science interventions.	Y	Y	Y	Y	N	Y
Specify multiple targets & levels of intervention for social & behavioral science programs & policies	Y	Y	Y	Y	N	Y

CROSS CUTTING COMPETENCIES	SPH					
	Yes or No					
	Muh	Mak	Rwa	Nair	Moi	Kinsh
Communication and informatics	Y	Y	Y	Y	Y	
Diversity and culture	Y	N	N	Y	Y	
Leadership	Y	Y	N	N	Y	
Public health biology	Y	Y	Y	Y	Y	
Professionalism	N	Y	Y	N	Y	
Program planning	N	N	N	N	N	
Systems thinking	Y	Y	Y	Y	Y	
OTHERS						
Dissertation	Y	Y	Y	Y	Y	Y

Weaknesses

- Duration of course- too short not enough time to grasp all the concepts, competencies & critical thinking. Little field work.
- Introduction of tracks- students feel like all courses are relevant but have to choose due to limited time.
- Structure of program- proposals are written before all the necessary courses are covered.

Weaknesses-2

- Limited resources
  - Infrastructure
  - Human resource- numbers, quality, diversity
  - Financial- little field work
  - Training/learning materials e.g. journals, internet, text books
- Political interference esp in the admission process.

Weaknesses with research

- Limited number, type and with little internal collaboration.
- Personnel
- Funding sources are few
- Local funding is limited and therefore the research agenda is donor driven.
- Competing demands for time
- Weak linkages with other academic institutions.

- Language barrier- particularly French speaking cannot compete favorably for grants in English.
- Few publications although many data sets.

Strengths

- In-service training in some SPH
- Demand driven training (by MOH)
- Amount of fieldwork for 3/6 schools

Opportunities

- Open to all disciplines and large resource from which to select HR for the SPH
- Restructuring of the institution could provide room for additional academic programs
- Short courses
- Collaboration with other Institutions
- DSS- multicenter trials
- Student faculty-exchange through HEALTH

- Increasing demand for public health training
- Increasing public health leadership.
- Land for developing infrastructure

Conclusions(1)

- Most of the MPH were initiated due to demand for PH graduates. This continues to increase annually.
- A critical mass of graduates within EA has not yet been realized i.e. health indices
- No follow up or tracer studies had been conducted for the MPH graduates

Conclusions(2)

- Opportunity for exchange of students, transfer units of credit.
- The graduates should have basic skills to tackle the regional PH challenges
- Weak or informal relationships with MOH, institutions both local & overseas.

Conclusions(3): Curricula

- Biostatistics, epidemiology, environmental health sciences, health policy and management, social and behavioural sciences were common to all curricula except at Moi at which environmental health was missing.
- These modules varied in content, emphasis, and depth.
- Program planning was not taught to any of the graduates.

Conclusions(4): Curricula

- communication skills could be strengthened.
- EH misses most of the basic concepts.
- HPM most curricula but do not emphasize the legal and ethical basis of PH services, community health safety & preparedness.
- All SPH had shortage of resources (human, financial and physical space).

Recommendations (1)

- Develop MPH curricula with core competencies to assure a well-prepared public health workforce to tackle regional challenges.
- The training resources should be shared within the region-synchronize courses.

Recommendations (2)

- To overcome spatial challenges SPH should consider distance education particularly if it is supported by technological advances in the region.
- Strengthen & create relationships with MOH, & other institutions (both local & overseas)
- Tracer studies- to maintain relevancy on the market.