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**manhiça**

# **Capacity Strengthening & Training Strategic**

## **Manhiça Health Research Center**

**Maria Nelia Manaca BSc, MPH, PhD,**  
**Accra, August 17<sup>th</sup> 2015**



- Laboratories
- Data center
- Other departments



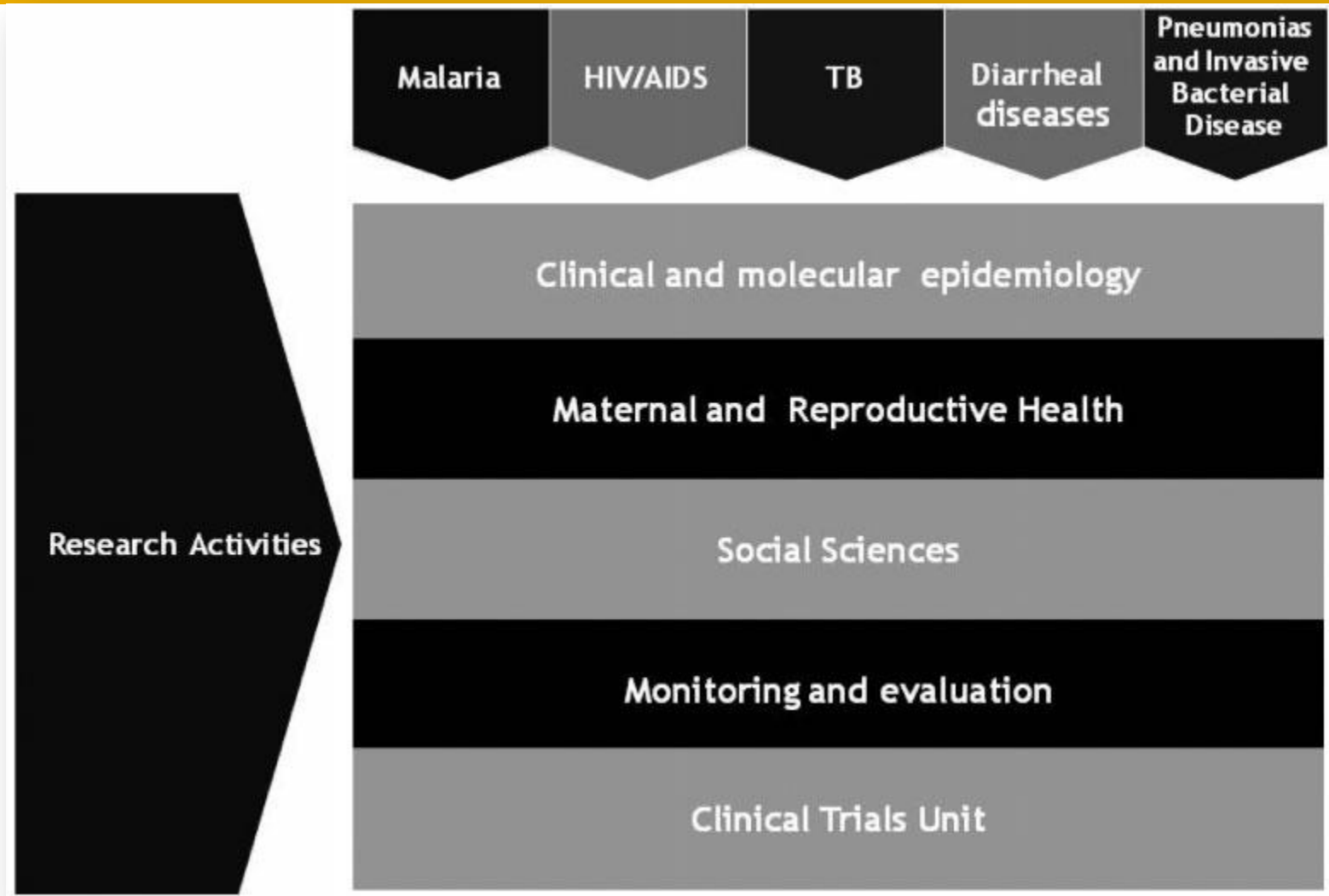
- Training Fellowship program
- Other training activities



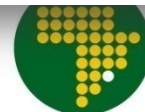
- Demographic surveillance
- Morbidity surveillance



# Research Matrix



*Sacoor et al 2013*



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# Capacity Strengthening and Training

- **Human Capacity**

Training and other capacity which allows the institution to have human resource capable to conduct research

- **Infrastructures**

Generates scientific evidence that can be used to inform the creation and updating of health policies

- **Communication**

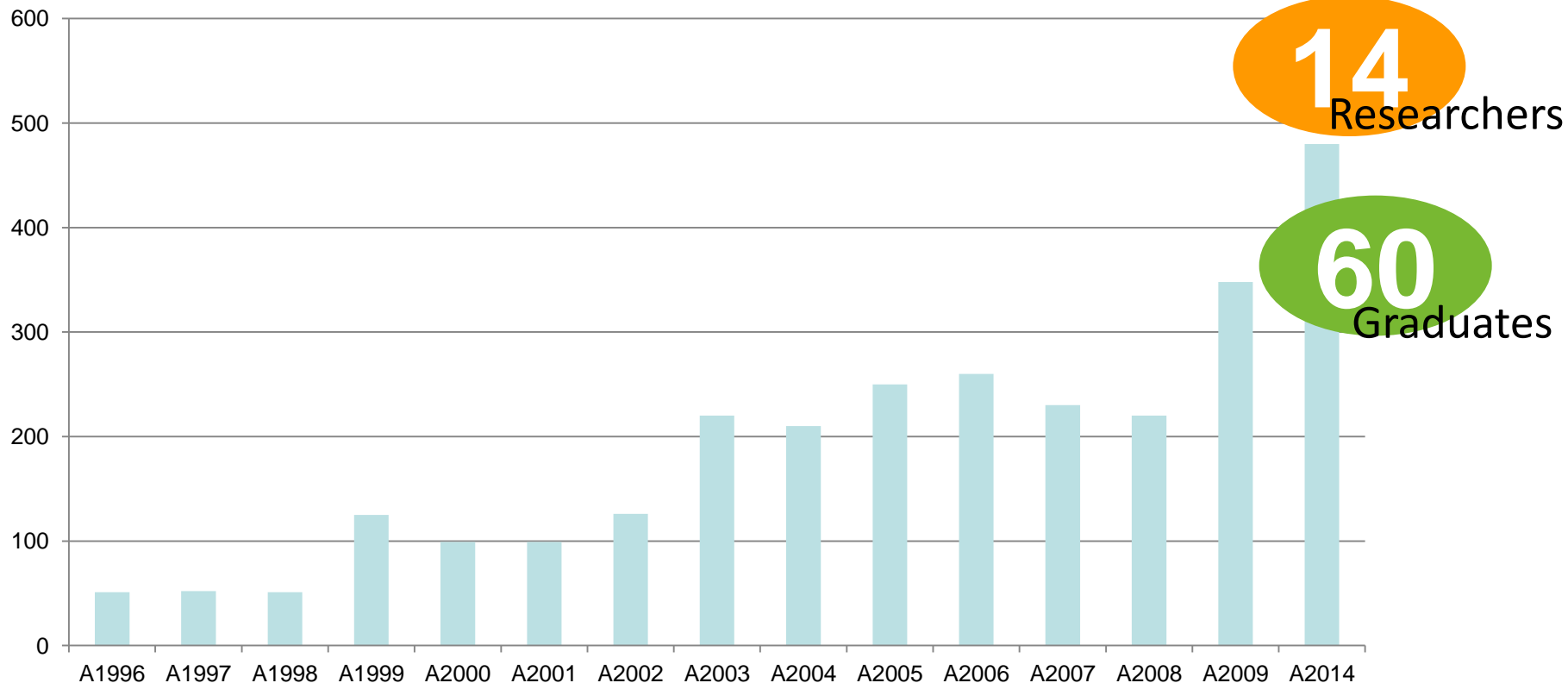
Promotion of corporate image;

Strengthen the communication with the community

Dissemination of the center's research activity

# Human capacity

# Human resource trend




- ✓ Unbalance between researchers vs the rest of the workers :  
About 500 center workers are only 14 researchers
- ✓ The greater the disparity between the overall personal vs that perform research makes heavy financial institution

# Human capacity

- ✓ The consolidation and future sustainability
- ✓ Mozambique needs this type of skills development for its own progress especially on health and biomedical research areas
- ✓ Training is a strategic area
- ✓ The partnership with training institutions have been key to strengthening the research and technical capacities of the country

# Research Training: *Training Fellowship Program*


Post-graduate program to train young Mozambican and sub-Saharan graduates, wishing to develop their professional career as health researchers



Implemented in collaboration with research and training institutions,  
the program provides direct experience in research at the centre



Trainees perform post-graduate training (master's and doctorates) at international recognised universities – in Australia, Belgium, Spain, South Africa, Portugal, UK, etc)



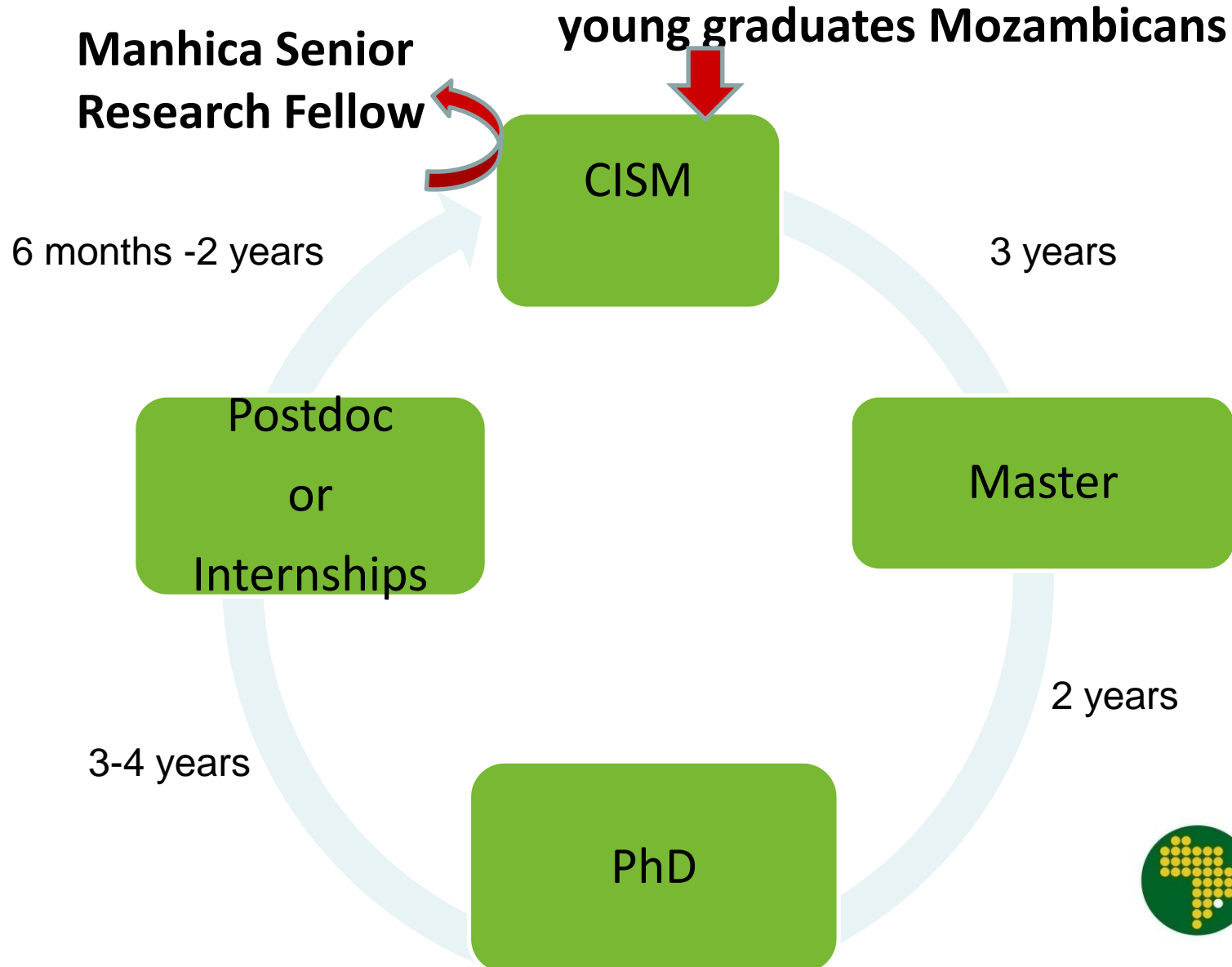
Fellows may also carry out internships at Universities, research centers and international institutions



More than 30 Mozambican have benefitted from this program



# Training Fellowship Program



# Training activities (Cont')

## ✓ **Post doctoral training**

- CISM fosters post doctoral training at partner centers of past training fellows who continue to be part of the center's research activities

## ✓ **Internship and Short term stays for health professions students and professionals**

- Faculty of Medicine, UEM
- Faculty of Veterinary, UEM
- Instituto Superior de Ciências e Tecnologias de Moçambique (ISCTEM)
- Instituto Superior de Ciências da Saúde (ISCISA)
- Universidade de Barcelona, ISGLOBAL, Hospital clinic, Spain **\_(1-2 years)-almost ; Four researchers /year**
- Universidade Católica de Moçambique
- Centro de Investigação em Doenças Infecciosas ,
- Centro de Investigação e Treinamento em Saúde de Chockwé

# Internship and short term stays

## Universidade Eduardo Mondlane

-Faculty of Medicine

-Faculty of Veterinary

- Rural and integrated internships at Manhica District Hospital
- **Mestrado Epidemiologia de Campo e Laboratorial**
- Best graduate students of the Faculty “ Estagio Premio”

24

10

2

Students, resident medical doctors and health professional/s

- Australia, Brazil,
- Spain, Germany,
- Netherlands,
- Portugal, USA

14



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# Internship-Short term stays

National and international students

- Masters and PhD

4

Training of technical staff within the scientific and health area

- Chokwe Training and Health Research Center
- Infections diseases research center at Universidade Catolica de Mocambique
- Angola Health Research Center
- Polana Canico Health Center -INS
- Malaria National Reference Lab, INS (9/ano)

1

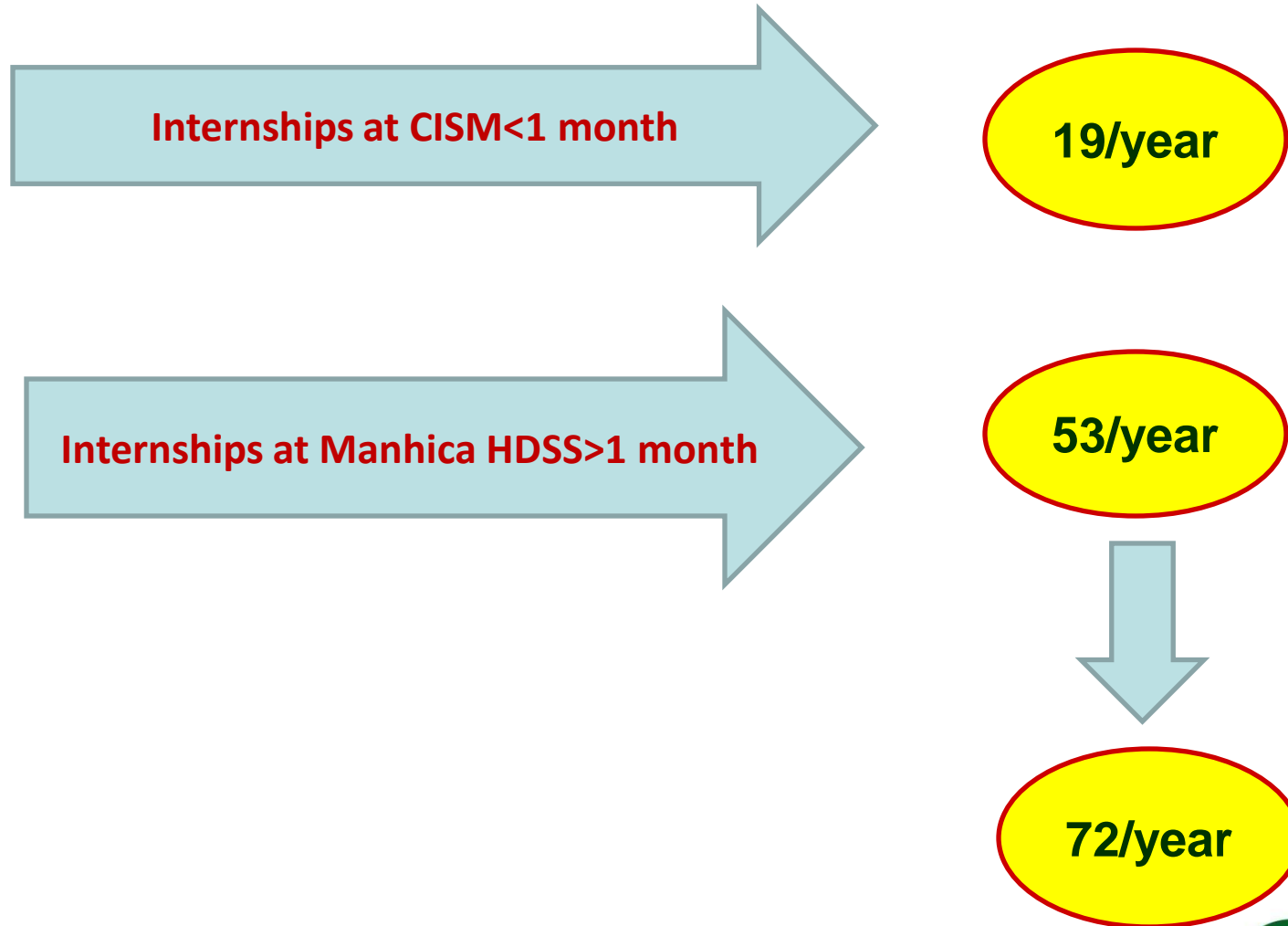
2

3

8

9

# Internship-Short term stays



# Other training activities

## Training of technical staff within the scientific and health area

- ✓ The most frequent courses: GCP, GCLP, Bio-statistics, Financial Management, Data Management and Introduction to Clinical Research, Project Management and Ethics, Monitoring of Clinical Trials, Laboratory Techniques, **(20 courses /year**-onsite and at other institutions )

## Workshops and seminars

- ✓ The CISM's scientific and technical personnel participate in national and international conferences
- ✓ Develop research networks and exchange knowledge and experience with other researchers
- ✓ Scientific sessions (by researchers )and journal club (Training fellows) activities for the research and technical personnel ( **every week**)

# Other training program in Mozambique

- ✓ **Educational Project regarding the introduction of the HPV vaccine in Mozambique** ( Colaboration MoH and Fundacao La caixa)
- ✓ **Elearning Project in collaboration with**
  - ✓ Manhica HDSS, Forum Mulher, Rede da criança, MASC, ECO SIDA, FDC, CESC, CAICC, Techsoup ( storytelling courses, Monitoring & Evaluation Courses, )
- ✓ **Project Trails of Excellence in Southern Africa (TESA)**
  - CISM is a member of the network of centres of excellence in southern Africa “TESA”, promoted by EDCTP since 2010
  - Objective :Development of new clinical interventions against HIV/AIDS, Tuberculosis and Malaria/ build capacity of centres
  - TESA I e TESA II (CISM Coordenator)

# Challenges

- ✓ The model is stressed because there are not core founding financing to maintain this training program.

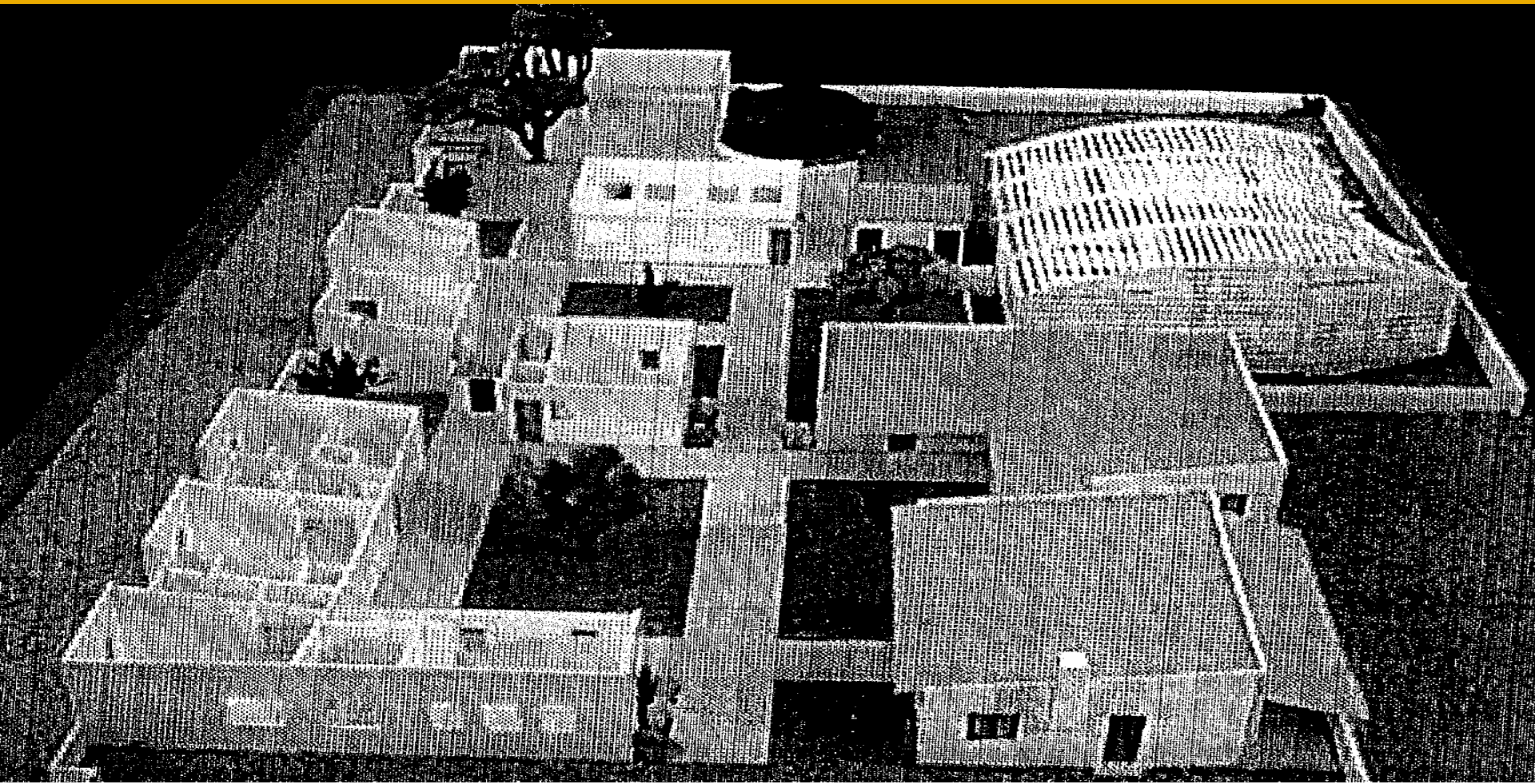
Every year, every single investigators have to look to the international opportunity for funding, so only if they get that opportunity they must to apply and approved then it can send their training fellowship to training

- ✓ Continue to train Mozambique researchers
- ✓ Attract young and talent Mozambican to join health research area offering them good work conditions
- ✓ Funds for training activities



# Infrastructure

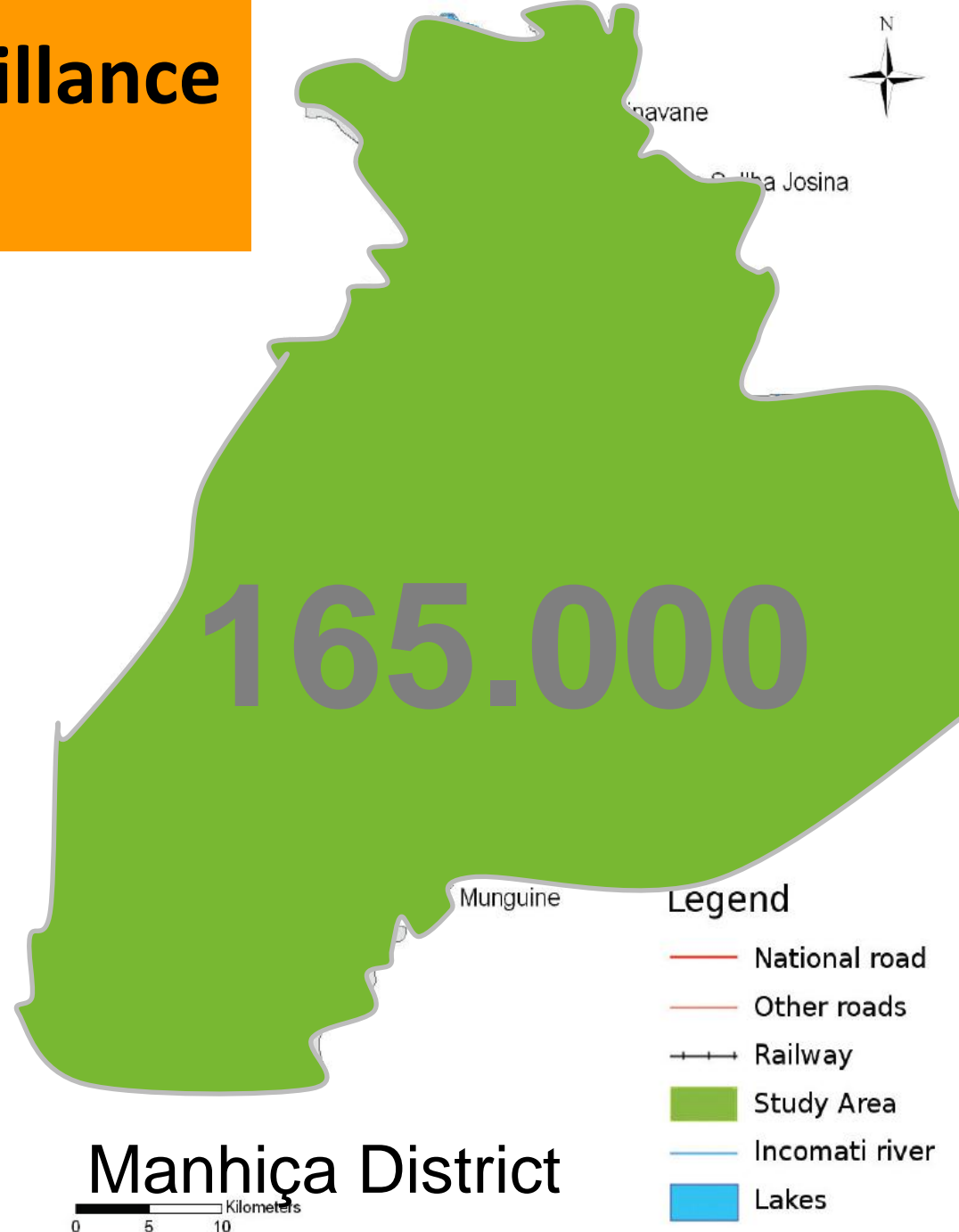
# Infrastructure Capacity



The center was created about 20 years ago, the infrastructure capacity was minimal, we had only hematic parasitology laboratory

# Demographic Surveillance System (DSS)


- ✓ Covers a study area of around 500 km<sup>2</sup> and 95,000 inhabitants
- ✓ All households are geo-positioned and numbered
- ✓ All individuals have a unique identification number
- ✓ All vital events recorded (births, migrations, deaths, pregnancies, etc.)



# Morbidity Surveillance System

- ✓ It covers the Manhiça District Hospital and all health posts in the study area
- ✓ All information on pediatric visits and admissions is collected
- ✓ Information includes:
  - Personal identification
  - Demographic information
  - Signs and symptoms
  - Diagnosis
  - Treatment
- ✓ Currently CISM has over 50 health professionals working at health facilities in the study area

# Morbidity surveillance



>1.000.000 Outpatient visits  
>60.000 admissions



# Laboratory

Divided into four sections:

## I- Clinical Analysis

Blood parasitology



Malaria Microscopy for clinical trials

Hematology and Biochemistry



# II-Microbiology

## General bacteriology



## Mycobacteriology



# III-Immunology





# IV-Molecular Biology





A photograph of a laboratory aisle filled with tall, white, upright freezers used for sample storage. The freezers are arranged in rows on both sides of the aisle. The leftmost freezer has several papers and a small red device attached to its door. The floor is made of light-colored square tiles. The ceiling has fluorescent light fixtures. The text "Samples storage" is overlaid in large red font across the center of the image.

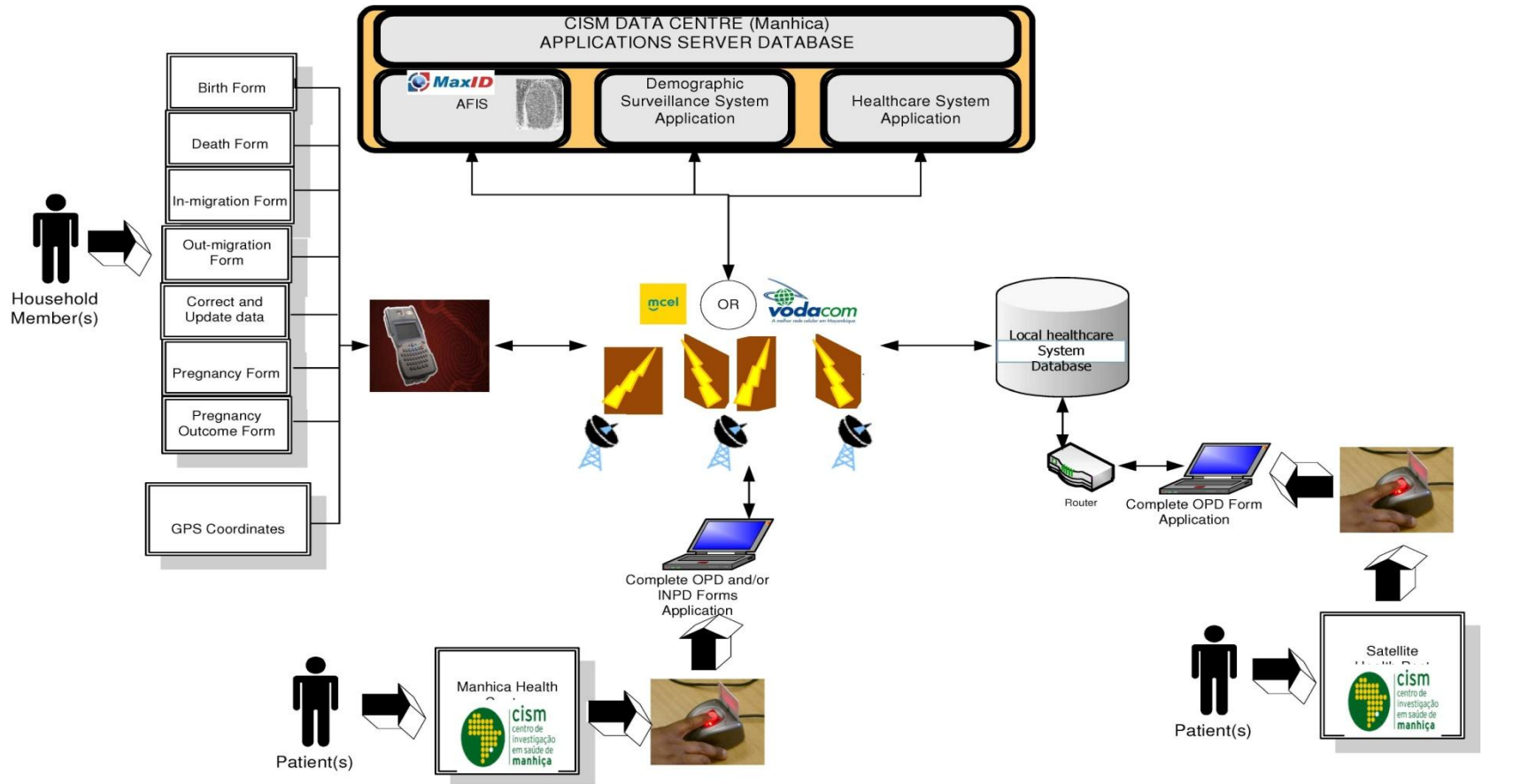
**Samples  
storage**

# Quality

# ISO 9001



# Technologies





# Data Center Archive





>500 forms/day

Paper free

Papers -> new technologies: PDA's, mobiles, tablets.

# Challenges

- ✓ Currently the center has capacity which are not updated.
- ✓ Most of those capacity has been stable according to the context decades ago.
- ✓ In some of the cases there is no classical model in how this capacity has to be established.
- ✓ INDEPTH network , has a important role on providing support across the site.

# communication and advocacy



# Communication

- ✓ Publication of scientific papers.
- ✓ Forum for disclosure of the result:

## Coordination Committee

Ministry of Health(DNS, INS, DPS)

Medicine Faculty (UEM)

AECI

Clinic foundation

years

1999-2000





ACORDO GERAL DE COOPERAÇÃO CIENTÍFICA E TÉCNICA  
ENTRE O GOVERNO DA REPÚBLICA POPULAR DE MOÇAMBIQUE  
QUE E O GOVERNO DE ESPANHA



O Governo da República Popular de Moçambique e o Governo de Espanha conscientes da necessidade de uma estreita cooperação entre ambos -



**Lutando contra a doença  
Promovendo o desenvolvimento**

**Programa de colaboração**  
Ministerio da Saúde - Fundació Clínic  
Faculdade de Medicina (UEM - Maputo)  
Agencia Española de Cooperación Internacional



**2008**



**fundação  
manhica**  
moçambique

The Centre aspires to play a role in the generation and dissemination of knowledge related to major public health challenges at both the national and international levels



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# Annual lecture on global health

- ✓ organized to disseminate knowledge related major public health challenges at both national and international levels:
  - International speakers to talk about health issues of national and international interest
  - Shared the Centre's work through Mozambican researchers
- ✓ It was attended by around 300 participants from various affiliations, including bilateral and multilateral cooperation, academia, research, diplomatic, State, NGOs, foundations, the private sector and other institutions.
- ✓ 7 editions of the lecture

*The Vaccine Impact and challenges in Africa in the current decade*



**Dr. Pedro Aide**  
Researcher



**Dr. Jean-Marie Okwo-Bele**  
Director of the WHO Department of  
Immunization, Vaccines and Biologicals

6<sup>th</sup> Edition March 2014

## *Malaria Control and Prevention in Africa – Progress and Challenges*



**Dr Khatia Munguambe**  
Researcher

**Dr Fatoumata Traore**  
Executive Director , RBM



**Dr Inacio Mandomando,**  
Researcher



## 5<sup>th</sup> Edition, March 2013

### *Addressing Unmet Needs in Global Health: Progress and Opportunities*

**Dr Trevor Mundel,**  
President of the global health  
program at the BMGF







**Dr Esperanca Sevene**  
Researcher

4<sup>th</sup> Edition, March 2012

*Miracles of science:  
Vaccines and ensuring  
access for all*



**Dr Seth Berkley**  
Executive Director, GAVI  
Alliance



## *The importance of Alliances in Facing Global Health Challenges*

**Dr Betuel Sigauque, Researcher  
Dna Infanta Cristina de Borbon,**





**Dr. Charfudin Sacoor,**

Head of demography department, CISM



## *The Role of Governments and the Women's Research Capacity Development*



**Sra Graca Machel ,**  
Chair of FDC

1<sup>st</sup> Edition, February 2009

*New measures to control malaria, drugs and vaccines*

**Dr Eusébio Macete**

CISM Director



**Dr Pascoal Mocumbi,**

President of the Manhica Foundation



# Informative report

# Posters



Boletim Informativo

19ª Edição - Jan-Abril 2014

## EDITORIAL

O Presente Boletim Informativo reporta as actividades do centro que tiveram lugar de Janeiro-Abril de 2014 e algumas actividades que tiveram lugar em Novembro e Dezembro de 2013. Agradecemos a todos que tem contribuído para a realização das actividades nele reportadas.

Na área de pesquisa, o CISM-Fundação Manhiça (FM) em colaboração com CRESIB-ISGLOBAL publicou 23 artigos científicos no ano 2013, e neste trimestre 4 artigos. Encontram-se em curso 34 estudos nas diferentes áreas de pesquisa (malária, TB, HIV/SIDA, Diarreias, Infecções respiratórias, Saúde Materno e Infantil, Ciências Sociais).

Na área de formação acolheu estudantes, médicos, residentes, e especialistas de diversas instituições

académicas e de pesquisa nomeadamente Faculdade de Medicina (FM), do Hospital Sant Joan de Deu, Barcelona, do Hospital Clinic de Barcelona, do Hospital Materno infantil Malaga, Espanha para a realização de estâncias formativas com enfoque para a componente laboratorial, clínica e de pesquisa

Os destaques neste boletim são para a *Palestra Anual* em Saúde Global da Fundação Manhiça, a atribuição da Medalha Bagamoyo ao CISM, a Expansão do Sistema de Vigilância Demográfica (DSS) do CISM, o início da recolha de dados demográficos das mulheres em idade reprodutiva que participaram no ensaio clínico baseado numa intervenção clínica de base comunitária para prevenção e tratamento da pré-eclâmpsia e as formações técnicas que tiveram lugar no CISM.

## Palestra Anual em Saúde Global da Fundação Manhiça

A VI Edição da *Palestra Anual* em Saúde Global, foi proferida pela Dra. Fatoumata Nafu-Traoré, Directora executiva da Roll Back Malaria, antecedida da intervenção da Dra. Khátia Mungumbe, Investigadora do CISM.



## HPV Vaccine Demonstration Project in Mozambique

Khátia Mungumbe<sup>1,2</sup>, Esperança Sevene<sup>1,2</sup>, Benigna Matsinhe<sup>3</sup>, Manuel Novela<sup>4</sup>, Azucena Bardaji<sup>5</sup>, Carolina Mindu<sup>1</sup>, Carla Silva Matos<sup>1</sup>, Adelino Xerinda<sup>6</sup>, Joaquim Uate<sup>6</sup>, Elisa Sicuri<sup>6</sup>, Sibone Mocumbi<sup>6</sup>, Carla Carriho<sup>2,7</sup>, Eusebio Macete<sup>1</sup>, John Aponte<sup>5</sup>, Pedro Alonso<sup>1,5</sup>, Clara Menendez<sup>1,5</sup>

1- Centro de Investigação em Saúde de Manhiça; 2- Faculdade de Medicina, Universidade Eduardo Mondlane; 3- Ministério da Saúde de Moçambique; 4- Organização Mundial da Saúde, Moçambique; 5- Instituto de Salud Global de Barcelona; 6- Fundação para o Desenvolvimento da Comunidade; 7- Hospital Central de Maputo.

### Background

- Cervical cancer is the most common cancer in women worldwide
  - 500.000 cases are registered every year
  - It is responsible for 275.000 deaths per year
  - 75% of these deaths occur in Developing Countries
- It is the most common cancer among women in sub-Saharan Africa
  - 70.700 cases are registered per year
- Mozambique has one of the highest incidences in the world
  - 55 new cases per 100.000 women per year
- It is caused, in 99% of cases, by the Human Papillomavirus (HPV)
- It affects women in the peak of their lives (30 – 50 years of age)
- Screening and treatment of pre-cancerous lesions can save many lives

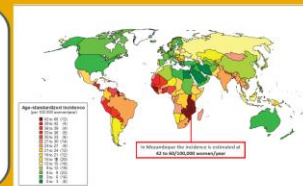


Figure 1. Global incidence of cervical cancer. (Arbyn et al. 2011)



Figure 2. Girls between 10 and 12 years of age are the recommended target group for vaccination against HPV. (© Centre for Communications Programs)

### Justification

- The majority of women in developing countries has limited access to health services
- The Mozambican Government intends to introduce the HPV vaccine in the country
- The HPV vaccine can strengthen cervical cancer control, especially if it is administered to adolescent girls
- Adolescents are not usual health service users, and there is little experience of vaccinating adolescents outside the health system premises
- It is crucial to conduct a demonstration project targeting adolescents in order to generate evidence to support the introduction of the vaccine countrywide

### Objectives

To demonstrate the feasibility and acceptability of vaccinating adolescent girls against HPV in pilot areas in Mozambique:

- To evaluate the feasibility of vaccinating 10 year old girls against HPV
- To evaluate the acceptability of girls, their parents, guardians, health and education professionals and communities at large
- To estimate the costs associated with vaccination in an entire district
- Compare approaches to reach 10 year-old girls: schools vs. health facilities vs. community

### Procedures

- Two vaccination campaigns will take place in 2014 and 2015
- Each year, around 3000 girls will be vaccinated in Manhiça District
- Vaccination will take place in schools, health facilities and communities
- The stages of the campaign will be: community sensitization; screening and recruitment; vaccination of 3 doses
- The evaluation will be through:
  - Observation of the vaccination process
  - Interviews with adolescents and stakeholders
  - Focus group discussions with community members



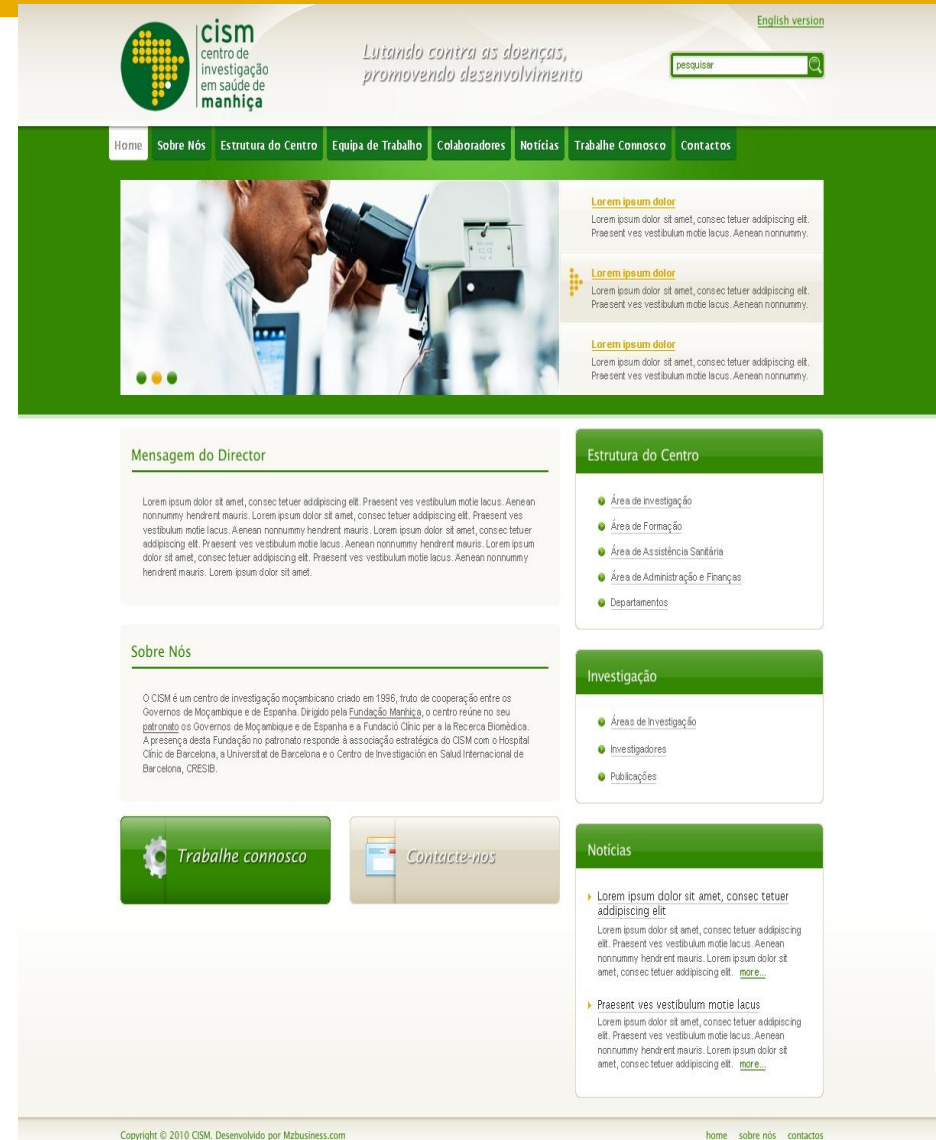
Figure 3. Mobile vaccination brigades will have the capacity of reaching girls at school and community. (© WHO)





# Activity Report

# Website



# Advocacy unit and institutional relationship

- ✓ Created in 2014
- ✓ Create empathy outside the institution and promote a climate of cooperation with stakeholders
- ✓ Mobilize efforts and resources for Research

# Challenges

- ✓ Improve our external communication strategy
- ✓ is new, few centers have this well developed area and INDEPTH could play a key role to strengthen this area
- ✓ The researchers are not fully prepared to pass the results to search for civil society, and the society itself is not so prepared to assimilate this information, because sometimes research results are contradictory to what are the public sector policies

## 6 MATURE ALL-PURPOSE SITES

- 1 US Army Medical Research Project-Kenya (USAMRU-K), Kisumu (Kenya)
- 2 Wellcome Trust/KEMRI, Kilifi (Kenya)
- 3 Malaria Research and Training Centre (MRTC), Bancoumana, Bandiagara, Donegoubougou (Mali)
- 4 Centro de Investigação em Saúde da Manhica (CISM), Manhica (Mozambique)

## 5 SITES BEING UPGRADED

- 1 CDC/ KEMRI (Kenya)
- 2 Malaria Research Laboratory (MRL), University of Ibadan (Nigeria)
- 3 Noguchi Memorial Institute for Medical Research Clinical Trials Facility (Ghana)
- 4 Service de Parasitologie, University Cheikh Anta Diop, Dakar (Senegal)
- 5 Niakhar Institut de recherche pour le developpement, Niakhar, Dakar (Senegal)

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- 4 Centro de Investigação em Saúde da Manhica (CISM), Manhica (Mozambique)
- 5 Bagamoyo/Ifakara Health Research & Development Centre (IHRDC), (Ilanzania)
- 6 Medical Research Council (MRC): Basse, Banjul/Fajara, Farafenni (The Gambia)

- 4 Malaria Institute at Macha, Choma (Zambia)
- 5 Tropical Diseases Research Centre (TDR), Ndola (Zambia)
- 6 Komfo Anokye Teaching Hospital (KATH), Kumasi (Ghana)

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PLANNING FOR THE FUTURE

# Thank you



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