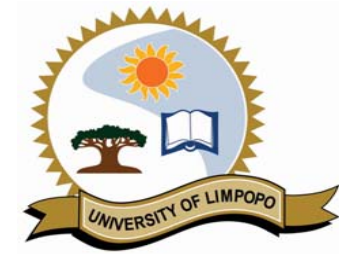


**TEACHING OF IMMUNOLOGY AND THE EXPANDED
PROGRAMME ON IMMUNIZATION (EPI) TO
UNDERGRADUATE MEDICAL STUDENTS AND HEALTH CARE
WORKERS AT THE MEDUNSA CAMPUS (UNIVERSITY OF
LIMPOPO)**

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Introduction



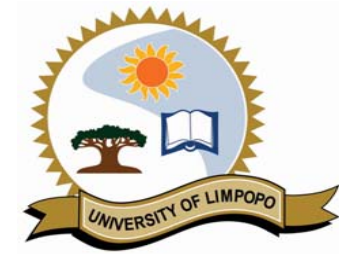
- The Ministries of Health require an appropriately trained and equipped labour force to deal with vaccination and EPI related issues
- Currently the institutions teaching these subjects (nursing colleges and medical schools) are doing it in a fragmented manner
 - results in the pre-service programme being deficient and graduates not being fully equipped to deal with immunization and vaccine issues.

Aims & Objectives



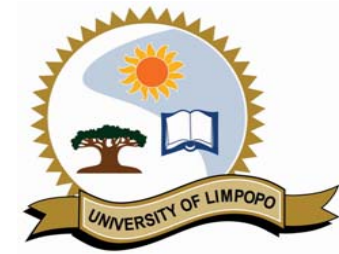
- 1) To identify all departments teaching the EPI and immunology to undergraduate students at University of Limpopo (Medunsa Campus)
- 2) To collate all the materials taught in all years of study for the MBChB degree
- 3) To identify gaps and areas of weaknesses in the programme
- 4) To make suggestions on improving and expanding the current teaching programme and
- 5) To develop guidelines and modules for teaching of postgraduates through a distance learning programme.

Methods



- The departments teaching any aspect of vaccinology and immunology in the undergraduate teaching programme were contacted to provide details of their teaching programmes.
- Formal and informal interviews were conducted with lecturers involved in teaching immunology and immunization within these identified departments.
- The findings were placed in a table, listing all aspects taught in each year.

Methods (cont.)



- The current teaching programme for MBChB (first to sixth year) was reviewed and gaps were then identified in the teaching of the various subjects.
- The WHO Mid-level Management course guidelines for EPI Managers were used as a reference for this purpose.
- Meetings were also held with the National School of Public Health to develop courses for the teaching of Postgraduate Diploma and Masters Degree in Public Health.

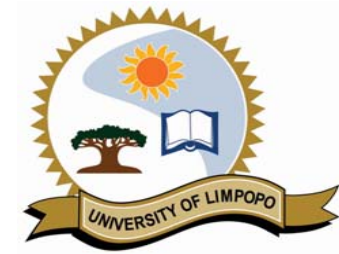
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Mid-Level Management Course for EPI Managers

A problem-solving approach to

Results

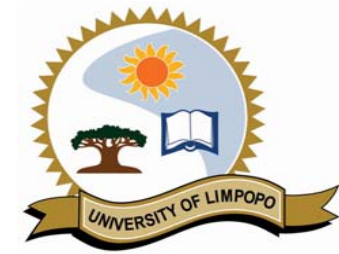


- The departments identified and consulted were **Physiology, Microbiological Pathology, Paediatrics, Internal Medicine, Community Health, and Family Medicine.**
- In the preclinical years there was more emphasis on the science of immunology rather than on the history of vaccines and basic concepts of EPI.
- The content taught in the clinical years was not regularly updated.

YEAR OF STUDY	SUBJECT	CONTENT	SUGGESTIONS
MBChB I	POME I: Microbiology & Infectious diseases (Pathogenesis of Infection & <i>Host Defenses</i>)	Non-specific immunity Organs involved in the immune system Acquired specific immunity Understanding antigens	To add history of vaccines and immunization To add introduction to EPI and immunization schedule
MBChB II	PHYSIOLOGY 1A Haemostasis, Fibrinolysis & <i>Body defences</i>	Mechanisms of antibody production Differences between antibody production in a primary and secondary immune response Passive and natural immunity	To add complement system and Organs of the immune system
MBChB III	MICROBIOLOGICAL PATHOLOGY Clinical Immunology	HLA typing and disease association <i>Immunization and Immunotherapy</i> <i>Hypersensitivity reactions</i> Immune deficiency syndromes Autoimmunity Transplantation Immunology Monoclonal Antibodies	PHARMACOLOGY Constituents of vaccines Vaccine Reconstitution. Mode of Vaccine Administration Vaccine Bioavailability

YEAR OF STUDY	SUBJECT	CONTENT	SUGGESTIONS
MBChB IV	PAEDIATRICS (Immunization)	EPI & Immunization schedules Passive and Active Immunity Types of Vaccines (including routes of administration and adverse events). Contraindications to vaccination Immunization of children with HIV Storage conditions	COMMUNITY HEALTH Cold Chain Management. Vaccine Management Immunization safety Assessment of EPI programmes. Increasing Immunization coverage.
MBChB V	-	-	INTERNAL MEDICINE Vaccines for travelers. Vaccination of HIV positive patients Vaccination of the at risk groups (e.g. health care workers)
MBChB VI	FAMILY MEDICINE (Vaccines & Vaccination)	Department of National Health and Population Development immunization Schedule. Commonly Available vaccines Contraindications for vaccinations Late vaccinations Vaccination for HIV positive children Vaccine administration (rotation at Health centers/facilities)	Introduction of New Vaccines into the EPI schedule (including advocacy)

Results (cont.)



- Teaching of vaccines and immunization was done in a fragmented manner and no standard format was used by any department.
- Outline and course contents for postgraduate teaching has been developed for a Postgraduate Diploma in vaccinology and a Master in Public Health track on vaccinology.

Conclusion



- A successful immunization programme depends on the collaboration between the Department of Health, tertiary institutions, health service providers and the community.
- Currently the EPI is not adequately taught at tertiary institutions.
- It is imperative to invest in pre-service rather than in-service training as this will contribute towards surveillance, research, capacity building and thus reduce the burden of vaccine preventable diseases significantly.