



NWU Medical School

North-West University in partnership
with North West Provincial Government

**Let's Talk Medical School
Engagement with NWU Staff and Students**

21 August 2024

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Prof B Luke (Project Team Lead)
Prof P Bester (Operations Lead)

1. Health in South Africa: Call for Medical Doctors



Population

60 870 651 people

Rapid population growth

- 69% urban.
- Medial age 27.6 years.
- 8.24m people unemployed.
- Unemployment rate 32.79%.



Health System

Dualistic

Private and Public

- 16% private.
- 84% public.
- Preparations for UHC through NHI funding model in progress by NDOH.



Disease Burden

Colliding Epidemics

Quadruple disease burden

- Non-communicable diseases (NCDs) including mental health.
- Communicable diseases including HIV and TB
- Mothers and childhood issues
- Trauma, crime. and Poverty



Indicators

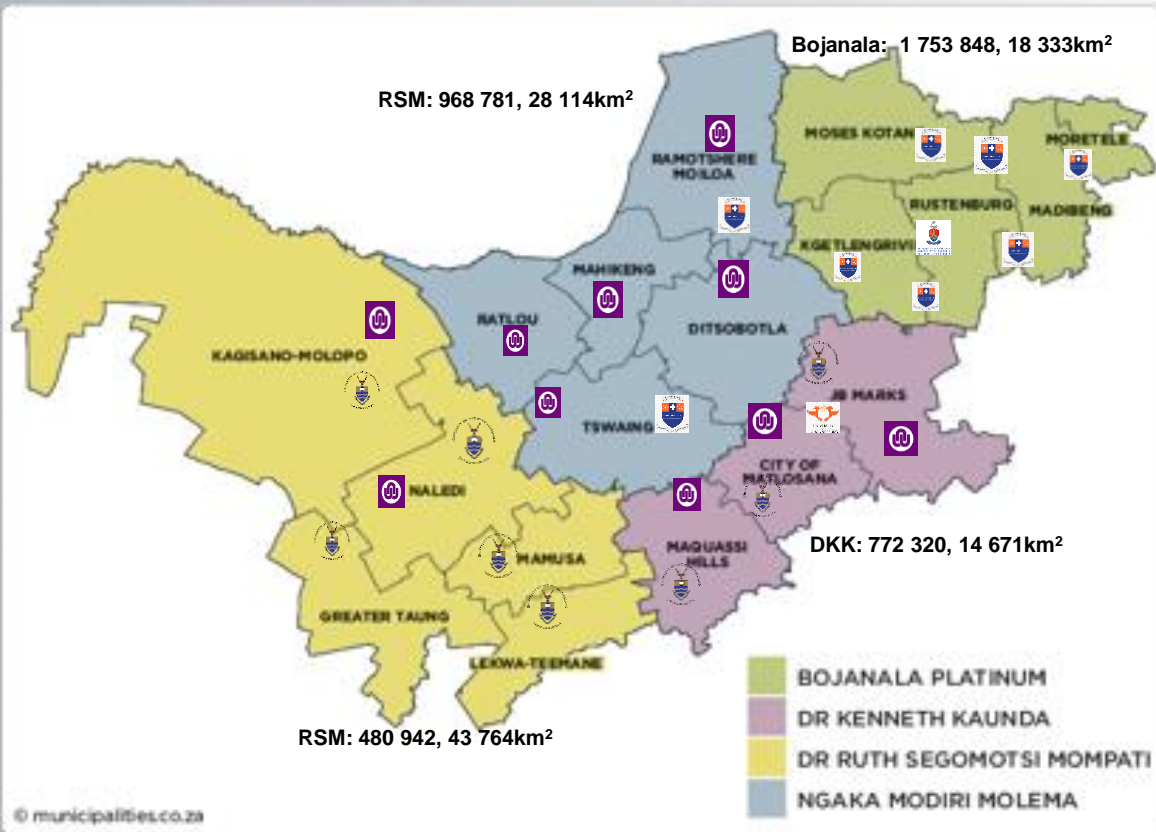
Emerging Economy

Upper-middle-income

- Life expectancy: 62.89yrs.
- Infant mortality: 26.8 infant deaths/1,000 live births.
- Deaths < age 5: 36.0/1,000 live births.
- Fertility rate: 2.29.



2. The North West Province



- Four districts (DKK, Bojanala, NMM, RSM).
- 18 municipalities.
- 6th largest geographical surface area in SA.
- Estimated population is 4 112 854, 6.9% of total SA population (StatsSA, 2021).
- Predominantly a rural province.
- Five medical internship training clusters, 19 public hospitals, PHC clinics, and CHCs.
- NWP is a training platform shared between NWU, Wits, SMU and UP.
- Rural health challenges closely related to mining, agriculture, poverty, and unemployment.
- Dr Kenneth Kaunda District:
 - 14 671 km², population: 772 320 (2019).
 - Matlosana (56.2% population, 39 wards);
 - JB Marks (32.8% population, 34 wards);
 - Maquassi Hills (11.0% population, 11 wards).

(<https://southafrica-info.com/land/infographic-local-government-municipalities-north-west-province/>)

3. North West Province Health Profile

North West Province health profile:

Statistics South Africa, 2020

4 027 160, 6,9% of total SA population

Gross domestic product	R6.19 trillion (2021)
Upper secondary school completion rate aged 25yrs and younger (by 2016)	58.6.2%
Total fertility rate, 2016-2021	2.65
Population < 15 years	29,1%
Proportion of elderly aged 60+	8.5%
Hospital beds (public & private)	7091
Life expectancy	58.5 years
Crude death rate	9,2 per 1,000

Top ten causes of death: TB, HIV/AIDS, lower respiratory infections, stroke, ischaemic heart disease, diabetes, neonatal disorders, diarrhoeal disease, violence and road injuries

For the vision of **universal health coverage (UHC)**, adequate numbers of health professionals are essential.

SA has 0.7:1,000 doctor-to-population ratio.

Public health system 0.36:1,000 doctor-to-population ratio.

NWP **0.21:1,000** doctor-to-population ratio (public sector).

Ideal: SA requires 67,000-78,000 additional medical doctors to meet WHO minimum recommended ratio (1:1,000).

Countries	Doctor: Population Ratio (per 1000)
South Africa	0.790
China	2.360
India	0.900
Brazil	2.150
Mexico	2.410
Russia	4.160

4. Existing enabling factors in establishing a Medical School under the North-West University

- 1 Minister of Health in principle support 14 December 2022, with specific inputs and advice.
- 2 Joint position paper: NWU in partnership with the North West Provincial Government and North West Department of Health, 8 February 2023.
- 3 Existing five medical training clusters in NW province, Klerksdorp/Tshepong Hospital Complex main facility with sufficient capacity.
- 4 K/T Complex and Job Shimankana Thabane Hospital are provincial tertiary hospitals, currently training MBChB students and registrars for Wits and SMU. NWU to sustain and strengthen the relationships.
- 5 Unequivocal support and buy-in from Wits, SMU and UP>



Inputs and advice

- Establish NWU Medical School in DKK district as initial training platform and extend to NMM, RSM, Bojanala Districts.
- Commence with 50 students, progressively increase student numbers based on resources, capacity, accreditation and sustainability.
- Focus on Klerksdorp/Tshepong Hospital Complex as the key clinical training platform in DKK district.



Obtained permission to proceed, subjective to accreditations/approvals by Ministry of Health, 22 December 2023.

5. Clinical Training Platform in the DKK District (Year 1 to 6)

Integrated into Dr Kenneth Kaunda District Health System (DHS)

Service delivery	Health posts	Mobile Clinics	PHC Clinics	CHC	L1 Hosp
JB Marks	1	4	12	4	0
Maquassi Hills	0	2	6	2	1
Matlosana	0	2	13	4	0
Total	1	8	31	10	1

PHC = Primary Health Care, CHC = Community Health Centre, L1 = Level 1 (district) hospital

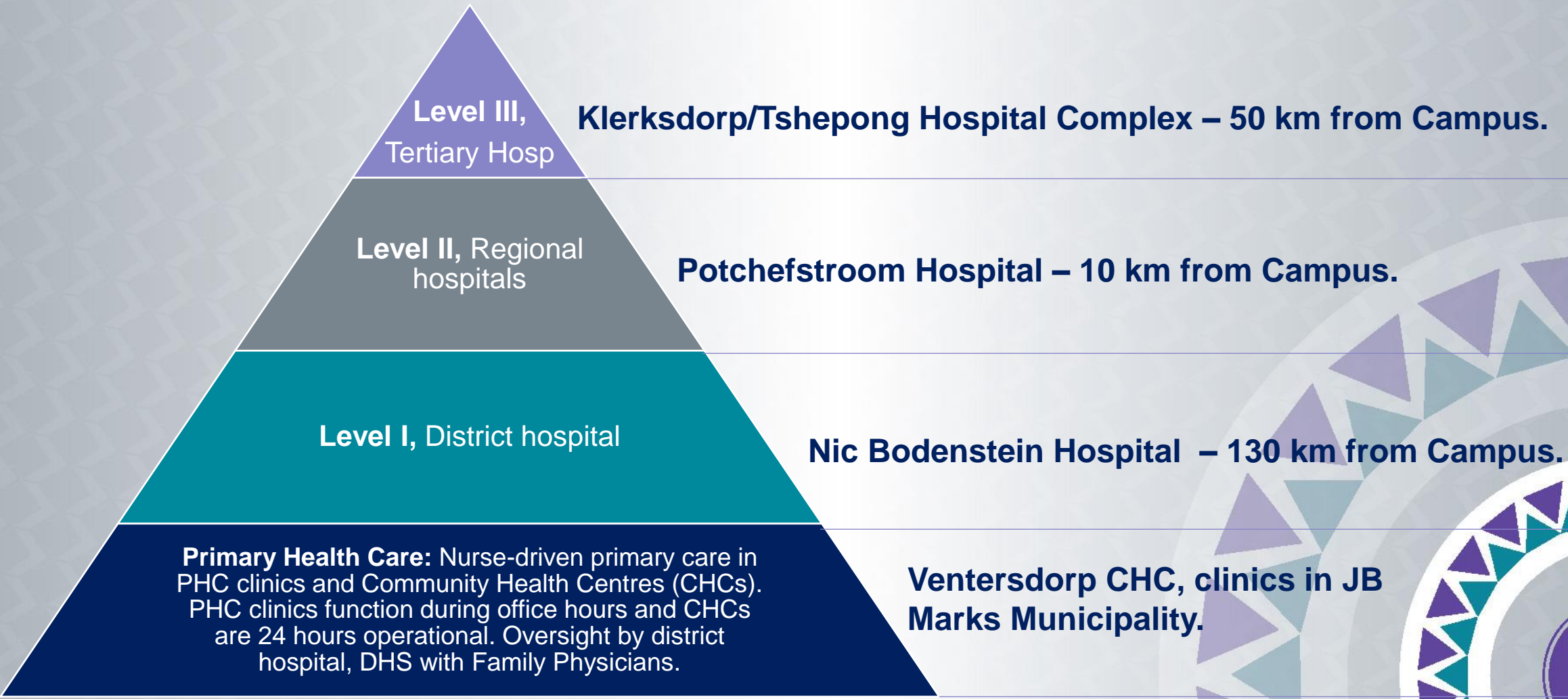


Structure of the Hospitals in the Dr Kenneth Kaunda District

Hospital	Geographical position	Level	Bed capacity
Potchefstroom Hospital	Potchefstroom	Acute level I & II	335 open beds
Klerksdorp/ Tshepong Hospital Complex	Two wings located in Klerksdorp and at the entrance to Jouberton	Level III	904 open beds (327 Klerksdorp, 577 Tshepong)
Witrand Hospital	Potchefstroom	Psychiatric Hospital	797 open beds
Nic Bodenstein Hospital	Wolmaranstad, Maquassie Hills	Level I	102 open beds
Ventersdorp Hospital	Ventersdorp	Level I	50 open beds



6. Structure of clinical training platform in DKK District



Level III,
Tertiary Hosp

Klerksdorp/Tshepong Hospital Complex – 50 km from Campus.

Level II, Regional
hospitals

Potchefstroom Hospital – 10 km from Campus.

Level I, District hospital

Nic Bodenstein Hospital – 130 km from Campus.

Primary Health Care: Nurse-driven primary care in PHC clinics and Community Health Centres (CHCs). PHC clinics function during office hours and CHCs are 24 hours operational. Oversight by district hospital, DHS with Family Physicians.

Ventersdorp CHC, clinics in JB Marks Municipality.



7. Approach to training Medical Graduates at the NWU School of Medicine

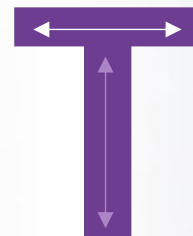
Health Profile, Disease Burdens,
Epidemiological transitions, Social
Determinants of Health

National Health Plan (ANC,
1994)

Human Resources
for Health 2030
Strategy

District Health
System

Rural proofed and
resilient doctors
for UHC

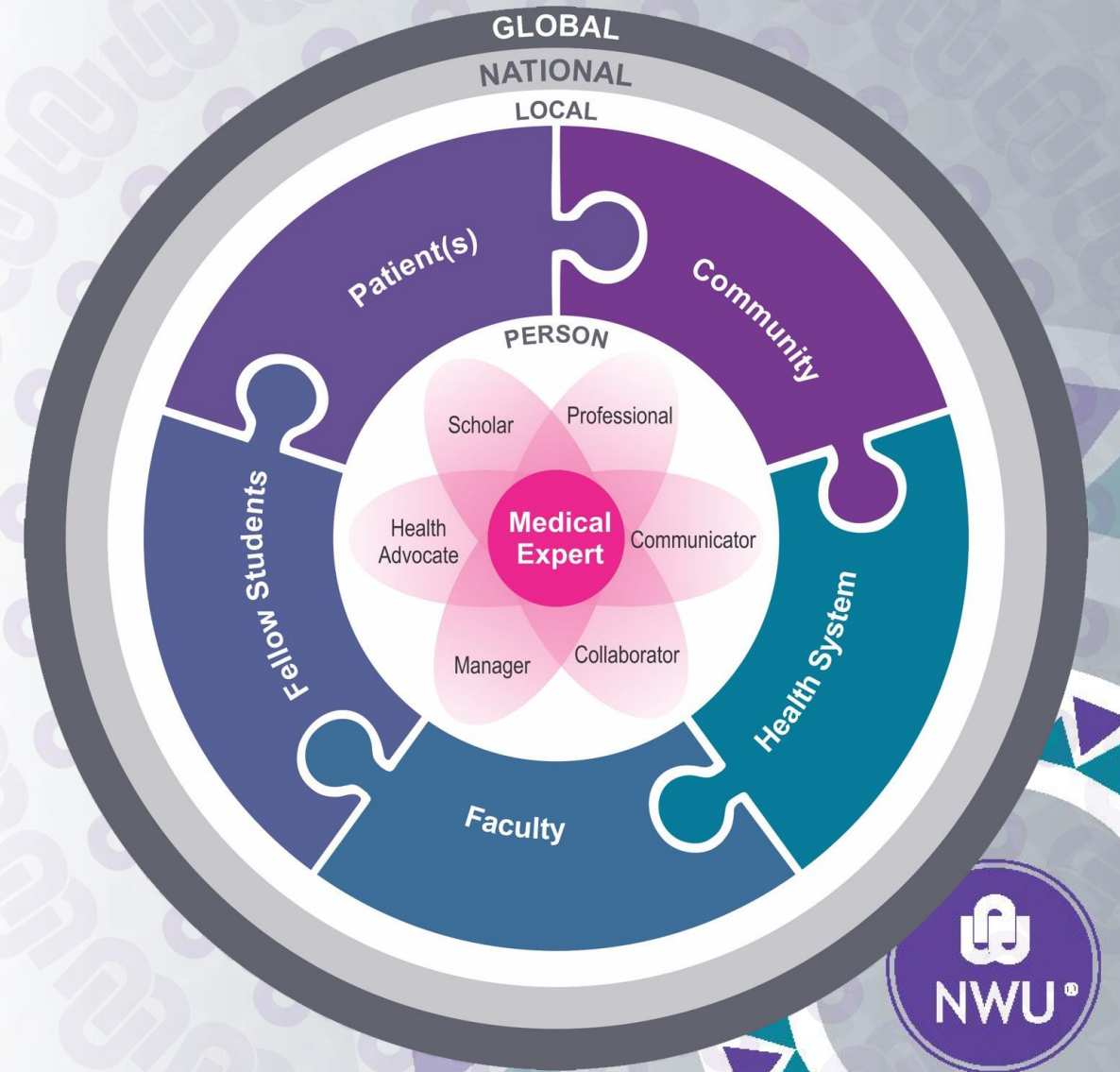


From disease focus to wellness model.
From biomedical to biopsychosocial approach.
Decolonised curriculum.
Interprofessional education.



8. The NWU Medical Graduate

- A clinically competent generalist practitioner.
- Fully aligned with HPCSA outcome requirements.
- Socially conscious and community-oriented.
- Benchmarked against national and international medical training.
- Can articulate into postgraduate studies and specialization.
- Uses state-of-the-art technology.
- An ethical team player and a critical thinker with resilience.
- Leading-edge medical competence combined with unique practice-based learning.
- A product of a collaborative effort the University, NWDoH and the private sector aligned to the principles of universal health coverage.



9. Enrolment Numbers and Selection Algorithm

Enrolment numbers from 2028-2045, proposed gradual growth projection over 18 years

Phase	Year	Enrolments
1	2028	50
	2029	80
	2030	80
	2031	100
	2032	100
	2033	100
2	2034	100
	2035	100
	2036	100
	2037	100
	2038	100
	2039	100
3	2040	100
	2041	100
	2042	150
	2043	150
	2044	150
	2045	150

Extend into NMM, RSM and Bojanala Districts

A proposed selection algorithm

A combination of post-matriculants (80% - 40 students) and graduates (20% - 10 students).

60% of applicants (30) from rural areas (quintile 1, 2, and 3 schools) and 40% of applicants (20) from urban areas.

Ration of North West to national applicants: 60/40 (30 students from NWP and 20 from other provinces).



10. Timeline and Process

Activated work streams; engaged NWDoH in April and NDoH in August 2023.

National Department of Health assessed and approved the business case December 2023.

DHET consultation.

Curriculum development by November 2024.

Obtain HPCSA letter of support after SCAS approval (Feb/Mar) 2025, then DHET approval (June) 2025.

PQM clearance. Submit to CHE and HPCSA for final accreditation December 2026.

Obtain SAQA registration March 2027. Appointment of preclinical staff.

Student application and selection & staff appointment 2027.

Deliver curriculum 2028.

DOH Engagement

DHET Consultation & Curriculum Development

Approvals & Accreditation

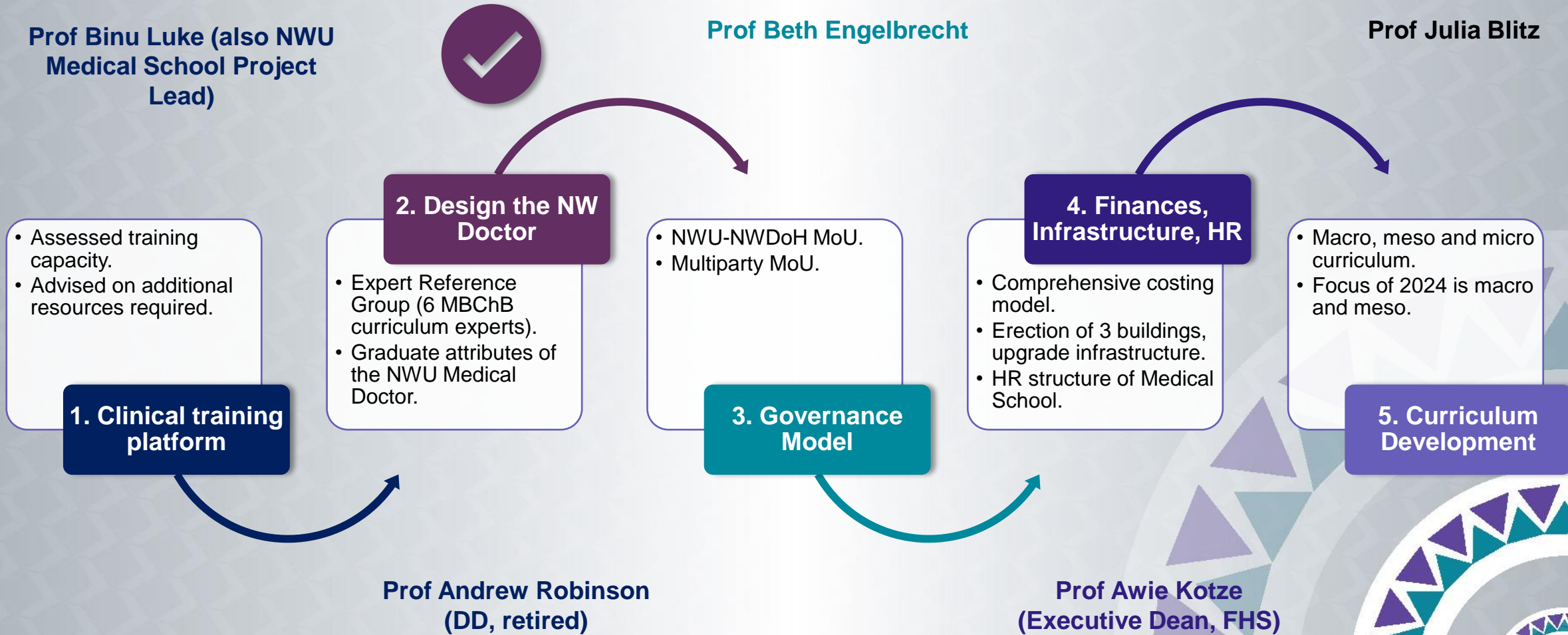
SAQA Registration

Applications & Selections

Programme Initiation



11. Technical work in five inter-related workstreams

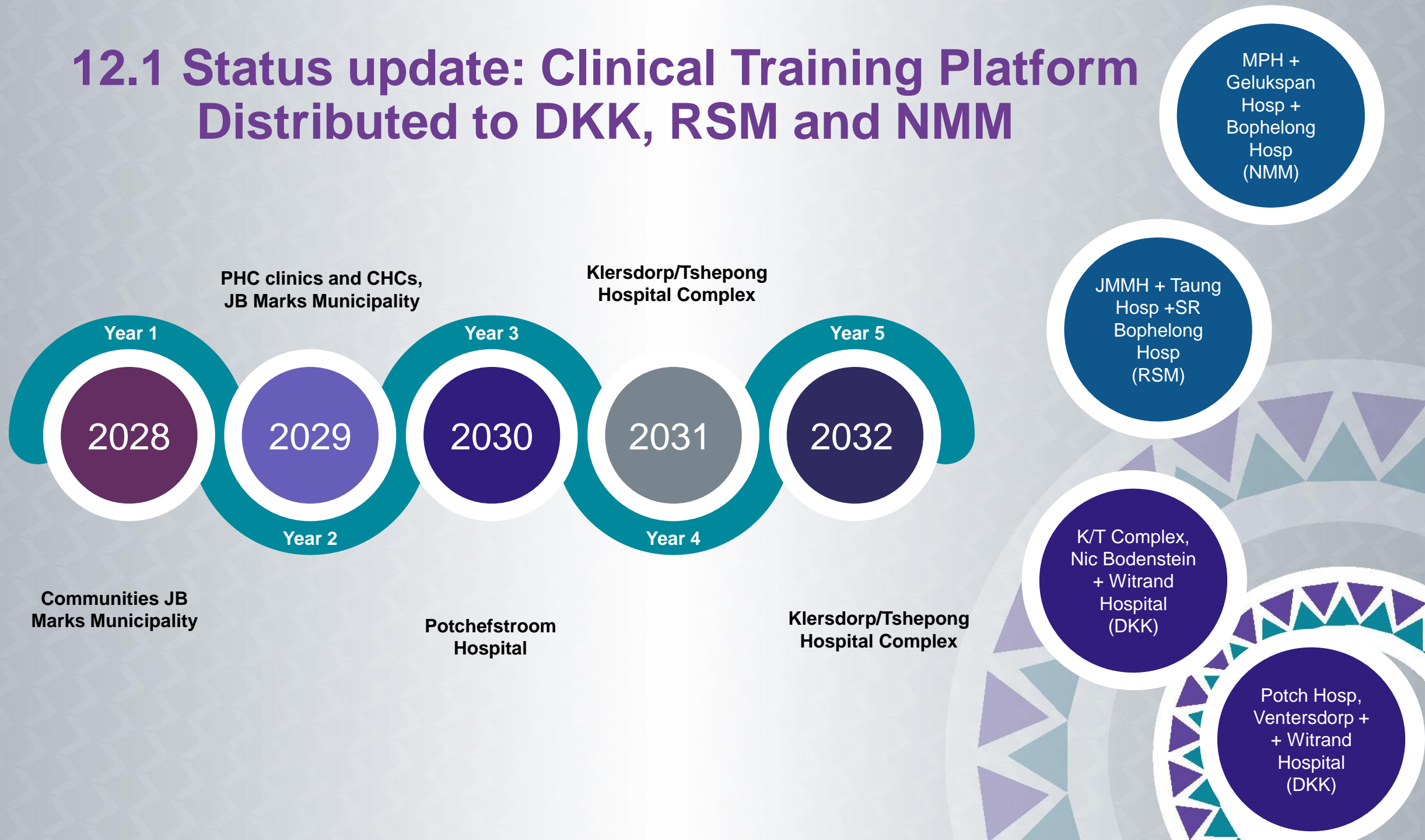


12. Status Update: Clinical Training Platform (Workstream 1, Prof Binu Luke)

1. Extended, distributive platform in DKK, NMM and RSM districts



12.1 Status update: Clinical Training Platform Distributed to DKK, RSM and NMM



13. Status Update: Governance Model

(Workstream 3: Prof Beth Engelbrecht)

1. Final phase in development of bilateral Memorandum of Agreement between NWU and North West Department of Health
2. MOA with Wits to be developed
3. Multilateral agreements to be considered



13.1 GOVERNANCE OF THE JOINT MEMORANDUM OF AGREEMENT – NWU and NWDOH - DRAFT

STRUCTURE	ROLE	FUNCTION	LEVEL	MEMBERS
DPC (District Platform Committee) - monthly to quarterly	Governance platform 1 st , 2 nd , 3 rd & 6 th years.	Platform prepare, student placement, clinical trainer, educator capabilities, supervision, accompaniment, assessment, joint staff.	District Hosp, identified clinics and CHCs.	District Management, DDG DHS, Relevant hosp CEOs, Relevant NWDOH manager, NWU: Deputy Director M/S.
SHPC (Specialised Hospitals Platform Committees) - Monthly to quarterly	Governance platform 3 rd , 4 th , 5 th years.	District platform, relevant joint staff matters.	Regional Hosp; K/T Hosp Complex & Psychiatric Hosp	CEOs tertiary hosp, Chief Director hosp, Academic Heads (reps), NWU: Chief/Deputy Director M/S, DD TL.
HPC (Health Platform Committee) - meets 6-monthly	Joint governance - academic platform NWDOH. Guide governance 6 th year.	Consider health platform matters & student training; joint staff appointments. Plan & oversee faculty development.	M/S executive leadership; health system snr leaders for whole province.	NWDOH: Exec, NWU: Chief/Deputy Director M/S, DD TL.
JAGC (Joint Academic Governance Council (JAGC)) - meets annually	Overall joint agreement governance.	Strategic decisions related to MoA and interface with other universities (each a separate MoA)	NWP: Premier/MEC; NWDoH: Exec; NWU: Exec	NWDOH: HOD, DDGs. NWU: VC, DVC TL, Exec Dean FHS, Chief Director M/S.
Technical Advisory Committee (TAC) subcommittees (finance, infrastructure, HR)	Advisory to JAGC.	Technical advice to HPC & JAGC; advisory agenda on technical matters to support governance decisions.	Joint agreement technical advisory committee.	NWDoH: DDGs, CFO, Heads Corp Services, Strat & Plan. NWU: Chief/Dep Direct M/S, Legal services, Technical leaders.



14. Status Update: Costing, Infrastructure and Human Resources

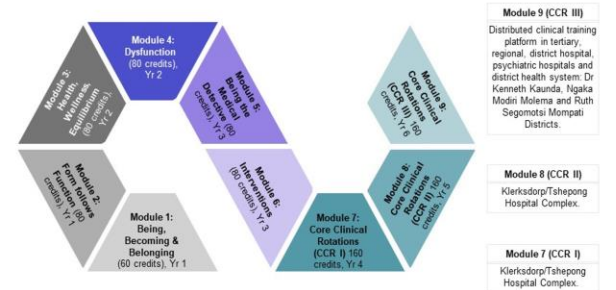
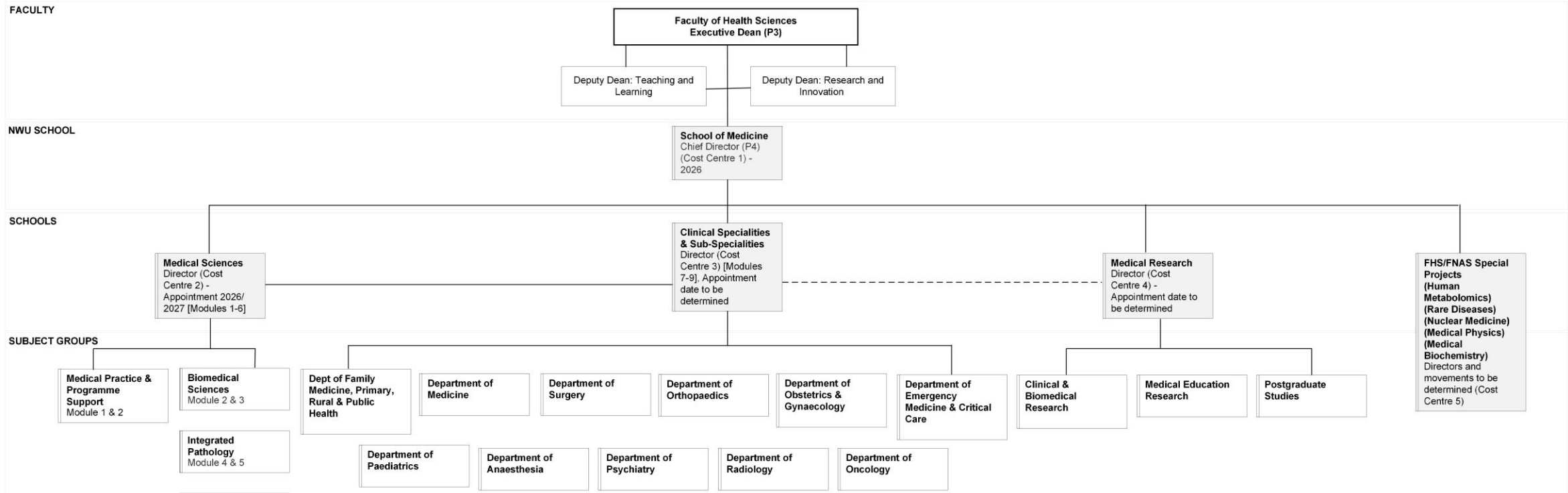
(Workstream 4: Prof AF Kotze)

1. School structure, OE Codes and cost centres application submitted for approval.
2. Space needs concluded. Awaiting architectural designs for new buildings
3. Updated HR structure based on curriculum requirements.



14.1 School Structure, OE Codes and Cost Centres

Proposed Organogram to activate new OE codes: School of Medicine, Faculty of Health Sciences, North-West University



MBChB is an integrated curriculum, spiralling over 6-years, 940 credits:



14.2 North-West University Financial Projections

Income sources

1. Internal Sources

- Tuition fees.
- Subsidy (input and output).
- Clinical Training Grant.
- Undergraduate bursaries:
 - NSFAS.
 - Other bursaries.

2. External Sources

- Training sponsorships.
- Alumni.
- Donors.
- Research contracts.

Expenditure

1. Infrastructure

NWU funds erecting, upgrading and furnishing NWU Medical School buildings:

- Klerksdorp Hospital.
- Tshepong Hospital.
- Potchefstroom Campus.
- Total cost: >R500 000 000 which the university will provide from reserve funds or from specific fundraising efforts.

Construction and upgrade of buildings will be aligned with the delivery of curriculum.

2. Student accommodation:

- Responsibility of the NWU.
- Rental or owned accommodation will be provided.

3. Operational costs

- Operational costs have been calculated where tuition fees, subsidies/cross-subsidies from other entities within the Faculty will be used.
- Financial sustainability will be achieved.
- Operational costs will include student transport, Wi-Fi, access to the learning management system and teaching-learning technologies, consumables in lecture halls, computer laboratories, library and staff costs including joint appointments.

Human Resources

1. NWU-appointed HR:

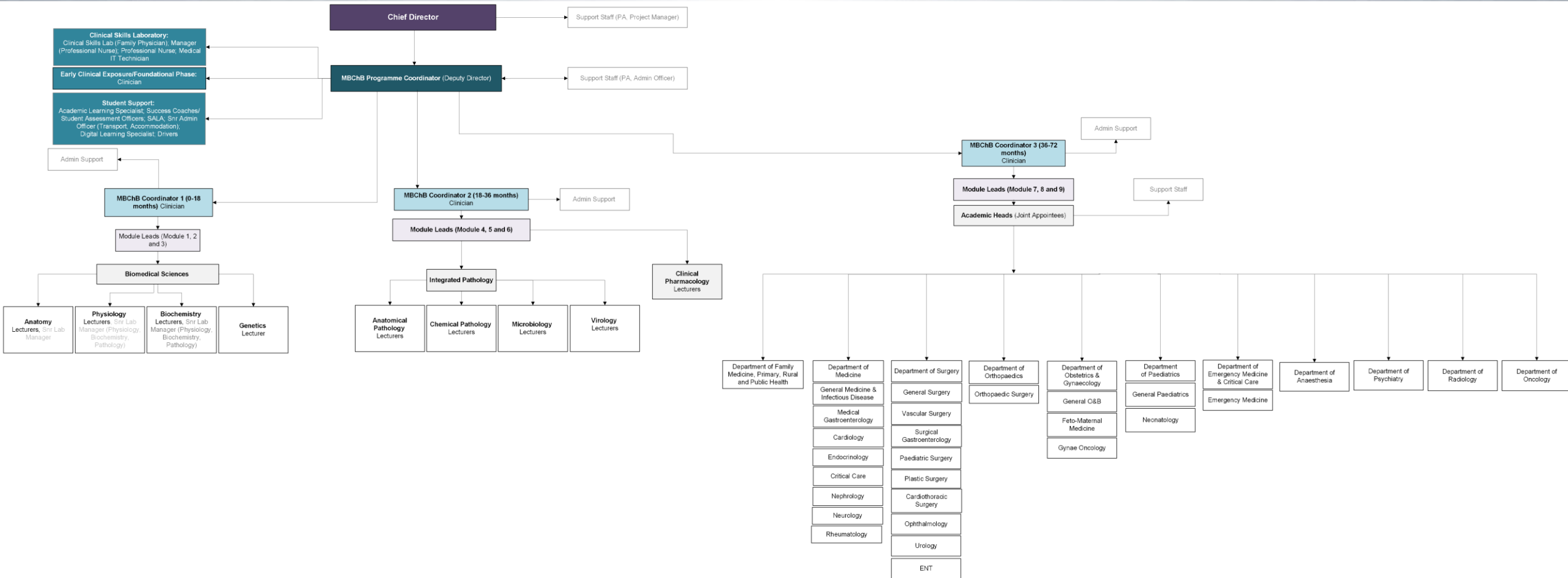
- Total of 64 staff members

2. Joint appointments:

- NWU will contribute to joint appointments.
- 40:60 or 20:80 ratio proposed for 11 HODs and 106 specialists.
- Around 90 these specialists are already employed, and it is estimated that around 20-25 specialists need to be employed progressively especially from 2030.
- The financial implication of the North West Department of Health to employ these specialists have been discussed.
- Specialists in private sector in Dr Kenneth Kaunda District will actively be recruited as honorary appointments.



14.3 Updated HR structure based on curriculum requirements

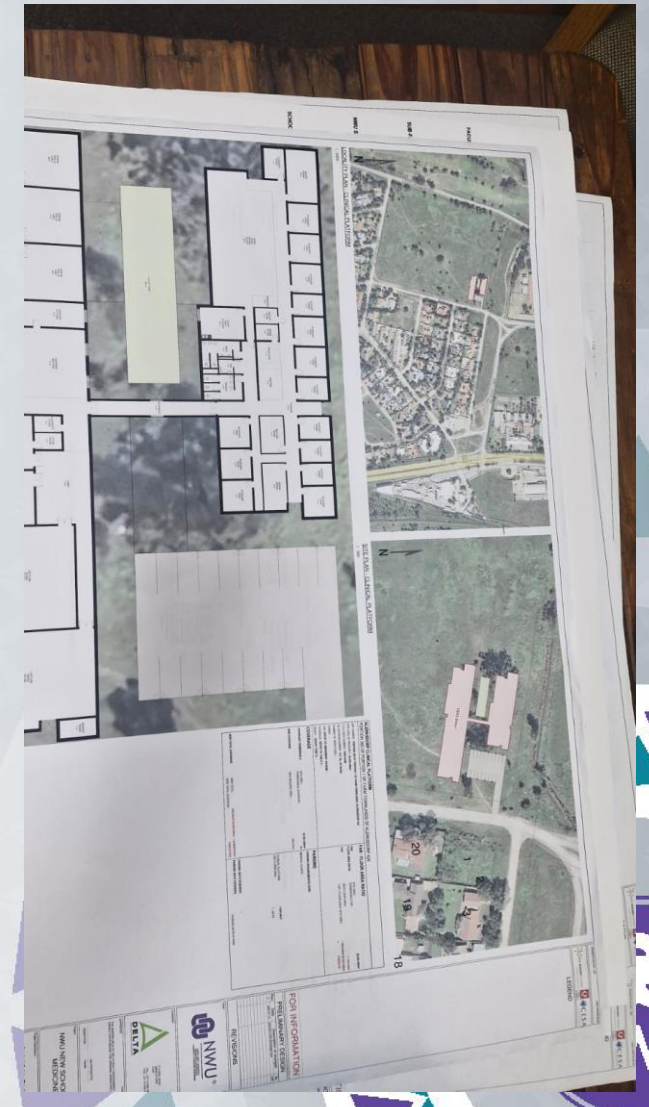
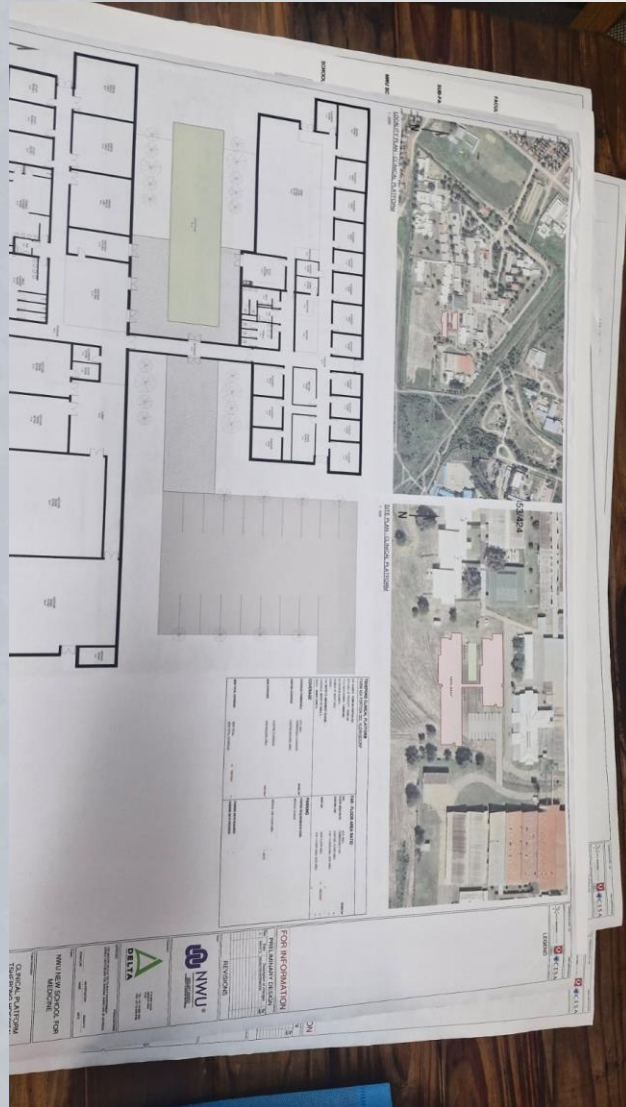


Chief Director	1
PA to Chief Director	1
Project Manager	1
MBChB Programme Director	1
PA to Programme Director	1
Director Clinical Specialities & Sub-Specialities Programmes	1
PA to Director Clinical Specialities & Sub-Specialities Programmes	1
Director Research	1
PA to Director Research	1
Research Coordinator	1
MBChB Programme Coordinators (specialist/GP)	3
Clinician for foundational years (Family Physician)	1
Public Health Specialist (one medical and one non-medical)	2
Student Assessment Officer/Success Coaches	2
Anatomy Lecturers	3
Physiology Lecturers	3
Clinical Pharmacologist Lecturers	3
Medical Microbiology Lecturers	2
Medical Virology Lecturers	2
Medical Biochemistry Lecturers	2
Medical Geneticists Lecturers	1
Medical Pathology (Anatomical, Chemical, Histology) Lecturers	3
Snr Lab Manager (Anatomy)	1
Clinical skills lab clinician (Family Physician)	1
Manager Clinical Skills Laboratory (Professional Nurse)	1
Professional Nurse	1
Medical IT Technician (Skills laboratory)	1
Snr Lab Manager (Physiology, Biochemistry, Pathology, etc.)	1
SALA (Student Academic Lifecycle Administration)	1
Snr Administrative Officers (Student accommodation and transport) PC	2
Senior Administrative Officers (KT complex)*	2
Administrative Officers (KT complex)*	2
Senior Administrative Officers (PC)	3
Administrative Officers (PC)	3
Drivers	6
Academic Learning Specialist (CHPE)	1
Digital Learning Specialist (Instructional design etc.)	1

14.4 Proposed staff complement by 8 August 2024 (at present being costed)



14.5 Awaits architect designs for new buildings, space needs concluded



15. Status Update: Curriculum Development

(Workstream 5: Prof Julia Blitz)

1. Programme Outcomes and Associated Assessment Criteria formulated.
2. Module Outcomes and Associated Assessment Criteria formulated.
3. Form 1 approved by SCAS, Form 3 first draft submitted for Q&APP feedback.
4. LOOOP software in process to sign contractual agreement.



Year 6: Module 9 (Transitioning into a Professional Doctor, 160).

Distributed training: DKK, NMM and RSM.

Year 5: Module 8 (Clinical Rotations II, 160).

Clinical rotation: K/T Hospital Complex. Paediatrics, Anaesthesia, Dermatology, Obstetrics & Gynaecology, Emergency Medicine, Forensic Medicine, Psychiatry, Orthopaedics, Elective.

Year 4: Module 7 (Clinical Rotations I, 160).

Clinical rotation: K/T Hospital Complex: Internal Medicine, Surgery, Anaesthesia, Radiology, Emergency Medicine & Trauma, Ophthalmology, Urology, ENT.

**Year 3, Module 6 (Interventions, 80);
Module 5 (Being the Medical Detective, 80).**

Clinical rotation: Potchefstroom Hospital.

**Year 2, Module 3 (Form follows Function, 80);
Module 4 (Dysfunction & Disequilibrium, 80).**

Clinical rotation: Ventersdorp Community Health Centre and clinics in the JB Marks Municipality.

**Year 1, Module 1
(Being, Becoming & Belonging, 60).**

Clinical rotation: Households (community care systems and connectedness; access and coverage of care), JB Marks Municipality.

**Module 2
(Health, Wellness & Being in Equilibrium, 80).**

36-72 months: Advanced Clinical Phase: Deepened understanding of patients in various clinical domains as well as undifferentiated patients. **Advanced Clinical Skills:** More complex history taking, clinical examination, clinical reasoning and comprehensive assessment, diagnostic and therapeutic interventions, pharmacological treatment and follow-up planning.

18-36 months: Intermediate Phase: Introduction into clinical reasoning and integration, investigations and interventions with knowledge of integrated pathology and clinical pharmacology. **Clinical skills:** Patient history taking and examination and formulating a problem list.

0-18 months: Foundational Phase: Fundamental concepts in anatomy, physiology and biochemistry. **Clinical Skills:** Basic patient interaction, communication and clinical examination skills and health system exposure.

940 credit, 6-year, integrated and spiral curriculum with patient contact from year 1.

15.2 Outline of Foundational Phase (0-18 months)

1st Year (140 credits)

Module 1: Being, Becoming and Belonging
(60 credits)

Module 2: Health, wellness and being in equilibrium
(80 credits)

Clinical rotation: Households (community care systems and connectedness; access and coverage of care)

2nd Year (80 credits)

Module 3: Form follows Function (80 credits)

Clinical rotation: Ventersdorp Community Health Centre and clinics in the JB Marks Municipality

Self-directed learning, lifelong learners based on a constructivism approach with authentic learning, outcome-based curriculum, health system and patient experience from year 1.



15.3 Outline of Intermediate Phase Training (18-36 months)

2nd Year (80 credits)

Module 4: Dysfunction and Disequilibrium (80 credits)

Clinical rotation: Ventersdorp Community Health Centre and clinics in the JB Marks Municipality

3rd Year (160 credits)

Module 5: Being the Medical Detective (80 credits)

Module 6: Interventions (80 credits)

Clinical rotation: Potchefstroom Hospital

Self-directed learning, lifelong learners based on a constructivism approach with authentic learning, outcome-based curriculum, health system and patient experience from year 1.



15.4 Outline of Advanced Clinical Phase (36-72 months)

4th Year (160 credits)

Module 7: Clinical rotations I

Focus on diagnosis based on history and clinical examination.

Group 1 (14 weeks)

- Internal Medicine (14 weeks).

Group 2 (14 weeks)

- Surgery (10 weeks).
- Anaesthesia (2 weeks).
- Radiology (2 weeks).

Group 3 (14 weeks)

- Emergency Medicine & Trauma (8 weeks).
- Ophthalmology (2 weeks).
- Urology (2 weeks).
- ENT (2 weeks).

Clinical rotation: K/T Hospital Complex

5th Year (160 credits)

Module 8: Clinical rotations II

Focus on diagnosis based on history and clinical examination.

Group 1 (12 weeks)

- Paediatrics (8 weeks).
- Anaesthesia (2 weeks).
- Dermatology (2 weeks).

Group 2 (12 weeks)

- Obstetrics & Gynaecology (8 weeks).
- Emergency Medicine (2 weeks).
- Forensic Medicine (2 weeks).

Group 3 (12 weeks)

- Psychiatry (6 weeks).
- Orthopaedics (6 weeks).

- Elective (4 weeks) – All.

Clinical rotation: K/T Hospital Complex

6th Year (160 credits)

Module 9: Transitioning into a Professional Doctor

Consolidation and practice of medicine in the distributed clinical training platform with oversight and support from the tertiary/regional hospitals. Emphasis on consolidation of skills in investigation, clinical management and procedures under supervision including for undifferentiated patients. Competency in leadership and public health.

42 weeks of student intern training in the Distributed Platform (4 clinical training complexes):

K/T & Nic Bodenstein/Witrand Hospitals.

Potchefstroom/Ventersdorp/Witrand Hospitals.

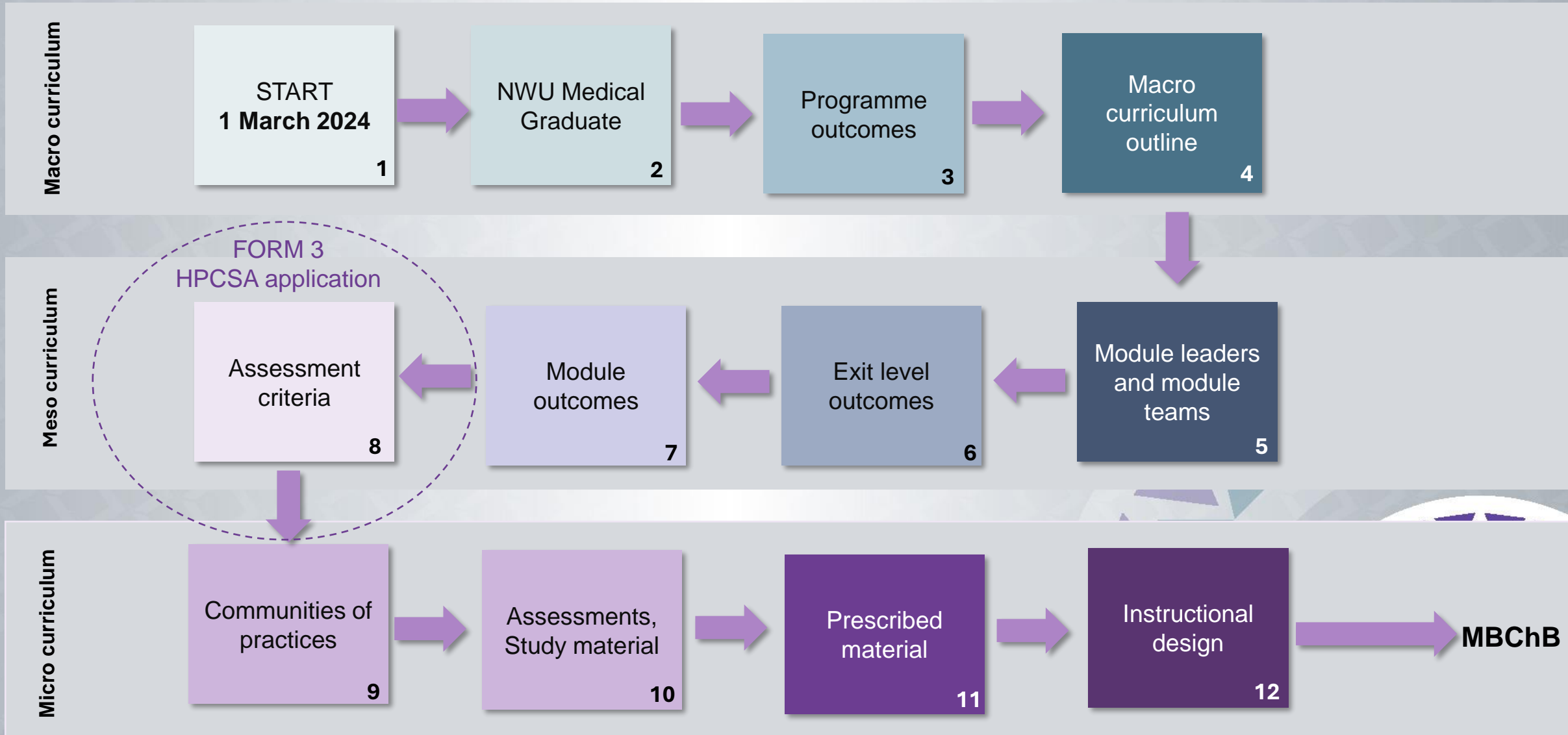
Mahikeng Provincial/Gelukspan/Bophelong Hospitals.

Joe Morolong Memorial/Taung/Bophelong Hospitals.

Total nr of students = 50 (12-13 students in each of the training complexes)

- Adult medical, surgical and trauma; in-patient emergency, palliative and ambulatory care with Community Medicine
- Paediatric, in-patient emergency, palliative and ambulatory care with Community Medicine
- Maternal Care, in-patient emergency, palliative and ambulatory care with Community Medicine
- Psychiatry, in-patient emergency, palliative and ambulatory care with Community Psychiatry
- QIP (Research) across all the rotations.

15.4 12-step Curriculum Development Journey in 2024





Welcome to this exciting project!
Looking forward to further engagements.
Thank you!

