Candidates' perceived benefits and challenges of the revised curriculum of the DipHIVMan

Madeleine Muller, Eric Buch, Oladele Adeniyi

Presented by: Dr Madeleine Muller
Family Physician CMH & Senior Lecturer WSU
SAAFP Congress
August 2023

A cross sectional survey

Table of contents

01

Background

Revising the Diploma of HIV Management

Diploma of HIV Management timeline

2002

Created

Infectious Disease
Consultants

2019

New Ownership

Handed over to
Family Medicine

2021

Revised Curriculum

Blueprinting

2022

Study program

Candidate support

Towards increased
reliability & validity
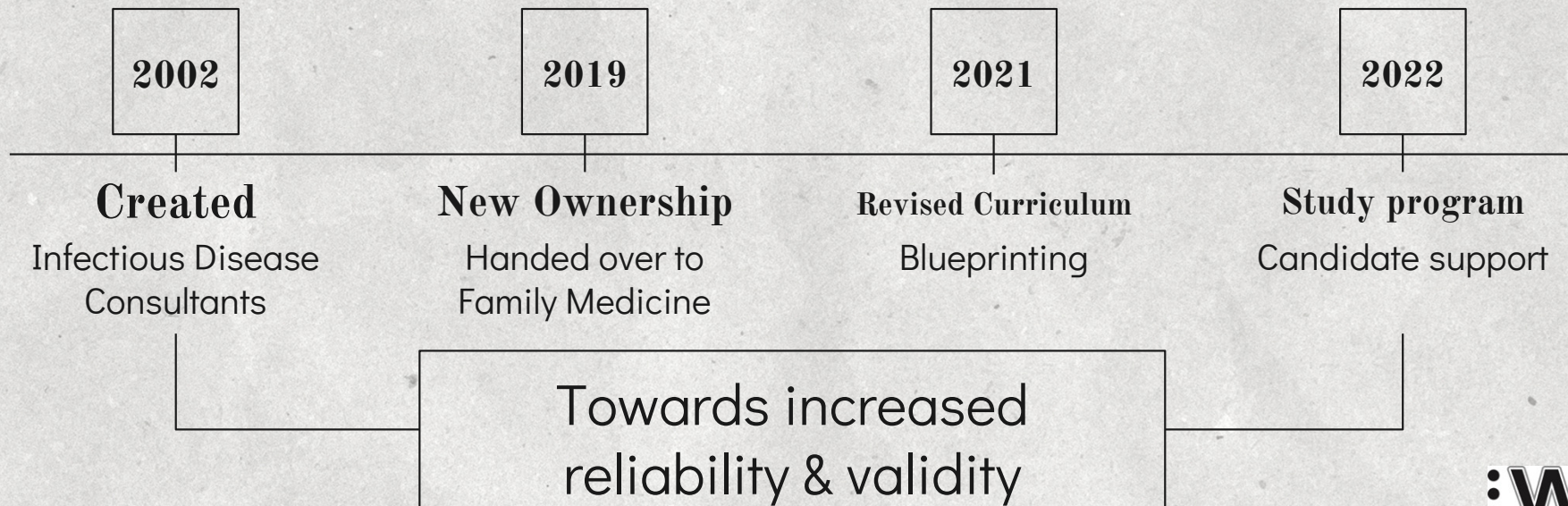
Key revisions
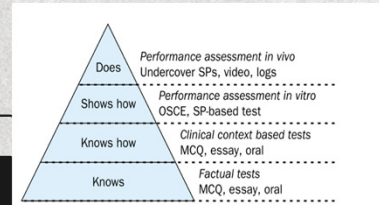

Figure 2: **Miller's pyramid of competence**
SP=simulated patients; OSCE=objective structured clinical examination; HCQ=multiple-choice questions.

Aspect revised	< 2020	Revisions implemented
Restructure curriculum	List of topics	Professional Activities: reflect the work we expect candidates to be able to do 27 PA's identified, with 87 smaller units
Resources	List of resources	Each PA linked to specific resources
Assessment & Blueprinting	Long paper SAQ (OSCE) MCQ	• Two papers: High quality MCQ • Paper 1: 100 / Paper 2: 60 (media & data) • 160 MCQ cover the breadth of the 27 EPAs allocated according to an impact factor; Frequency x importance
Study program	None	9 week study program with weekly email support

Reliability measurement

- With large # of MCQa & Candidates: Each paper can also be tested for reliability
- Split the group randomly into two parallel groups
  - Cronbach alpha score over past 4 exams >0.90

DIPHIVMAN 2021 - 2023				
	2023FS	2022SS	2022FS	2021SS
Cand (n)	157	234	154	229
Cronbach Alpha	0,92	0,93	0,90	0,92
SEM (%)	3,89	3,65	3,92	3,80
SD (%)	13,68	13,80	12,46	13,12
Mean (%)	67,49	68,94	71,25	68,62

WSU
Walter Sisulu University
In pursuit of excellence

02

Objectives

Exploring educational effect

Objectives

Objective 1: The curriculum

To determine the utilisation and potential benefits of the structured, professional-activity-based DipHIVMan curriculum to candidates in preparation for the examination.

Objective 2: The resources

To examine the utilisation and perceived benefits of the resources provided to candidates in preparation for the examination.

Objective 3: The study programme

To assess the utilisation and perceived benefits of the weekly guided-learning study programme to candidates in preparation for the examination.

03

Methodology

Cross sectional study

Methodology

- **Study Design:** Cross sectional survey

- **Participants:** Online survey sent to ALL candidates that wrote the DipHIVMan in FS2022, SS2022 and FS2023 (544 in total) – via email and SMS reminders

- **Sampling technique:** Convenience sampling (Targeting respondents from online survey)
  - Sample Size: Target sample size is 50% response rate of total number of candidates

- **Statistical analysis:** Simple descriptive statistics and Pearson chi squared test

Ethics: Frere/CMH Research Ethics Committee NHREC REC-260219-056

04

Results

Initial data on 194 submissions

Walter Sisulu University
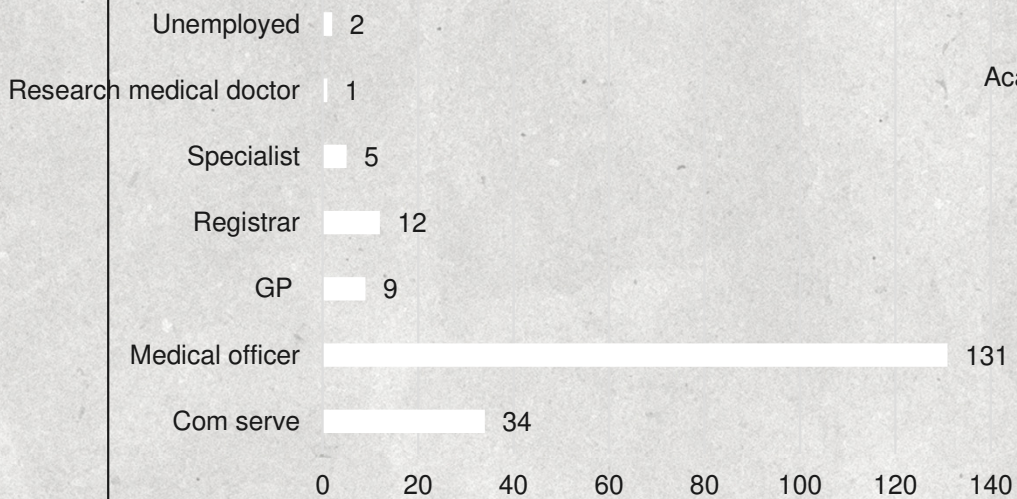In pursuit of excellence

DIPHIVMan exam

- Response rate: 194 surveys (36%)

- **194 respondents**
  - 13.5% (n=26) Fail
  - 86,4% (n=166) Pass

Demographics

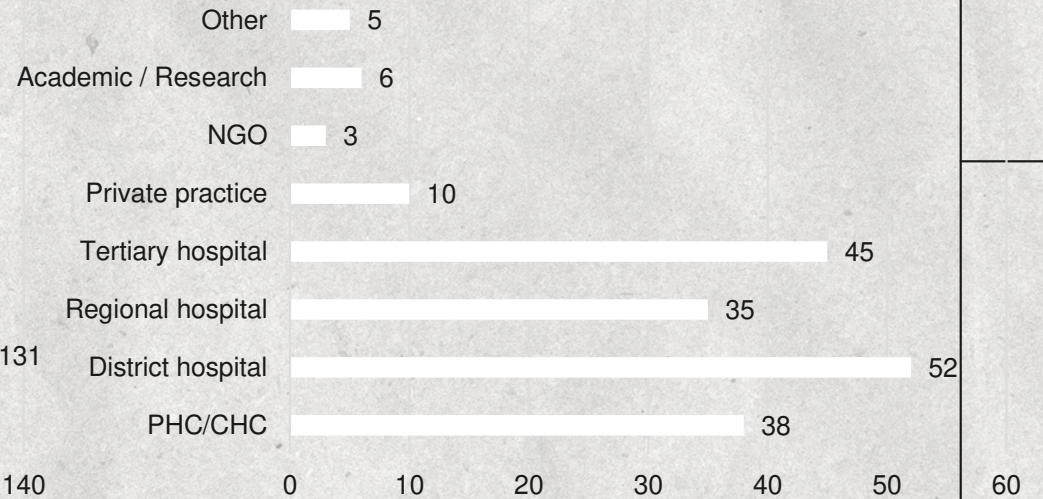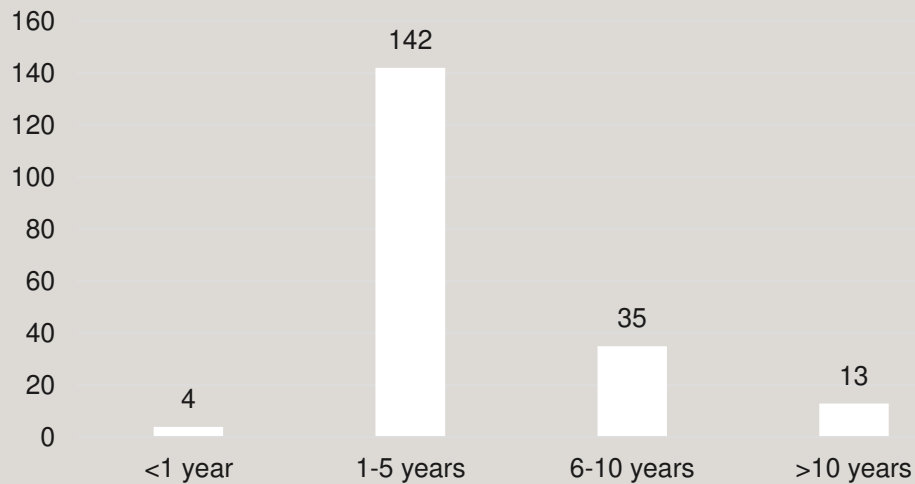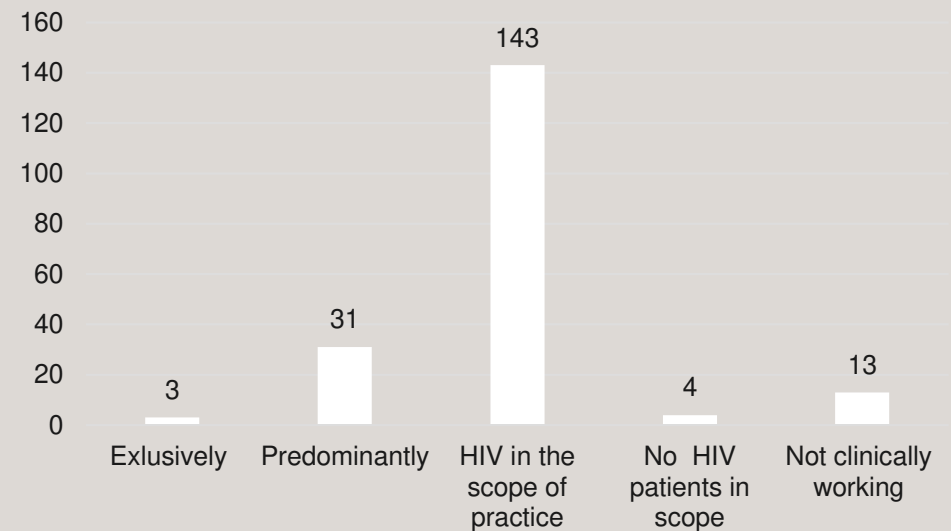## Job Title at time of writing DIpHIVMan

Unemployed	2
Research medical doctor	1
Specialist	5
Registrar	12
GP	9
Medical officer	131
Com serve	34

(x-axis: 0, 20, 40, 60, 80, 100, 120, 140)

Type of Facility

Other	5
Academic / Research	6
NGO	3
Private practice	10
Tertiary hospital	45
Regional hospital	35
District hospital	52
PHC/CHC	38

(x-axis: 0, 10, 20, 30, 40, 50, 60)

Demographics

Survey Candidates:
Years of Experience as a doctor

<1 year	4
1-5 years	142
6-10 years	35
>10 years	13

Work with HIV pateints

Exlusively	3
Predominantly	31
HIV in the scope of practice	143
No HIV patients in scope	4
Not clinically working	13

Demographics

Survey Candidates: Province at time of writing
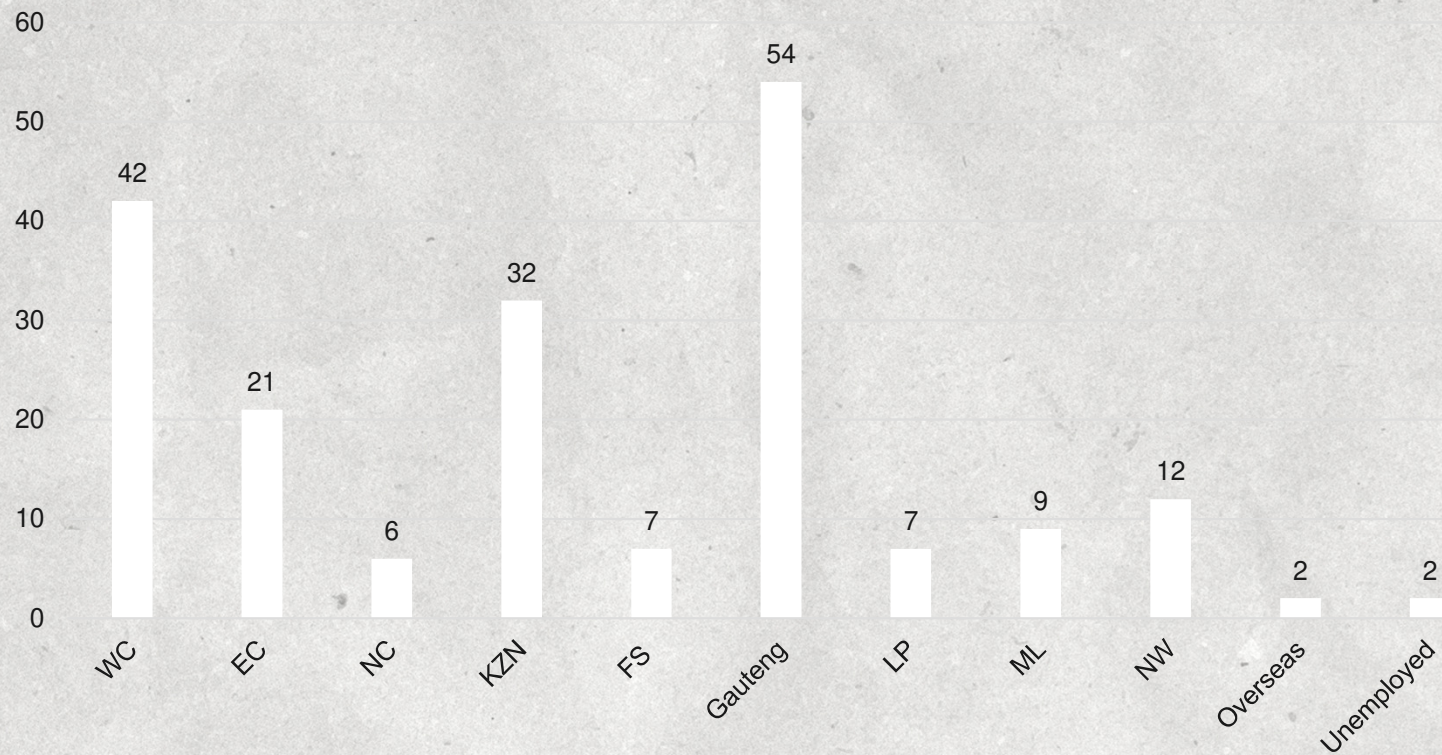
Blueprint & Curriculum

88,77% (n=172) of respondents downloaded the revised curriculum.
   11,3% (n=22) did not or were not sure if they did

64,4% (n=125) used the curriculum regularly or extensively in their preparation
   23,3% (n=45) average use
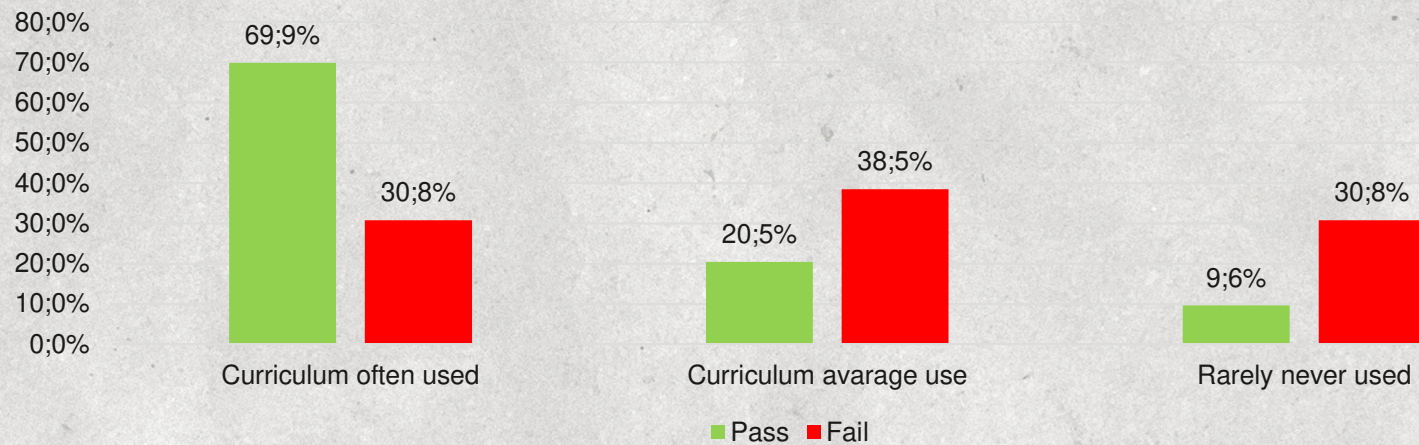   12.4% (n=24) rarely or never.

75.3% (n=146) considered the curriculum clear about what they needed to prepare for the diploma
   17% (n=33) were neutral
   7,7% (n=15) did not consider the curriculum clear

Curriculum usage

Relationship curriculum use and pass rate

Curriculum Usage	Pass	%	Failed	%	p-Value	OR	CI 95%
Often Used	116	69,9	8	30,8	0,001	8,7	2.52 - 30.07
Average Used	34	20,5	10	38,5	0,346	1,7	0.56 - 5.12
Rarely/Never Used	16	9,6	8	30,8	<.001	0,14	0.05 - 0.42

Use of Prescribed resources

- **73,7%** (n=143) of respondents regularly used the prescribed resources / **20.6%** average use

  5.7% (n=11) rarely or never used the resources

- **84%** (n=163) found the resources relevant in their preparation

  13.9% (n=27) neutral

  2,1% (n=4) not relevant.

- **80,9%** (n=157) worked through most or all of the resources, **8,2%** (n=16) more than once

  19,1% (n=37) found it impossible to cover all the material

DipHIVMan preparation

- **55,5%** (n=98) joined part of the full 9 week study program.
  23,7% (n=46) download the study program (but did not join)
  35.8%% (n=50) did not join or download the program

- **54,1%** (n=105) engaged regularly with the study group
  11,3% (n=22) average use
  34,5% (n=67) occasionally or not at all.

- **92,9%** (n=91) of those the 98 that joined the study group found it useful
  5,1% (n=5) were neutral
  2% (n=2) did not find it useful

Study program
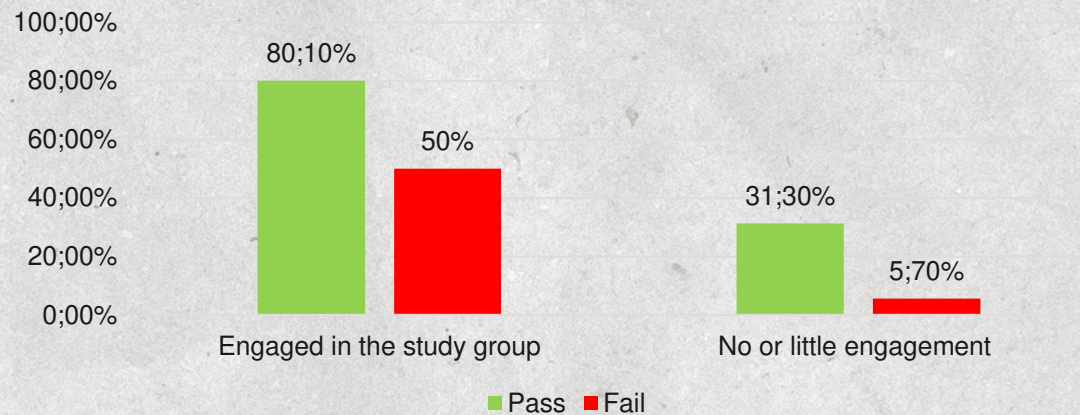
Relationship of joining study group and pass rate
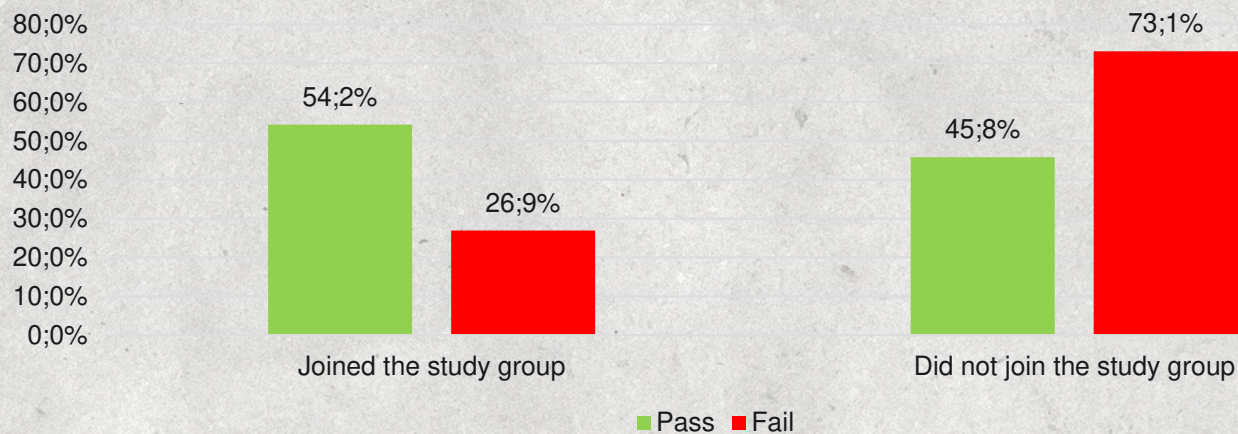
Relationship of Joining study group to Pass / Fail	Pass		Fail		Total	p-value
Joined the study group	90	54,2%	7	26,9%	97	0,010
Did not join the study group	76	45,8%	19	73,1%	95	0,010

Study group

Engagement in study group

Relationship of Study group engagement to Pass / Fail	Pass		Fail		Total	p value
Engaged regularly study group	114	80,1%	11	50,0%	125	0,009
No or little engagement	52	31,3%	15	57,7%	67	0,009

The DipHIVMan has helped my clinical decision making

1;0%   0;5%

31;4%

67;0%
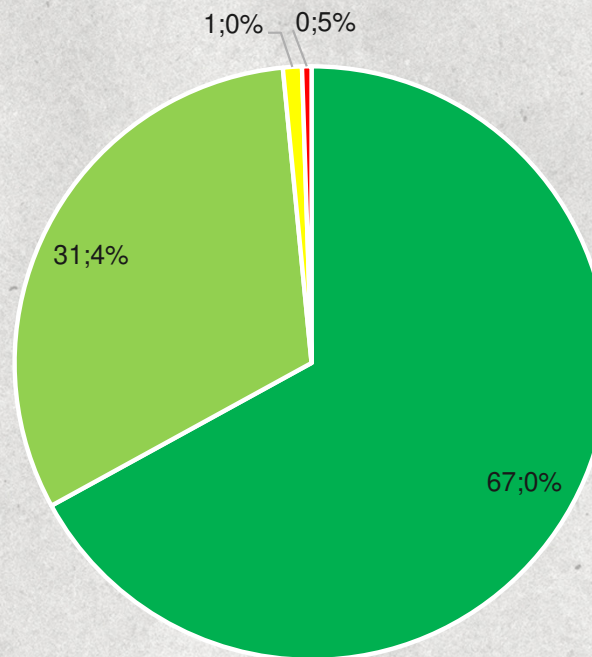
■ Strongly agree   ■ Agree   ■ Neutral   ■ Disagree

05

Discussion

Discussion

- A structured, detailed curriculum can assist the candidate in preparation and ensure that the breadth of content is covered (to increase validity).
- Candidates showed a high level of acceptability of the curriculum and resources provided.
- Candidates who engaged in the study programme found it useful in preparation for the exam
- Candidates agreed that the DipHIVMan has helped them in clinical decisions making when seeing patients living with HIV

Way forward

- Ongoing quality control of the curriculum content and resources.
- Psychometric review and revision of each exam to improve question bank
- All candidates to be automatically enrolled in the study group

References

- Ten Cate, O., Chen, H.C., Hoff, R.G., Peters, H., Bok, H. & Van Der Schaaf, M. 2015. Curriculum development for the workplace using Entrustable Professional Activities (EPAs): AMEE Guide No. 99. *Medical Teacher*. 37(11):983–1002. DOI: 10.3109/0142159X.2015.1060308.
- Jenkins, L.S., Mash, R., Motsohi, T., Naidoo, M., Ras, T., Cooke, R. & Brits, H. 2023. Developing entrustable professional activities for family medicine training in South Africa. AOSIS (pty) Ltd. DOI: 10.4102/safp.v65i1.5690.
- Norcini, J., Anderson, B., Bollela, V., Burch, V., Costa, M.J., Duvivier, R., Galbraith, R., Hays, R., Kent, A., Perrott, V. & Roberts, T. 2011. Criteria for good assessment: Consensus statement and recommendations from the Ottawa 2010 conference, in *Medical Teacher*, vol. 33. 206–214. DOI: 10.3109/0142159X.2011.551559.
- Paniagua, M. & Swygert, K. 1996. *Constructing Written Test Questions for the Basic and Clinical Sciences*.
- Schuwirth, LQ., VD Vleuten, CPM. Chapter 20: How to design a Useful Test: The principles of Assessment Swanwick Tim, Forrest Kirsty & O'Brien Bridget (ed). 2019. *Understanding Medical Education EVIDENCE, THEORY, AND PRACTICE*. vol. Third edition. Page 278

Thanks!

Do you have any questions?

mmuller@wsu.ac.za
+27741028137