A Model for Acceptance and Use of Health Information Systems for South African Health Practitioners

Mr. Million Mberi

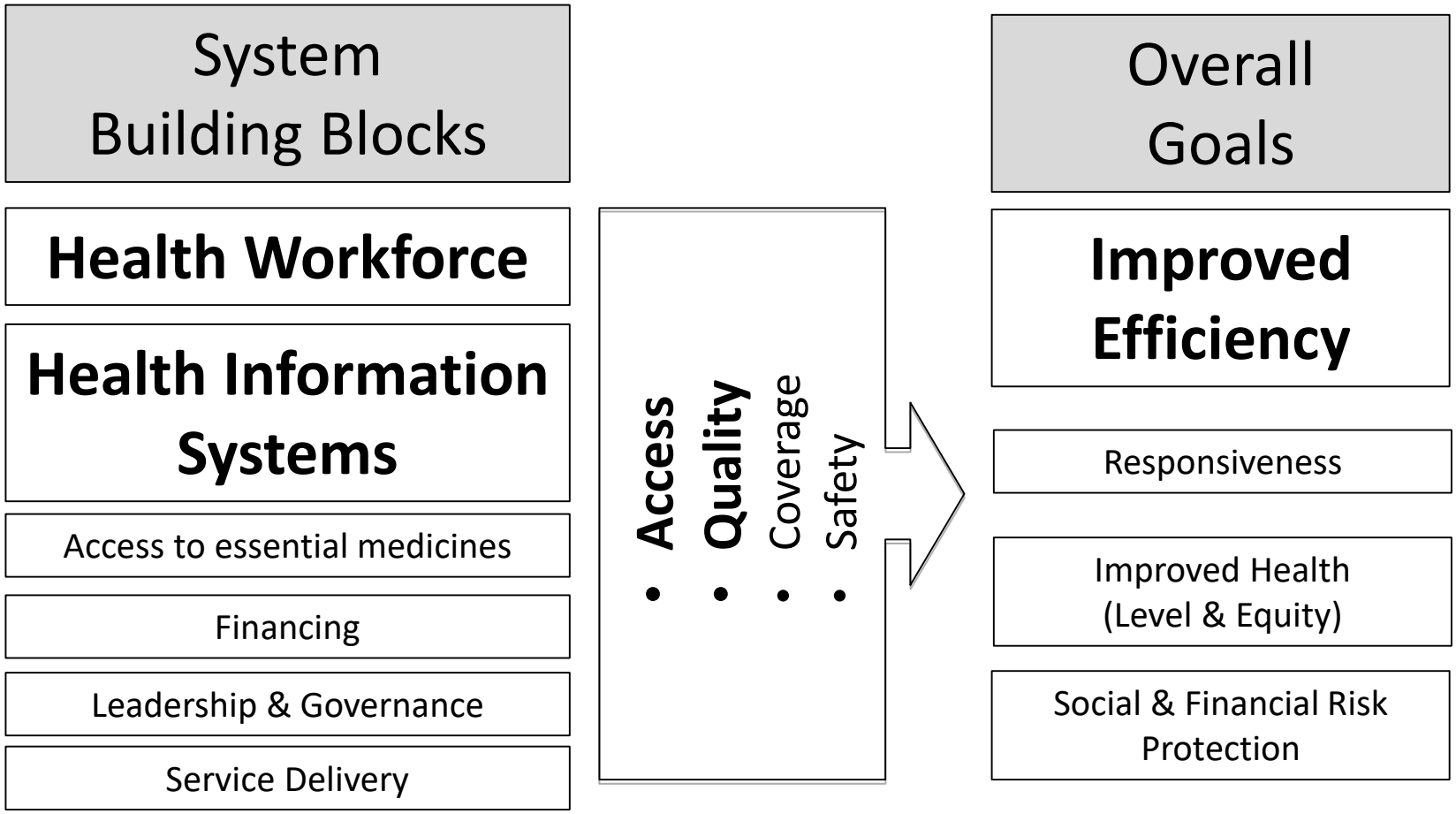
Prof. Ray Kekwaletswe

Outline

- Background to the study
- Health Information Governance
- IT Driven Health Systems
- Research Objectives
- Research Questions
- Practical Contributions
- Theories of Technology HIS Acceptance & Use
- Factors Influencing HIS Acceptance & Use
- Research Methods
- Data Analysis & Findings
- Next Steps in the Research

Background To the study

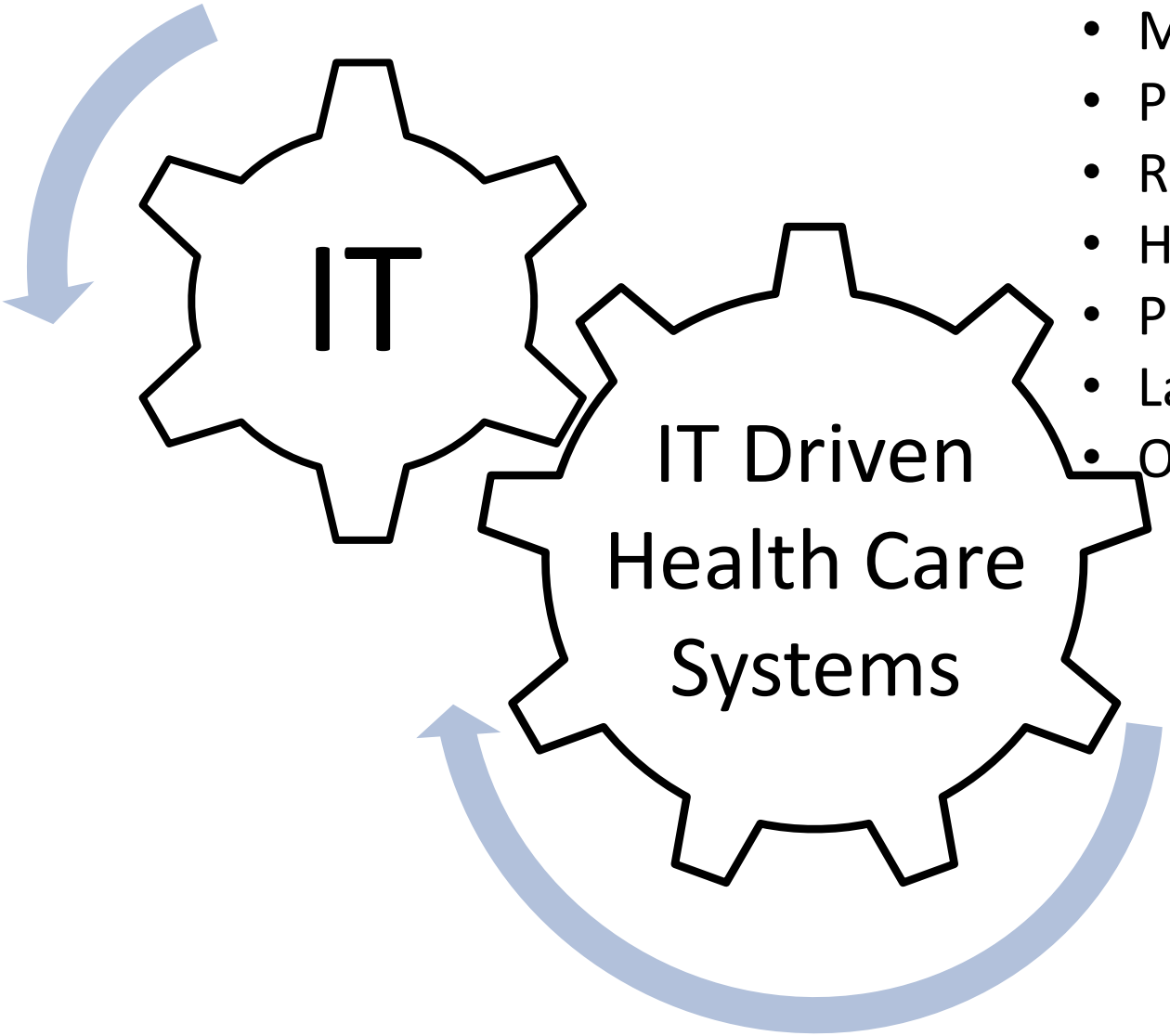
Health Information Governance



The Health Systems Framework

(WHO,2007)

Variants of HIS



- Master Patient Index
- Pharmacy Information
- Radiology Information
- Hospital Information
- Practice Management
- Laboratory Information
- Other

Carter (2008)

Acceptance & USE of HIS

- **To receive**: the psychological state of **taking** the minimal objection;
- **To grasp the idea**: the psychological state of **fully comprehending the intentionality** (e.g. functionality and design) of HIS;
- **To assess the worth**: the psychological state of **evaluating the value and desirability** of the HIS to a health practitioner;

(Schwarz et al. 2014).

Acceptance & USE of HIS

- **To be given:** the psychological state of a health practitioner **willing to adapt their routines** to what was required by HIS; and
- **To submit**: the psychological state of a health practitioner **surrendering to the intentionality** of the HIS

USE

- The **regular application** of HIS as an **integral part** of a health practitioners in **performing their functions and achieving objectives**

(Schwarz et al. 2014).

Research Objectives

Primary

1. Explain why HIS is accepted and used by South African health practitioners

Secondary

1. Explain the factors influencing individual acceptance & use of HIS
2. Determine the extent to which each factor is significant in influencing the acceptance and use of HIS
3. Develop a model for acceptance and effective use of HIS by South African health practitioners

Practical Implications of achieving research objectives

1. Prediction of whether the new HIS will be acceptable to health practitioners,
2. Diagnosis of the reasons why a planned HIS implementations may or many not be fully acceptable to health practitioners,
3. Taking of corrective actions to increase the acceptability and usage if of HIS
4. Enhancement of the business impact resulting from the large investments in time and money associated with introducing new HIS to health and health related institutions.

Key Questions to be addressed

Primary

1. Why are health information systems used or not used by South African health practitioners?

Secondary

1. What are the factors influencing the use or non-use of HIS by South African health practitioners?
2. To what extent is each factor significant in influencing the use of HIS by South African health practitioners?
3. In what ways can HIS be efficiently used by South African health practitioners?

Leading Theories on Acceptance and Use of Technology

- Theory of Planned Behaviour (**TPB**)

  (Ajzen,1991),

- Task-Technology Fit (**TTF**)

  (Goodhue and Thompson,1995),

- Technology Acceptance Model (**TAM**),

  Venkatesh and Davis (2000)

- Unified Theory of Acceptance and Use of Technology (**UTAUT**)

  Venkatesh et al. (2012)

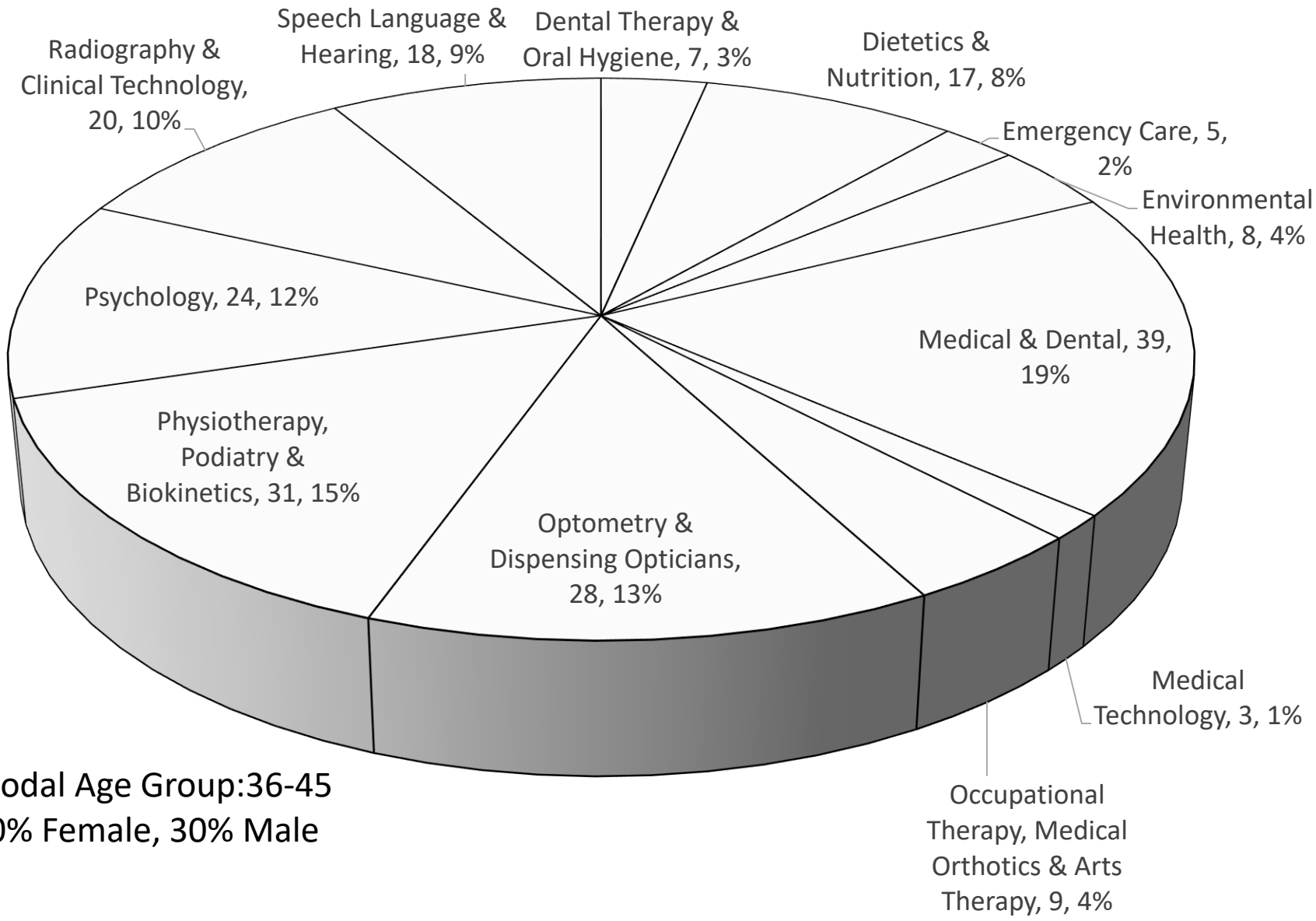
Theoretical Constructs Surveyed

UTAUT Constructs		TTF Constructs	
PE	Performance Expectancy	**IC**	Individual Characteristics
EE	Effort Expectancy	**TE**	Technology Characteristics
FC	Facilitating Conditions	**TA**	Task Characteristics
PV	Price Value		
HM	Hedonic Motivation		
SI	Social Influence		
HB	Habit		

Research Methodology

- Population - Health Professionals
- Sampling Method - Stratified Random
- Target Sample Size - 384 Health Practitioners
- Collection Media - Survey Monkey
- Privacy - Data Anonymisation
- Data Analysis - SPSS Software
  - Descriptive Analysis
  - Linear Regression
  - Further Analysis Pending

Respondents Profile - Affiliation



Modal Age Group:36-45
70% Female, 30% Male

Data Analysis and Results

Factors to which Health Practitioners Agreed / Strongly Agreed

Construct / Factor	Mean Scoring
EE - Effort Expectancy	4.5
PE - Performance Expectancy	4.2
SI - Social Influence	3.8
BI - Behavioural Intention	3.8
PV - Price Value	3.7
IC - Individual Characteristics	3.7

Likert Scale Scoring (1 =Strongly Disagree – 5 Strongly Agree)

Data Analysis and Results

Factors to which Health Practitioners are Neutral

Construct / Factor	**Mean Statistic**
TA - Task Characteristics	3.4
FC - Facilitating Conditions	3.3
TE - Technology Characteristics	3.2
HB - Habit	3.1
HM - Hedonic Motivation	3.1
TA - Task Characteristics	3.4

Data Analysis and Results

Significant of Factors to predict individual use of HIS

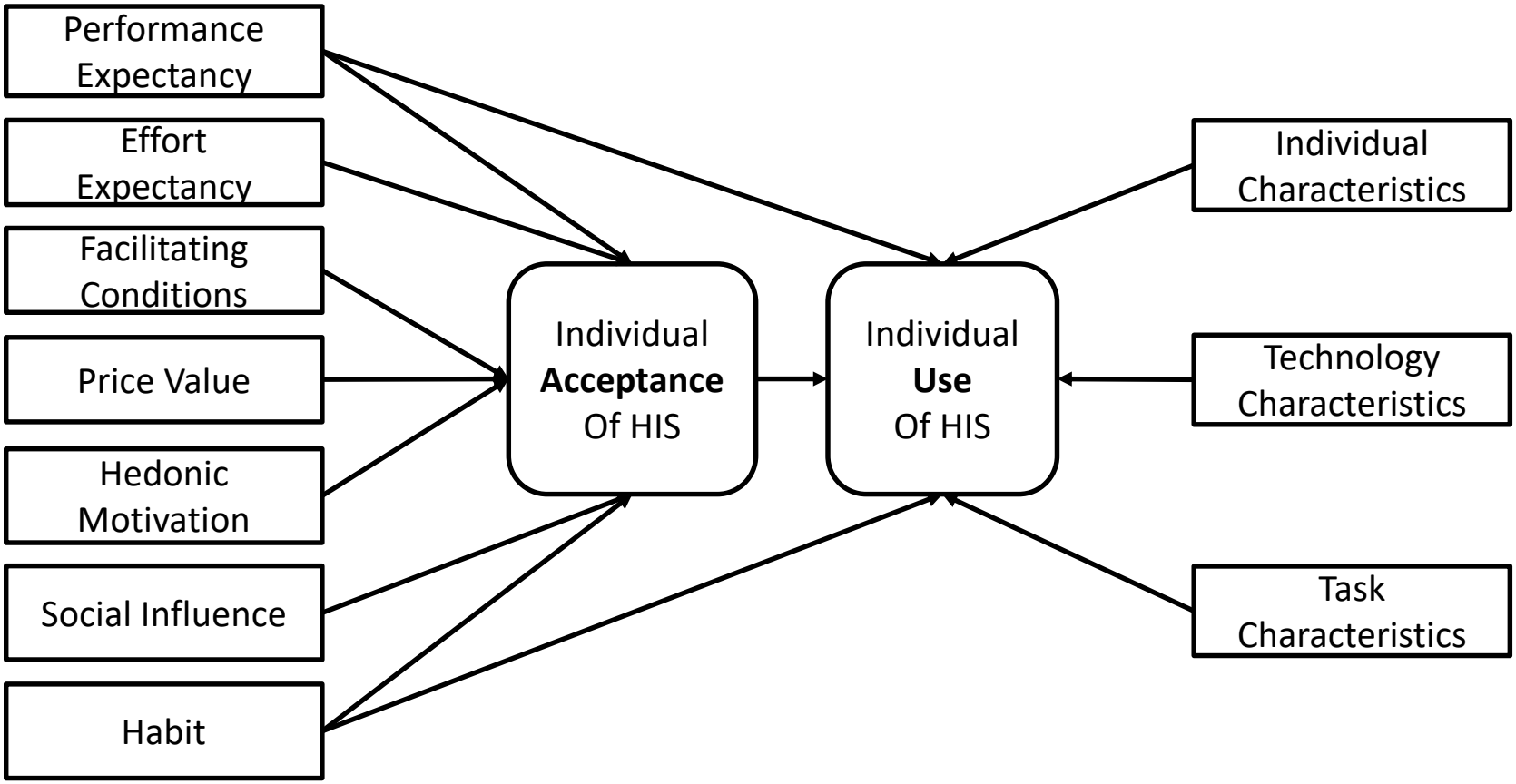
IA, TA, TE, EE, HM, SI, IC, HB, FC, PV, PE and BI
collectively predict 51.7% of HIS use
by health practitioners

This is a high R Square (Pallant, 2013) but there is still 48.3% required to predict from other factors not covered in the proposed model

Next Steps in Research

- Advanced Data Analytics
- Further Development of the Model
- Validation of the Model
- Model Recommendations

The Conceptual Model



Mberi & Kekwaletswe (2019)

Thank you


Health Professions Council of South Africa
1st NATIONAL CONFERENCE
2019
REGULATING HEALTH PROFESSIONALS IN THE 21ST CENTURY