EVALUATING THE IMPLEMENTATION OF GROUP EMPOWERMENT AND TRAINING (GREAT) FOR DIABETES IN SOUTH AFRICA – CONVERGENT MIXED METHODS

Family Medicine and Primary Care

Stellenbosch University

Dr Darcelle Schouw

BACKGROUND

- Diabetes is top cause of mortality in women
- Diabetes is second cause of mortality overall
- 1 in 4 adults over the age of 45 years have diabetes
- Almost 1 in 2 adults over the age of 45 years have diabetes or pre-diabetes
- Prevalence is increasing
- Impact on working-age adults – socio-economic costs
- Fourth commonest reason to consult

- The Society for Endocrinology, Metabolism and Diabetes of South Africa Type 2 Diabetes Guidelines Expert Committee. The 2017 SEMDSA Guideline for the Management of Type 2 Diabetes Guideline Committee .JEMDSA 2017; 21(1)(Supplement 1): S1-S196

GLOBAL EVIDENCE

Group diabetes education is effective at:

- Improving people's knowledge of diabetes
- Improving control of sugar / glucose
- Improving control of blood pressure
- Helping people to lose weight
- Reducing the need for medication

Deakin TA, McShane CE, Cade JE, Williams R. Group based training for self-management strategies in people with type 2 diabetes mellitus. Cochrane Database of Systematic Reviews 2005, Issue 2. Art. No.: CD003417. OI:10.1002/14651858.CD003417.pub2.

SOUTH AFRICAN EVIDENCE

Group diabetes education has been shown to:

- Improve healthy eating
- Improve physical activity
- Improve foot care
- Enable people to share knowledge with others
- Improve control of blood pressure
- Improve glycaemic control
- Be cost-effective

Mash RJ, Rhode H, Zwarenstein M, Rollnick S, Lombard C, Steyn K, Levitt N. Effectiveness of a group diabetes education programme in underserved communities in South Africa: Pragmatic cluster randomized control trial. Diabetic Medicine 2014; 31(8):987-93. doi: 10.1111/dme.12475.

Mash R, Kroukamp R, Gaziano T, Levitt N. Cost-effectiveness of a diabetes group education program delivered by health promoters with a guiding style in underserved communities in Cape Town, South Africa. Patient Education and Counseling 2015;98(5):5:622-626.

Van der Does A, Mash R. Evaluation of the "Take Five School": An education programme for people with Type 2 Diabetes in the Western Cape, South Africa. Prim Care Diabetes. 2013 Dec;7(4):289-95. doi: 10.1016/j.pcd.2013.07.002. Epub 2013 Aug 8.

Allerton J, Mash R. The impact of point-of-care HbA1c testing and intensified clinical care on glycaemic control in patients with type 2 diabetes at Khayelitsha Community Health Centre. Completing thesis.

THE EFFECTIVENESS OF GREAT FOR DIABETES

Group diabetes education has been shown to:

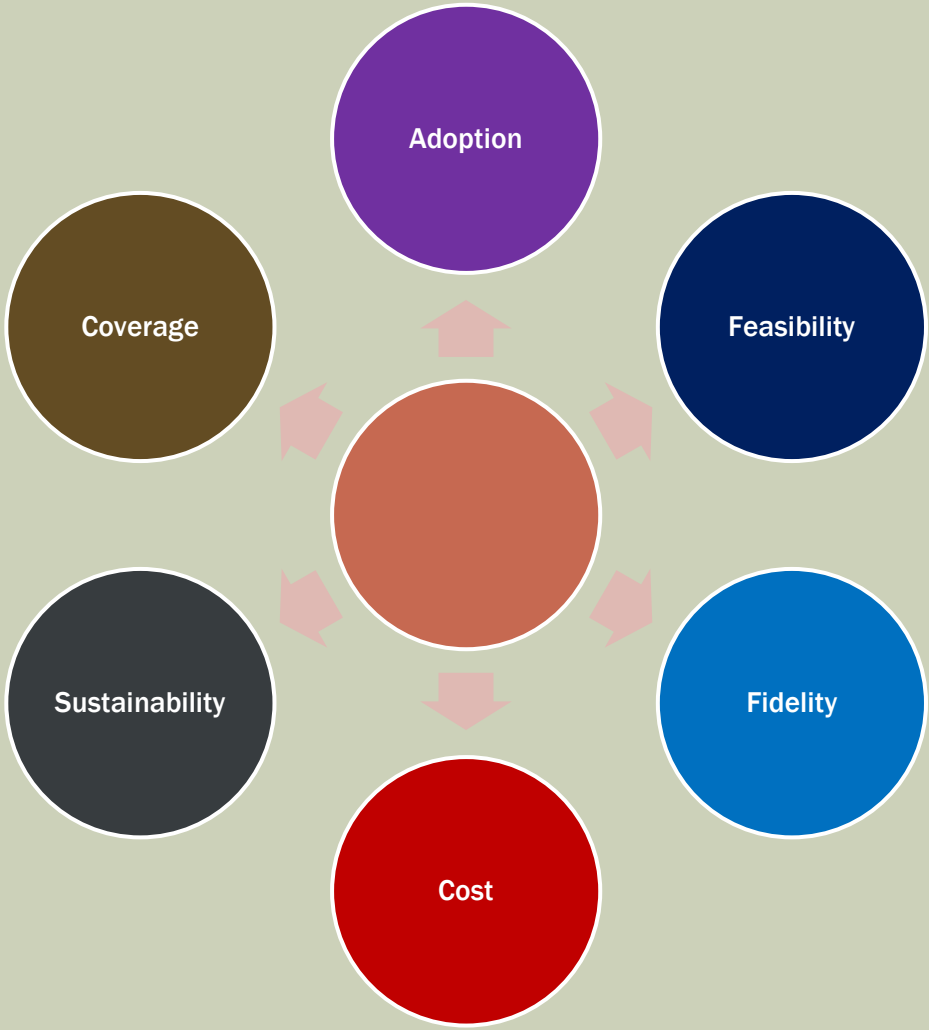
- Improve healthy eating
- Improve physical activity
- Improve foot care
- Enable people to share knowledge with others
- Improve control of blood pressure
- Improve glycaemic control
- Be cost-effective

- Mash RJ, Rhode H, Zwarenstein M, Rollnick S, Lombard C, Steyn K, Levitt N. Effectiveness of a group diabetes education programme in underserved communities in South Africa: Pragmatic cluster randomized control trial. Diabetic Medicine 2014; 31(8):987-93. doi: 10.1111/dme.12475.
- Mash R, Kroukamp R, Gaziano T, Levitt N. Cost-effectiveness of a diabetes group education program delivered by health promoters with a guiding style in underserved communities in Cape Town, South Africa. Patient Education and Counseling 2015;98(5):5:622-626.
- Van der Does A, Mash R. Evaluation of the "Take Five School": An education programme for people with Type 2 Diabetes in the Western Cape, South Africa. Prim Care Diabetes. 2013 Dec;7(4):289-95. doi: 10.1016/j.pcd.2013.07.002. Epub 2013 Aug 8.
- Allerton J, Mash R. The impact of point-of-care HbA1c testing and intensified clinical care on glycaemic control in patients with type 2 diabetes at Khayelitsha Community Health Centre. Completing thesis.

AIM

To evaluate what key lessons could be learnt from the implementation of the GREAT for diabetes programme in primary care facilities in South African provinces. These lessons could help refine the programme theory and further scale-up within these provinces.

KEY OBJECTIVES / IMPLEMENTATION OUTCOMES



EVALUATION METHODS

QUALITATIVE

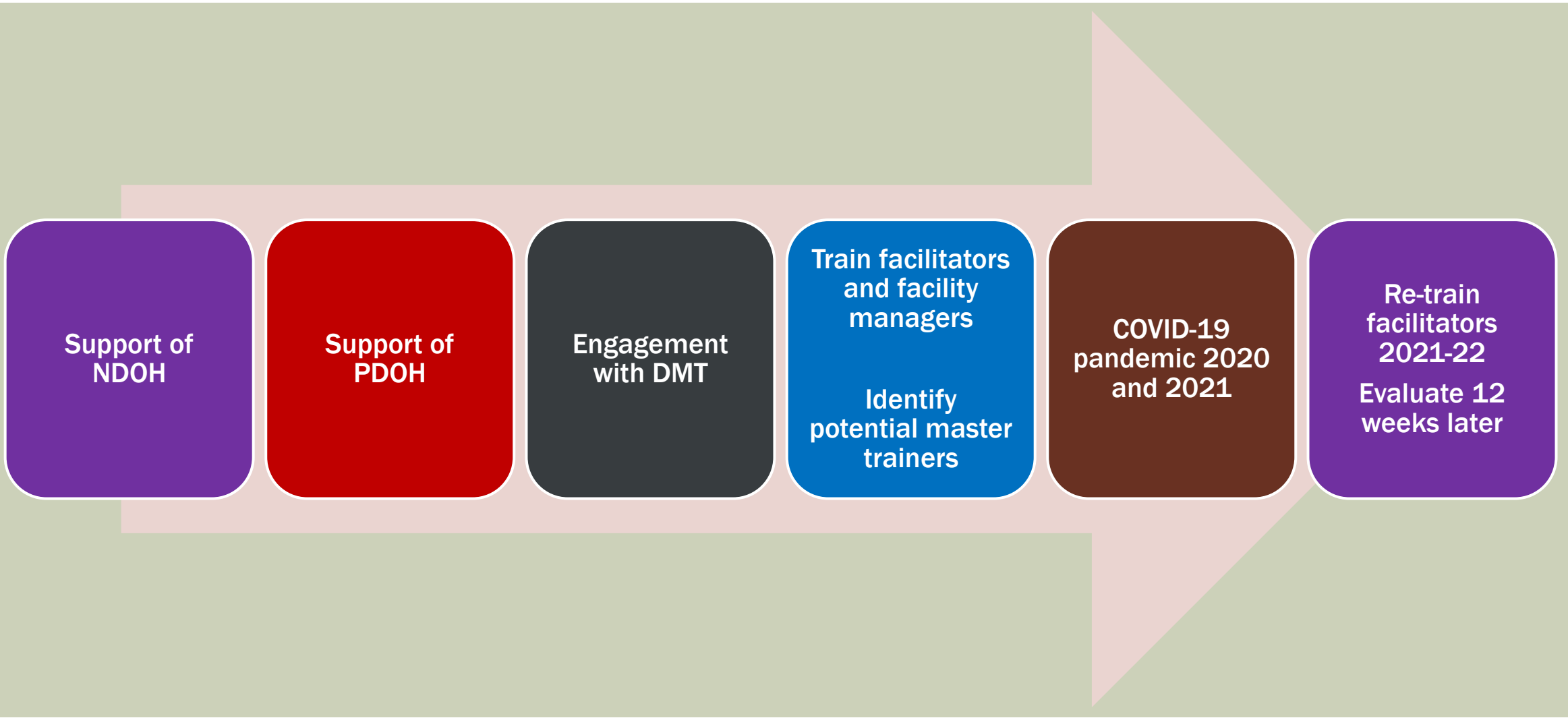
Descriptive exploratory semi-structured interviews with:

- National policymakers
- Provincial policymakers
- District managers
- Facility managers, facilitators, primary care providers
- Patients

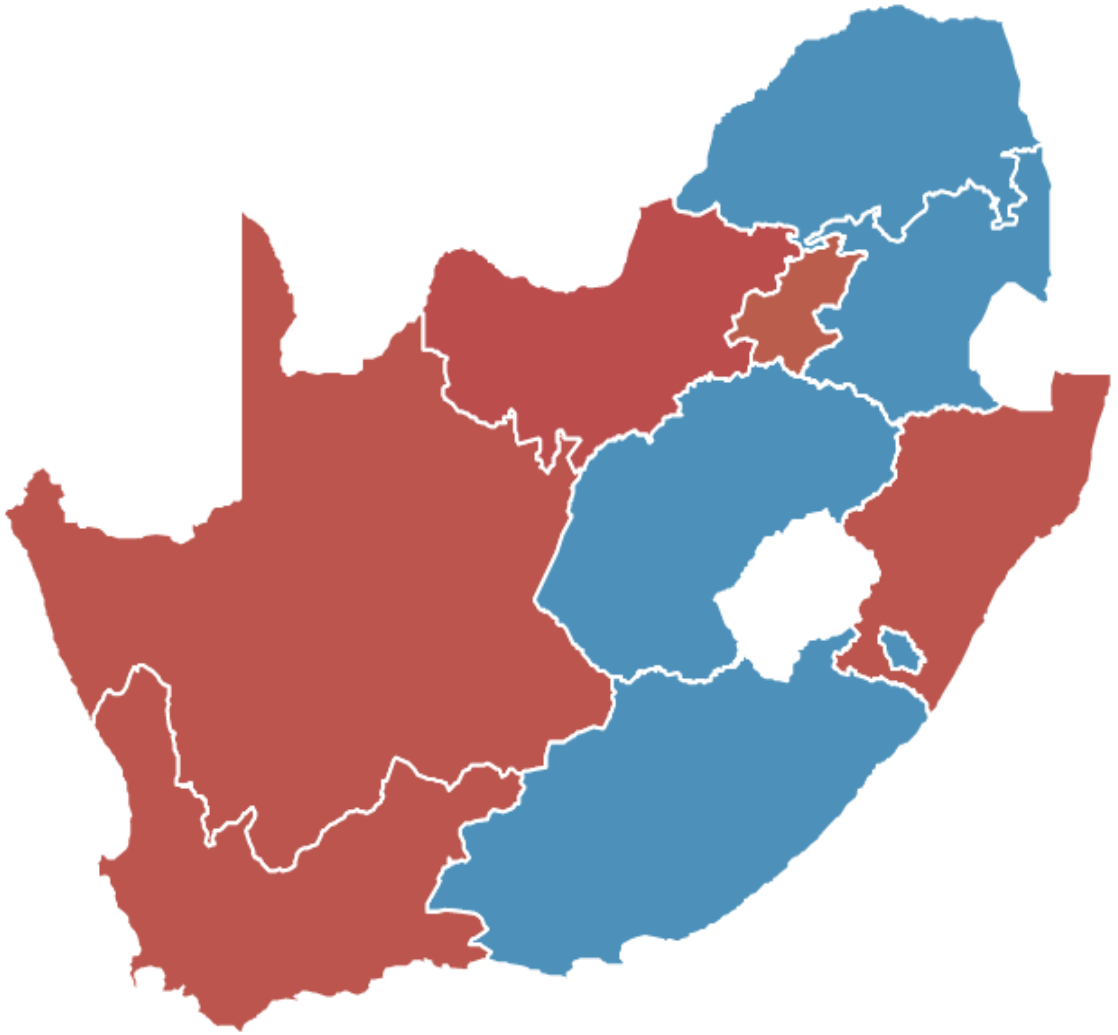
QUANTITATIVE

- End of training feedback questionnaire
- Observations of GREAT sessions
- Facility survey on reach / coverage
- Estimation of setup and incremental costs

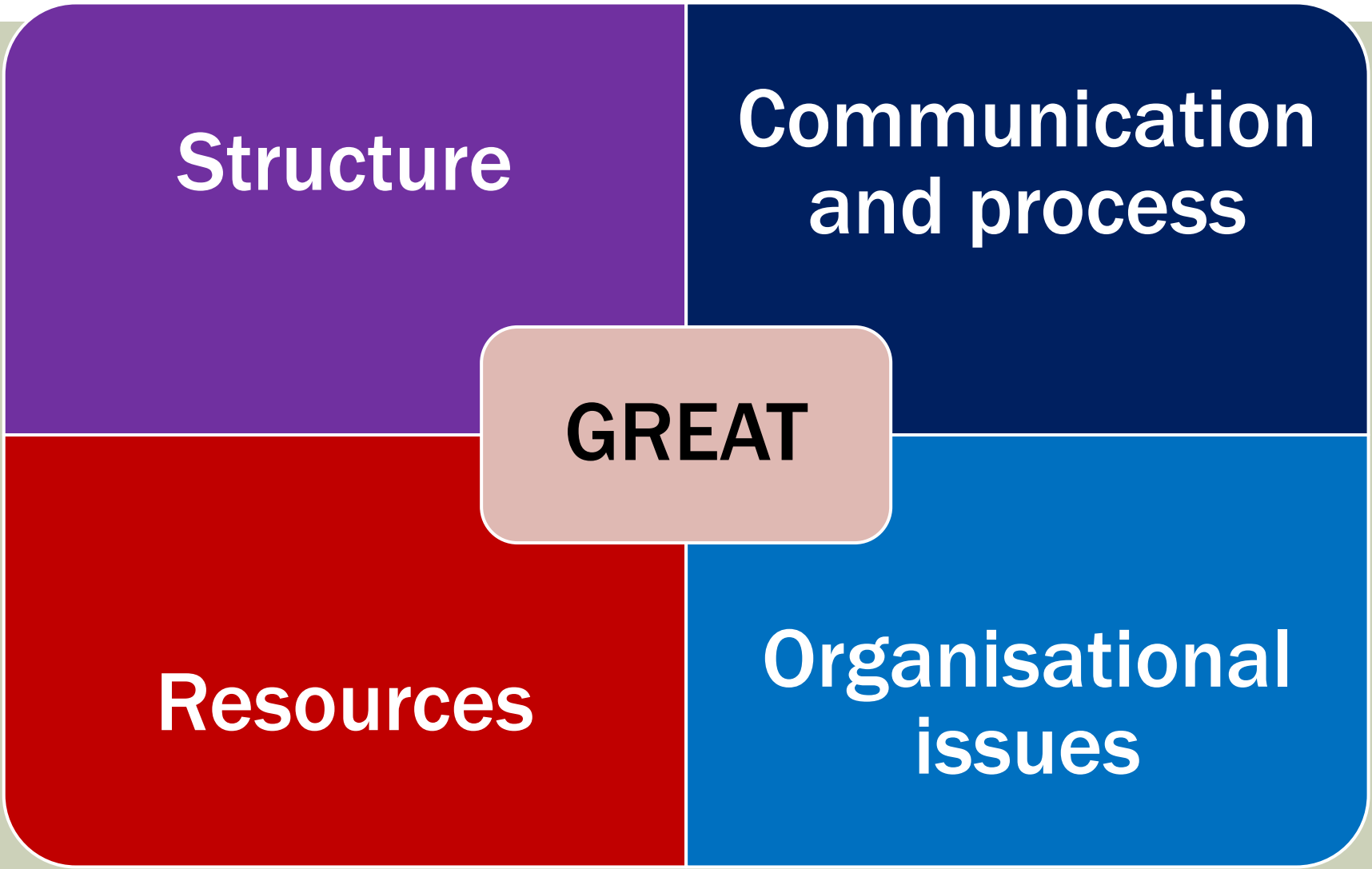
IMPLEMENTATION STRATEGY AFTER COVID-19



THE IMPLEMENTATION OF GREAT FOR DIABETES



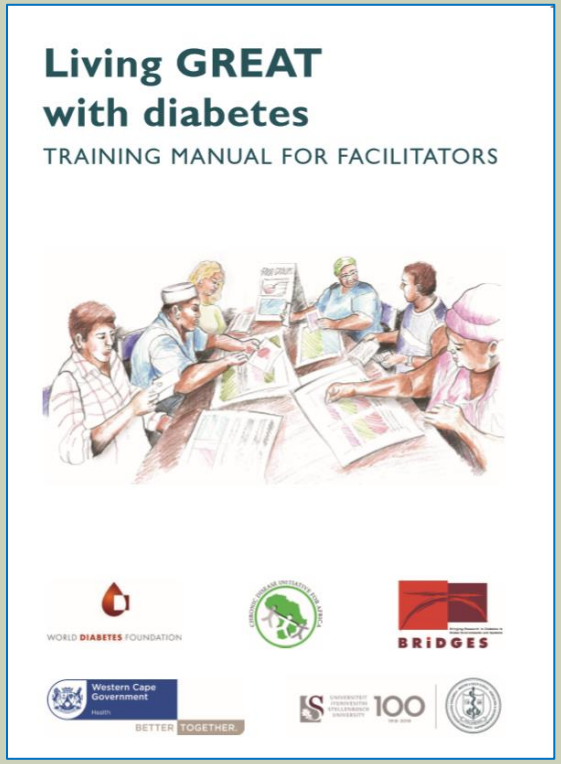
THE DESIGN OF GREAT FOR DIABETES?

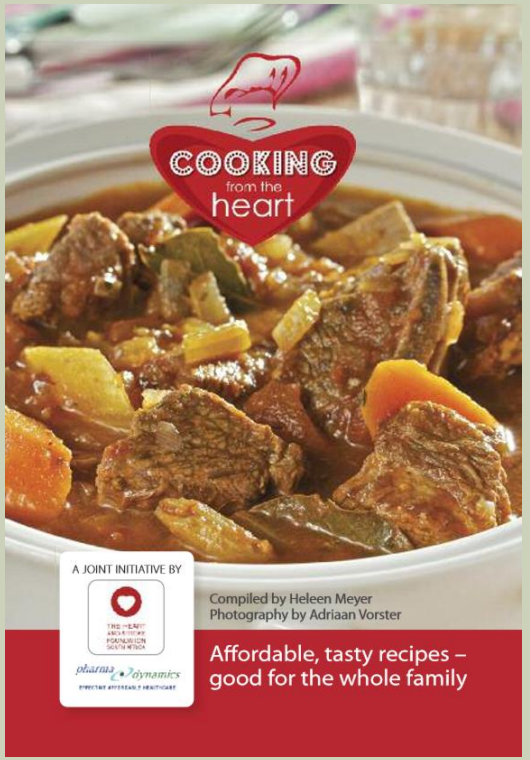


STRUCTURE

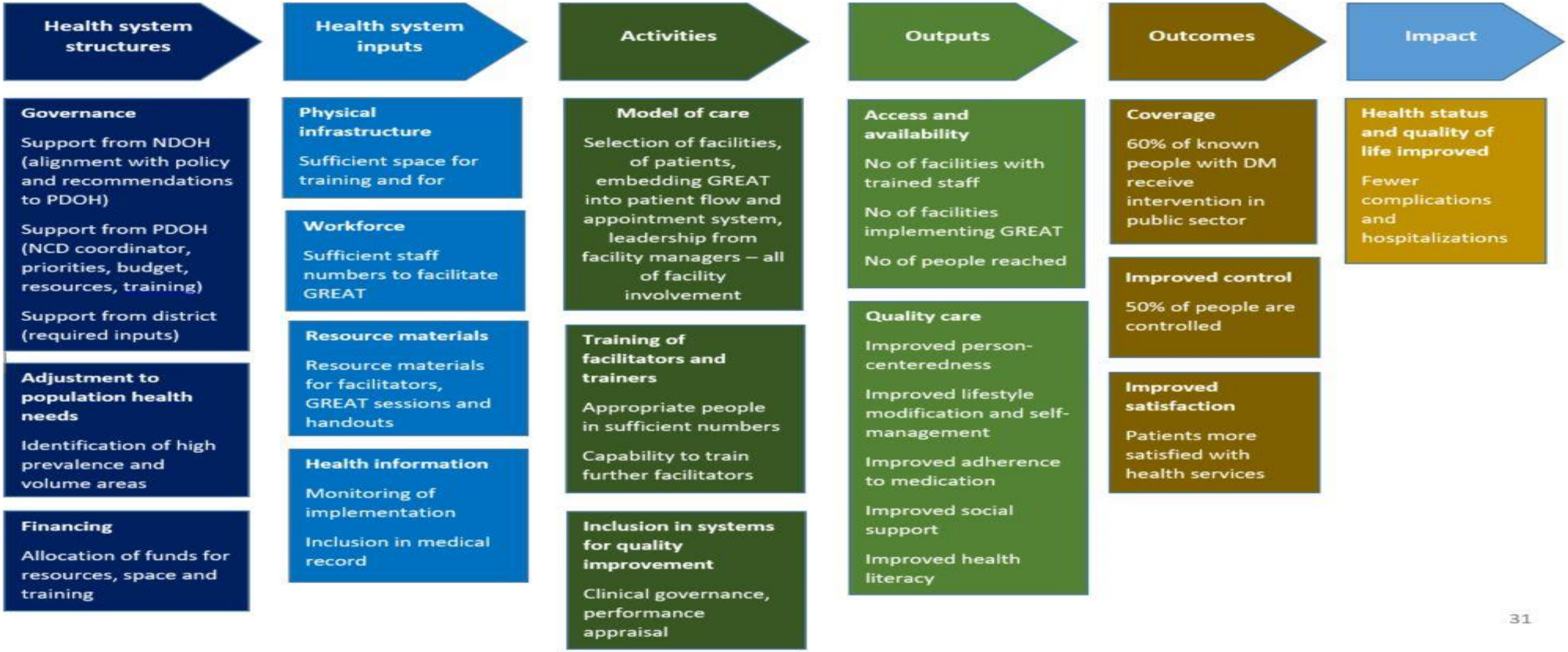
- 4-5 sessions:
  - Understanding diabetes
  - Lifestyle modification
  - Understanding medication
  - Avoiding complications
- 60-120 minutes
- On day of usual attendance
- 10-15 people

RESOURCE MATERIALS FOR FACILITATORS





RESULTS


Health system structures
Health system inputs
Activities
Outputs
Outcomes
Impact
Governance
Support from NDOH (alignment with policy and recommendations to PDOH)
Support from PDOH (NCD coordinator, priorities, budget, resources, training)
Support from district (required inputs)
Adjustment to population health needs
Identification of high prevalence and volume areas
Financing
Allocation of funds for resources, space and training
Physical infrastructure
Sufficient space for training and for
Workforce
Sufficient staff numbers to facilitate GREAT
Resource materials
Resource materials for facilitators, GREAT sessions and handouts
Health information
Monitoring of implementation
Inclusion in medical record
Model of care
Selection of facilities, of patients, embedding GREAT into patient flow and appointment system, leadership from facility managers – all of facility involvement
Training of facilitators and trainers
Appropriate people in sufficient numbers
Capability to train further facilitators
Inclusion in systems for quality improvement
Clinical governance, performance appraisal
Access and availability
No of facilities with trained staff
No of facilities implementing GREAT
No of people reached
Quality care
Improved person-centeredness
Improved lifestyle modification and self-management
Improved adherence to medication
Improved social support
Improved health literacy
Coverage
60% of known people with DM receive intervention in public sector
Improved control
50% of people are controlled
Improved satisfaction
Patients more satisfied with health services
Health status and quality of life improved
Fewer complications and hospitalizations

SUPPORT FROM THE NDOH AND PDOH

Health system structures

Governance

Support from NDOH (alignment with policy and recommendations to PDOH)

Support from PDOH (NCD coordinator, priorities, budget, resources, training)

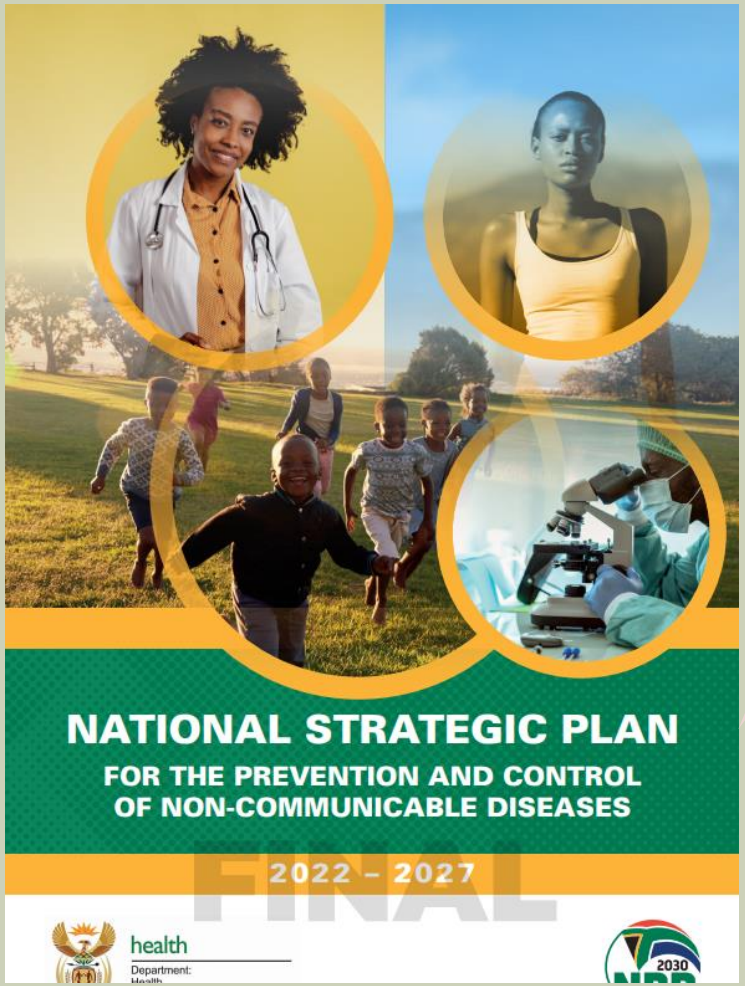
Support from district (required inputs)

Adjustment to population health needs

Identification of high prevalence and volume areas

Financing

Allocation of funds for resources, space and training



90% know if they have DM

60% receive an intervention

50% are controlled

COSTS

Health system structures

Governance

Support from NDOH (alignment with policy and recommendations to PDOH)

Support from PDOH (NCD coordinator, priorities, budget, resources, training)

Support from district (required inputs)

Adjustment to population health needs

Identification of high prevalence and volume areas

Financing

Allocation of funds for resources, space and training

Financing

- Setup costs ZAR9315 per facility
- Opportunity costs
- Operational costs
  - Space
  - Graduations

COSTS	ZAR
Set-up costs	
Training workshop	
Cost of materials for 20 people	38300
Cost of refreshments for 22 people	13200
Venue hire	6000
Accommodation for 5 participants	19000
TOTAL	76500
SU trainer costs per workshop	
Airport transfer	800
Air tickets	4500
Accommodation and sustenance	7600
Local travel	2250
Excess baggage for materials	1500
TOTAL	16650
Operational incremental costs	
Additional staff	0
Venue	0

SPACE

Health system inputs

Physical infrastructure
Sufficient space for training and for

Workforce
Sufficient staff numbers to facilitate GREAT

Resource materials
Resource materials for facilitators, GREAT sessions and handouts

Health information
Monitoring of implementation

Inclusion in medical record

Session	Province	Type of space	In facility or outside	Size	Problems with environment
1	WC	Physiotherapy room	Facility	Adequate	Not enough seats
2	WC	Physiotherapy room	Facility	Adequate	No problems
3	WC	Boardroom	Facility	Adequate	Cold and very formal
4	WC	Tent	Outside	Adequate	Cold and little privacy
5	WC	Clinic room	Facility	Too small	Poor ventilation, noisy, no privacy, dark, interruptions
6	WC	Church hall	Outside	Adequate	No problems
7	KZN	Outside area	Outside	Adequate	Cold and poor ventilation
8	KZN	Prefabricated room	Facility	Adequate	No problems
9	NW	Clinic room	Facility	Adequate	No problems
10	GP	Clinic kitchen/Tent	Facility	Too small	Poor lighting, poor ventilation, noisy and interruptions, cold

TRAINING OF FACILITATORS AND TRAINERS

Activities

Model of care

Selection of facilities, of patients, embedding GREAT into patient flow and appointment system, leadership from facility managers – all of facility involvement

Training of facilitators and trainers

Appropriate people in sufficient numbers

Capability to train further facilitators

Inclusion in systems for quality improvement

Clinical governance, performance appraisal

What I learnt from the training workshop (N=142)	n (%)
New knowledge about diabetes	68 (47.9)
The guiding style and a new approach to patients	63 (44.4)
New communication skills	54 (38.0)
Use of resource materials to help people learn	15 (10.6)
How to set goals with patients	10 (7.0)
How to make a presentation	6 (4.2)
Being congruent in one's own behaviour and lifestyle	6 (4.2)
Learning from peers and colleagues	6 (4.2)
Value of role play to learn new skills	5 (3.5)
Value of getting patients to reflect on what they learnt	5 (3.5)

TRAINING OF FACILITATORS AND TRAINERS

Activities

Model of care

Selection of facilities, of patients, embedding GREAT into patient flow and appointment system, leadership from facility managers – all of facility involvement

Training of facilitators and trainers

Appropriate people in sufficient numbers

Capability to train further facilitators

Inclusion in systems for quality improvement

Clinical governance, performance appraisal

What would have improved the training workshop (N=142)	
Nothing	31 (21.8)
The workshop should be longer with more time to ask questions and practice	21 (14.8)
Identify when people are tired and need an energiser	9 (6.3)
Provide more feedback after simulated practice	6 (4.2)
Summarise key learning and signpost the flow between sessions better	4 (2.8)
Provide more resources to read	4 (2.8)
Work in smaller groups and change members between tasks	4 (2.8)
Teach presentation skills more	2 (1.4)

FIDELITY TO DELIVERY OF GREAT

Activities

Model of care

Selection of facilities, of patients, embedding GREAT into patient flow and appointment system, leadership from facility managers – all of facility involvement

Training of facilitators and trainers

Appropriate people in sufficient numbers

Capability to train further facilitators

Inclusion in systems for quality improvement

Clinical governance, performance appraisal

- Language issues
- Communication skills (score 1-4)
  - Evocation mean score 3.5
  - Respecting choice and control mean score 3.4
  - Exchanging information mean score 3.2
  - Empathy mean score 3.1
  - Collaboration mean score 3.1
  - Balance of open as well as closed question mean score 3.0
  - Use of reflective listening mean score 2.9
- Facilitation skills judged as good
- Liked the visual, active and collaborative approach
- No major changes

ACCESS AND AVAILABILITY

Outputs

Access and availability

No of facilities with trained staff

No of facilities implementing GREAT

No of people reached

Quality care

Improved person-centeredness

Improved lifestyle modification and self-management

Improved adherence to medication

Improved social support

Improved health literacy

Province	Number of facilities implemented	Number of facilities planning to implement	Number of facilities not planning to implement	Number of patients reached
KwaZulu-Natal	3	7	1	37
Western Cape	6	2	0	435
North-West	2	6	0	40
Northern Cape	2	6	1	39
Gauteng JB	1	10	0	37
Gauteng TSH	0	7	0	37
TOTAL	17	38	2	625

Activities

Model of care

Selection of facilities, of patients, embedding GREAT into patient flow and appointment system, leadership from facility managers – all of facility involvement

Training of facilitators and trainers

Appropriate people in sufficient numbers

Capability to train further facilitators

Inclusion in systems for quality improvement

Clinical governance, performance appraisal

Training of facilitators and trainers

- Sending the appropriate people for training
- Training enough people per facility
- 4-day workshop better
- Developing master trainers
- A few issues with venues for training

THE FEASIBILITY OF GREAT FOR DIABETES

"The information that we got was excellent. I feel that it was something really worthwhile sitting in. If everybody who is diabetic (and I mean there are a lot of diabetics around these days) can have what we have, I am sure that they will have a better, wider perspective of what they are going through" (Patient)

'They [the patients] asked us "why didn't you do it like this before, we have been here in this institution for a long time, but you didn't do it?"' (Health promotion officer)

Outputs

Access and availability

No of facilities with trained staff

No of facilities implementing GREAT

No of people reached

Quality care

Improved person-centeredness

Improved lifestyle modification and self-management

Improved adherence to medication

Improved social support

Improved health literacy

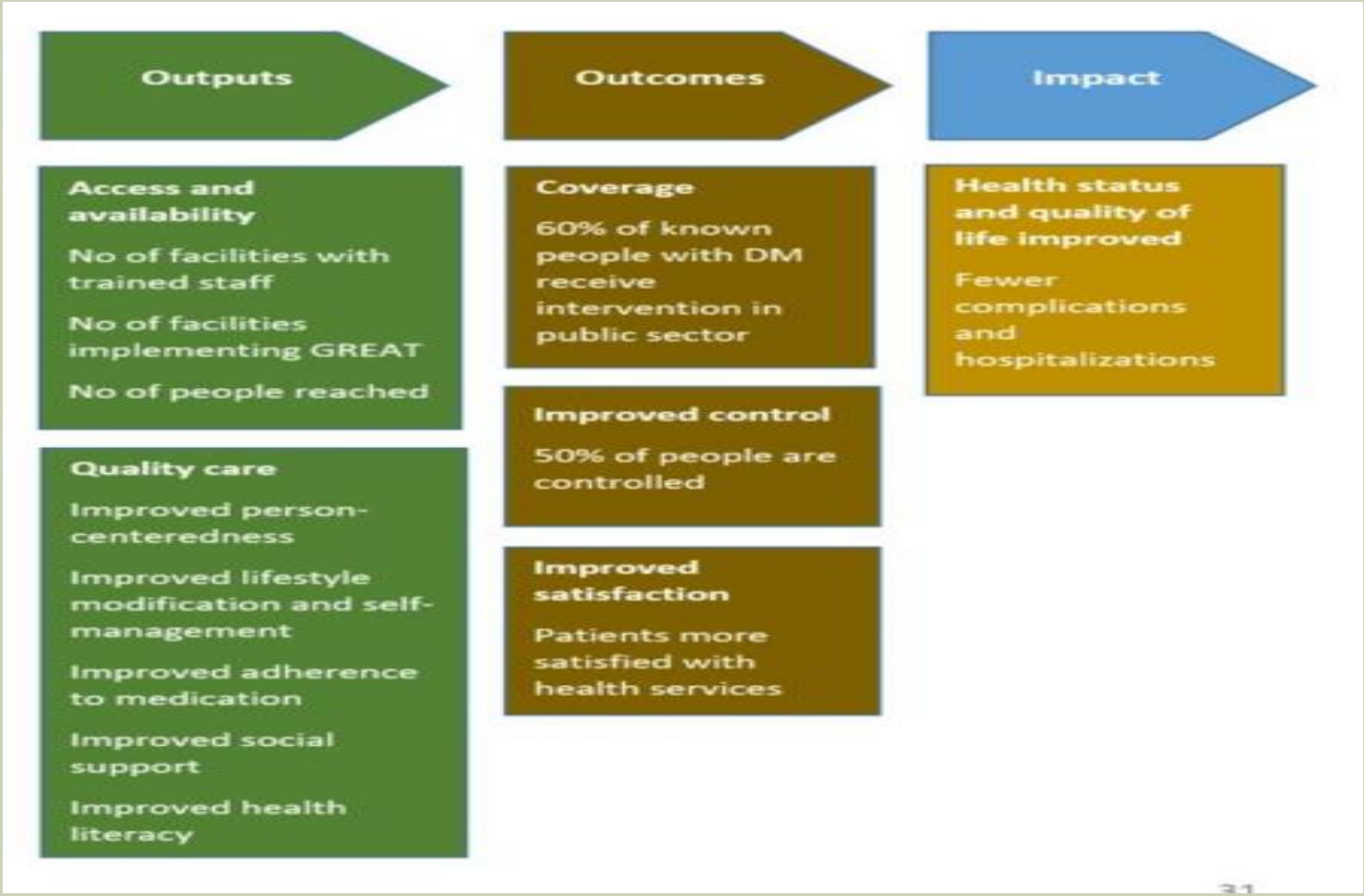
Quality of care – patient's perspective

Patient-related factors

- Very positive on content and guiding style
- Impact on length of or number of visits
- Retention issues – choice to attend

"Everything we did was better, there is no other thing I can say maybe we want it to happen on top. Everything was better, we were treated very well. We were helped, we arrived here my child saying we were dying, but after we entered this session we heard that there is no death if you take your treatment accordingly, you eat your food accordingly, and you won't die." (Patient)

EXPECTED OUTPUTS, OUTCOMES AND IMPACT



THANK YOU!

Questions and discussion