Compromised TB Infection Prevention and Control in South African Primary Care Facilities: A Whole Systems Perspective

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Umoya omuhle

BACKGROUND

- **TB** is one of the leading causes of **death** in South Africa.
- In 2015, **more than 20,000 people** were diagnosed with **drug-resistant tuberculosis (DR-TB)**

Organisation of services

Clinic space & infrastructure

Management & culture of care

How is TB IPC being implemented?

The ***Umoya Omuhle*** project (Zulu: '**a breath of fresh air**') Is a collaborative project applying a whole systems approach:

- To assess TB and DR-TB transmission in South African primary health care facilities and;
- To identify opportunities for strengthening health facilities' capacity to implement IPC measures.

- Health facilities are important and **neglected sites** of DR and DS-TB transmission
- Existing guidelines for **airborne infection prevention and control** (IPC) in health facilities are **poorly implemented**

METHODS

Approach:
Inter-disciplinary and **contextual**; situates processes and practices related to TB IPC at the clinic level within the structure and functioning of the whole system
Focused site visits on 3 consecutive days in 6 primary care facilities

Setting: Three districts in KwaZulu-Natal, South Africa,

Methods included:

- structured interviews with clinic managers;
- informal conversations with staff and patients;
- observations of clinic space, infrastructure and processes

Table 1. Clinic features

Facility	Location	Estimated daily headcount	Established in
1	Semi-rural	300	1996
2	Rural	80	1985
3 CHC	Peri-urban	950	2003
4 CHC	Urban	1000	1985
5	Urban	300	1980s
6	Rural	80	2008

CHC: Community Health Centre

FINDINGS

Clinic space & infrastructure	• Indoor waiting areas are crowded; not all clincs have outdoor spaces • Ventilation affected by climate and concerns about privacy and security • Climatic conditions and stigma contribute to poor uptake of protective masks	• "The air flow is very poor because there is only one door that side."(Clinic 3) • "Sometimes there is no air conditioner and it can be very hot. We use the fans, but the infrastructure is not conducive or it's not good for us." (Clinic 1) • "Staff are at risk because there is no coughing booth." (Clinic 3) • "Staff in the TB Unit do not wear masks because they believe that they are at low risk." (Clinic 4)
Organisation of services	• Care pathways are fluid; clinics transitioning to meet targets of 'Ideal Clinic' framework • Multiple queues due to lack of integration of services; poor queue management • Few clinics have appointment systems • Inconsistent implementation of cough triaging and TB screening • Filing systems are manual and centralized	• "The clients are congested […] we have floods and floods of clients, and there is no control on who is to come, and from where." (Clinic 3) • "HIV patients go for blood work to the TB unit, with some of them with low immune systems, and at high risk for contracting infections." (Clinic 3) • "The Health Centre has been forced to implement the collection of files from a single central registry, which is a system that is very inconvenient for patients, because it lengthens their waiting time." (Clinic 2). • "There is no one who is able to pitch in and say: 'I will be able to triage.' We've tried all doors, but the staff availability we don't have. We've tried with Mr [Name of Security Guard]. But he is not clinical and we can't use him." (Clinic 3)
Management culture	• Accountability structures lacking • No presence of TB champions • Passive approach towards patient education • Inconsistent screening of health workers	• "Management makes decisions based on the theory of how things should be, instead of being based on the real situation." (Clinic 4) • "Fixing public health care will require a radical transformation moving from a system organized at the district level to a team-based approach focused on patients." (Clinic 3)

Conclusion:

- Weak TB IPC is often narrowly attributed to health workers and managers' poor adherence to guidelines – without adequate consideration of the **systems context**.
- A whole systems approach promotes understanding of the barriers and enablers to IPC implementation within **everyday clinic processes and practices.**
- In South Africa, solutions for improving IPC need to be **systemic** and **embedded** within broader initiatives to 're-engineer' primary health care and improve health care facility performance.

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