Private Sector Prescribing Practices for TB Symptoms in KwaZulu-Natal, South Africa:
a cross-sectional, standardized patient study

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Background

South Africa has a **TB incidence of 567 per 100,000[1]**. In 2015, only **65% of 454,000 estimated new cases of TB** were notified to the national TB program[2].

Up to **30% of South Africans seek initial care outside the public system[3]**; these patients may experience **greater TB diagnostic delay[4-5]**.

Little is known about **quality of TB care in the formal private sector**, specifically regarding prescribing practices and ideal case management.

Objectives

PRIMARY: Describe the prescribing practices of private General Practitioners (GPs) treating standardized patients (SPs) who present with tuberculosis symptoms

SECONDARY: Assess ideal case management:
1) **helpful management** (referral or test order)
2) **no harmful management** (inappropriate medicine)

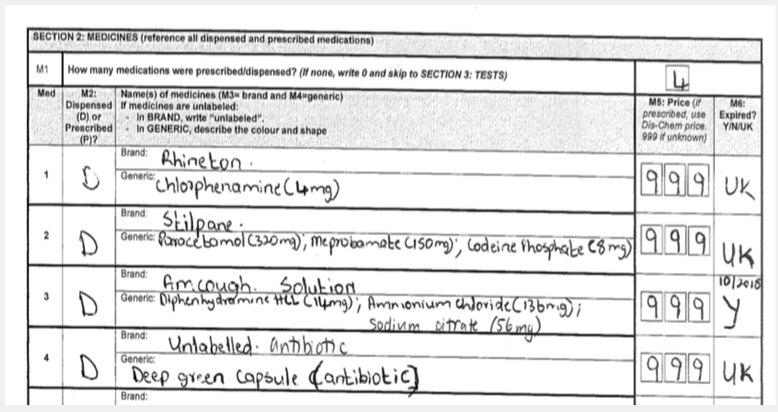
Methodology

Design: Eight cash-paying SPs (6 F, 2 M) presented 1 of 3 TB cases during **unannounced visits** to **consenting GPs**

Study Site: 6 high TB-burden communities within an urban site in Kwa-Zulu Natal, South Africa

Sample Size:
- **100 GPs** (86 male, 14 female), sampled conveniently
- **220 interactions** (case 1 = 95, case 2 = 50, case 3 = 75)

Data Collection:
- **Exit survey:** History Qs, exams, tests, referrals, patient satisfaction
- **Artifact survey**: medicines, referral forms


SECTION 2: MEDICINES (reference all dispensed and prescribed medications)

M1 How many medications were prescribed/dispensed? (If none, write 0 and skip to SECTION 3: TESTS) 4

Med	M2: Dispensed (D) or Prescribed (P)?	Name(s) of medicines (M3= brand and M4=generic) If medicines are unlabeled: - In BRAND, write "unlabeled". - In GENERIC, describe the colour and shape	M5: Price (if prescribed, use Dis-Chem price. 999 if unknown)	M6: Expired? Y/N/UK
1	D	Brand: Rhineton. Generic: Chlorpheniramine (4mg)	999	UK
2	D	Brand: Stilpane. Generic: Paracetamol (320mg), Meprobamate (150mg), Codeine Phosphate (8mg)	999	UK
3	D	Brand: Amcough Solution Generic: Diphenhydramine HCl (14mg), Ammonium chloride (136mg), Sodium citrate (56mg)	999	10/2018 Y
4	D	Brand: Unlabelled: Antibiotic Generic: Deep green capsule (antibiotic)	999	UK
		Brand:		

TB Case Descriptions

CASE 1: Suspected TB, HIV+

Cough + fever >2 weeks, sputum, loss of weight/ appetite, night sweats, not on ARTs

CASE 2: Confirmed TB, HIV-

Above symptoms + positive GeneXpert report

CASE 3: Suspected MDR-TB, HIV+

Above symptoms + previous TB diagnosis and incomplete treatment, not on ARTs

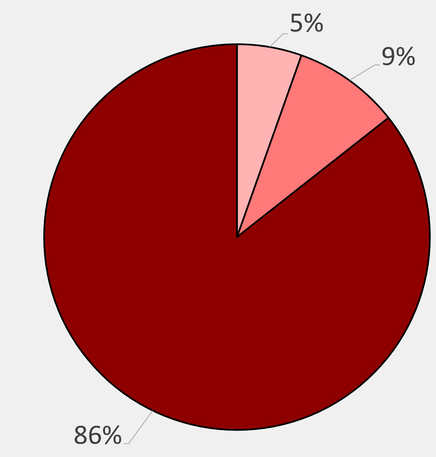
IDEAL CASE MANAGEMENT:

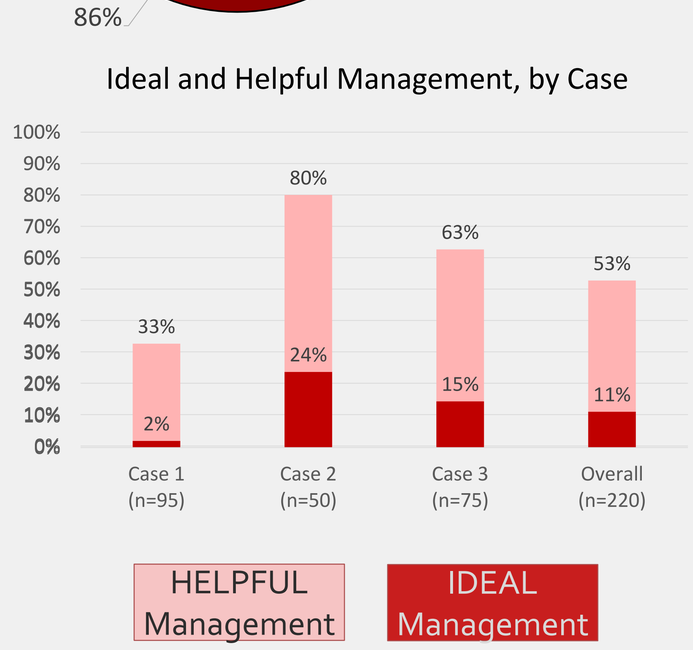
Helpful: Referral for a TB test **OR** referral to public clinic/ hospital

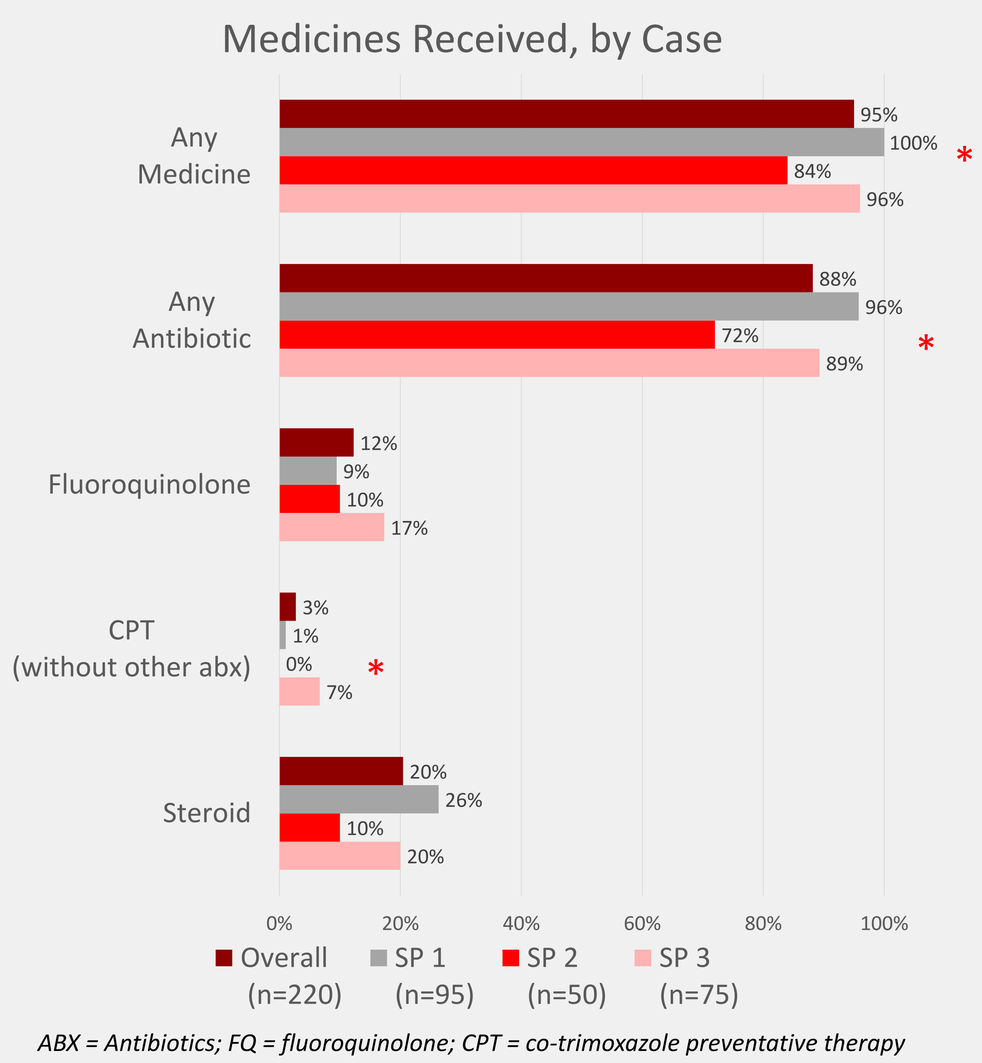
AND NOT

Harmful: Prescription of antibiotics (except co-trimoxazole) or steroids

Results







ABX = Antibiotics; FQ = fluoroquinolone; CPT = co-trimoxazole preventative therapy

Key Findings

- 95% of interactions received 1+ medications; ABX were most commonly prescribed (90%).
  - FQs were prescribed in 12% of interactions (higher than SA public sector)
- **Helpful** and **ideal** management occurred in 53% and 11% of interactions, respectively.
- "Confirmed" TB (case 2) had **lower** rates of antibiotic prescription and **higher** rates of ideal management

When diagnosis was unclear, GPs resorted to empirical therapies (abx/steroids)

Current prescribing practices may have implications on **TB diagnostic delay, immunosuppression in PLHIV,** and **antimicrobial resistance** for patients with TB symptoms in South Africa

References: *[1] WHO Global Tuberculosis Report (2018); [2]Naidoo P et al, (2017); [3]Chin & Hanson (2017); [4]Skordis-Worrall J (2010); [5]Van Wyk SS (2011)*

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