



# Unnecessary antibiotic prescribing in public and private primary care in South Africa

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# Rationale and overview of the research

## WHAT IS ANTIBIOTIC RESISTANCE, AND WHY DOES IT MATTER FOR SOUTH AFRICA?

Many medical advances and treatment of diseases are only possible because of the use of antibiotics – drugs used to combat infections caused by bacteria. Yet, in a growing number of cases, bacteria are becoming resistant to antibiotics that previously used to kill them easily, a phenomenon called antibiotic resistance (ABR).

As antibiotics become less effective, common infections such as

pneumonia, tuberculosis, blood poisoning and gonorrhoea are becoming more difficult if not impossible to treat.

This issue is particularly critical for South Africa, as its health system faces the double challenge of a high burden of infectious diseases alongside some of the highest rates of ABR in the world.

ABR is accelerated by the fact that antibiotics are used when they are not

necessary. In most countries more than 80% of all antibiotics are prescribed in primary care.

Respiratory tract infections (RTIs) such as the common cold, laryngitis, and bronchitis, are one of the main problem areas. Primary care providers have been known to prescribe antibiotics even when they are not necessary as most of these infections are caused by a virus, not a bacteria.

## OBJECTIVES OF THE RESEARCH

Most of the research on ABR in South Africa has focused on trying to describe bacterial resistance, rather than understanding the reasons behind over-prescribing of antibiotics.

In this project, we aimed to fill this gap in several ways, by answering the following questions:

1. How much unnecessary prescribing of antibiotics is there for RTIs in the private and public primary care sectors?

2. What are the perceptions and experiences of providers and patients about antibiotic prescribing for RTI treatment?

3. What is the relative importance of provider knowledge and patients' clinical factors in antibiotic prescribing for the treatment of RTIs?

4. Can unnecessary prescription of antibiotics be reduced by:  
– increasing patient awareness?  
– using financial incentives for providers?

To answer these questions, we have drawn on qualitative and quantitative methods, including an ethnographic study and a national online survey of private GPs.

To obtain robust measures of over-prescription of antibiotics, we have used standardised 'mystery' patients, who were trained to portray consistently a case of viral bronchitis and visit public clinics and private GPs.

## SUMMARY OF METHODOLOGICAL APPROACHES USED IN THE STUDY

### ETHNOGRAPHIC STUDY

#### What was done?

Consultations observed over 24 days in 3 GP practices and 6 public clinics

65 in-depth interviews with providers

### NATIONAL ONLINE SURVEY OF PRIVATE PROVIDERS

#### What was done?

Online survey completed by 433 private GPs

Experimental clinical vignettes were used to assess the relative impact of clinical and non-clinical factors in antibiotic prescribing

### INCOGNITO VISITS OF STANDARDIZED PATIENTS

#### What was done?

Enumerators trained to portray a patient suffering from a case of acute bronchitis (complaints and history)

186 private GPs and 73 public clinics were visited by standardised patients

We varied the attitude and requests of standardised patients