ACTUARIAL SOCIETY OF SOUTH AFRICA

Quantifying Risk, Enabling Opportunity.

The Section 59 Investigation into Racial Bias

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Quantifying Risk, Enabling Opportunity.

The Section 59 Investigation

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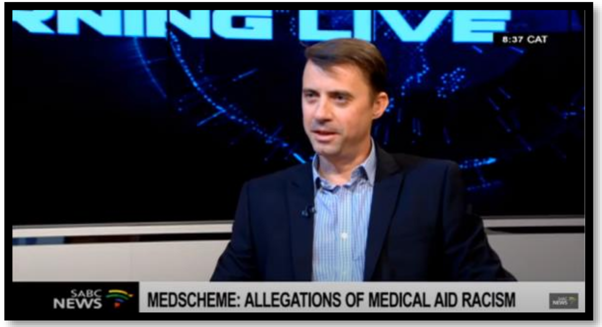
A group of medical practitioners approached Morning Live alleging that medical schemes were not paying them based on their race

March 2019

The Section 59 Investigation



Rejection of claims by leading medical schemes and managed care organisations

The Section 59 Investigation

The Council for Medical Schemes (CMS) announced at a special stakeholder engagement session that it will facilitate an independent investigation into racial discrimination

May 2019

The Section 59 Investigation

The Section 59 Investigation was established to examine allegations made by medical practitioners, that they are being treated unfairly and their claims are being withheld by medical schemes based on their ethnicity and colour of their skin.

The panel was tasked with making recommendations to the Council for Medical Schemes in relation to addressing the complaints and the appropriate administrative, legal and policy interventions.

The Section 59 Investigation

Five allegations were to be investigated

1. Targeting Black and Indian health care practitioners in relation to conducting practice audits

2. Forcing Black and Indian practitioners to enter into settlement agreements for the payment of large monetary amounts where alleged fraud or other illegal conduct is suspected

The Section 59 Investigation

Five allegations were to be investigated

3 Generally engaging in racial profiling

4 Illegally refusing to pay Black and Indian practitioners for services rendered to patients

The Section 59 Investigation

Five allegations were to be investigated

5

Causing Black and Indian owned health care practices to close their practices, as a result of unlawfully withholding payments, and as a result reducing access to healthcare

The Section 59 Investigation

Submissions (written and oral) from interested parties to the panel. Parties included medical scheme members, healthcare practitioners and medical schemes and their administrators

August 2019 to January 2020

The Section 59 Investigation

The Panel appointed an independent expert (a statistician) to assist with investigations as to the existence of racial prejudice.

1

"No **explicit** racial bias in the systems and algorithms and used (to identify suspected fraud, waste and abuse)"

"Algorithms identify deviations from normal behaviour and large deviations are a sign of irregular behaviour (suspected fraud, waste and abuse)"

The Section 59 Investigation

The Panel appointed an independent expert (a statistician) to assist with investigations as to the existence of racial prejudice.

2

"Based on the calculations, **strong racial bias exists** with respect to fraud, waste and abuse outcomes with black practitioners having a 40% likelihood of being identified as fraud, waste and abuse cases than their non-black counterparts"

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Technical Debate and Deliberations

Technical Debates and Deliberations

Review mandated by the Government Employees Medical Scheme (GEMS)

Insight Actuaries and Consultants in collaboration with Professor P Fatti

Intended to highlight the need for debate rather than to suggest that any view is superior

Technical Debates and Deliberations

Proportion of black practitioners flagged

VS

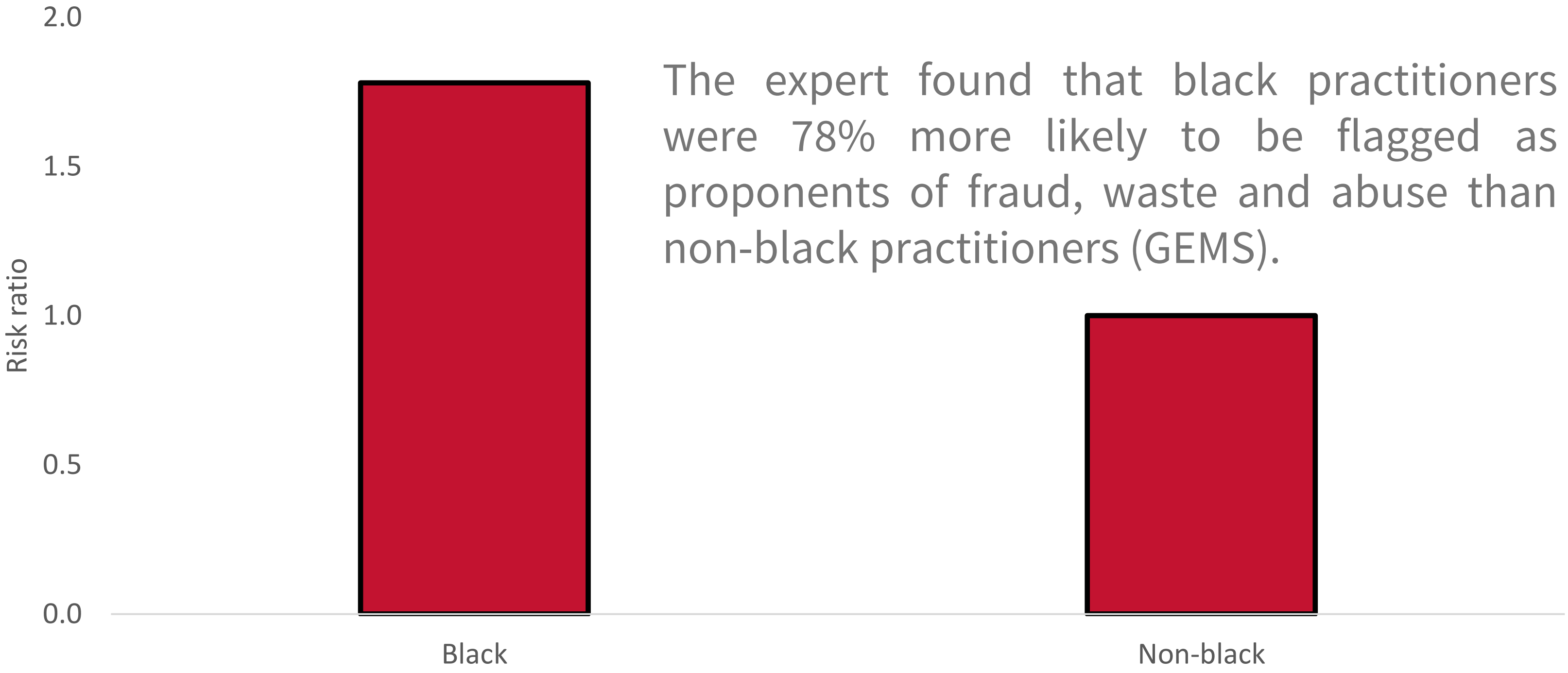
Proportion of non-black practitioners flagged

To the extent that the proportion of black practitioners flagged as proponents of fraud, waste and abuse is higher than the proportion of non-black practitioners flagged, bias was deemed to be evident by the expert

Technical Debates and Deliberations

The expert identified black and non-black practitioners based on surname noting that healthcare practitioners have not been racially classified. Practitioners without “black surnames” are deemed to be non-black.

Technical Debates and Deliberations



The expert found that black practitioners were 78% more likely to be flagged as proponents of fraud, waste and abuse than non-black practitioners (GEMS).

Technical Debates and Deliberations

Exposure

Corporate and state practices

Racial classifications

Interpretation

Technical Debates and Deliberations

Not accounting for exposure when comparing the proportion of black and non-black practitioners flagged as proponents of fraud, waste and abuse

Technical Debates and Deliberations

Illustrative example

Assume that there are only two medical practitioners, one is black and the other is non-black. The black practitioner has 100 patients. The non-black practitioner has 5 patients. The black practitioner thus has more opportunity to be a material proponent of fraud waste and abuse. This highlights the importance of quantifying and adjusting for exposure.

Technical Debates and Deliberations

$^{4}/_{10}$ practitioners are black

$^{6}/_{10}$ interactions are with black practitioners

Technical Debates and Deliberations

Not excluding corporate and state practices when comparing the proportion of black and non-black practitioners flagged as proponents of fraud, waste and abuse

Technical Debates and Deliberations

Purportedly non-black

Corporate and state practices do not typically have “black surnames” in their practice names and were inappropriately deemed to be non-black.

Corporate and state practices do not have a race should be excluded.

Polokwane Public Hospital

Tygerberg Public Hospital

Technical Debates and Deliberations

The mapping between surnames and race is imperfect

Not necessarily a 1-1 match between surname and race

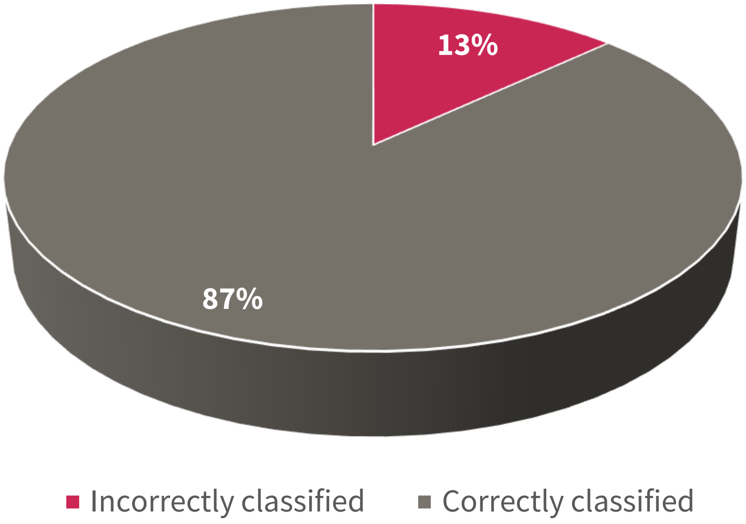
Intermarriage, name changes and other extenuating circumstances

African but not South African regarded as non-black

Technical Debates and Deliberations

An audit of the 800 largest practices were performed. 13% of practices (104 practices) were found to be incorrectly classified as non-black.

There are over 15,000 practices and a full audit required more time. The high error rate clearly shows the need for a full audit before results can be fully relied upon.



Technical Debates and Deliberations

✓

- Adjusting for exposure
- Excluding state and corporate
- Adjustments for misclassifications

!

- The risk ratio reduces from 1.78 to 1.47, which highlights results are sensitive
- A full audit of the racial classification system is needed before results can be fully relied upon

Technical Debates and Deliberations

Assuming results continue to hold after further corrections, is a higher propensity to flag black practitioners as proponents of fraud, waste and abuse an indication of racial bias?

Extenuating factors and unknown unknowns

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The Way Forward

The Way Forward

A final report is still to be released by the Section 59 Investigation Panel

"The release of the draft Section 59 Investigation Report, which was due to take place at the Fraud, Waste and Abuse Summit, will be released on a date to be communicated. It will be sent to individual respondents and published on the investigation's website"

The Way Forward

As actuaries, we need to be exceptionally careful to ensure that our models do not incorproate racial (or other) biases either explicitly or implicitly

- Results should be blindly reviewed– practice number not name
- Proactively consider whether our models are biased in any way

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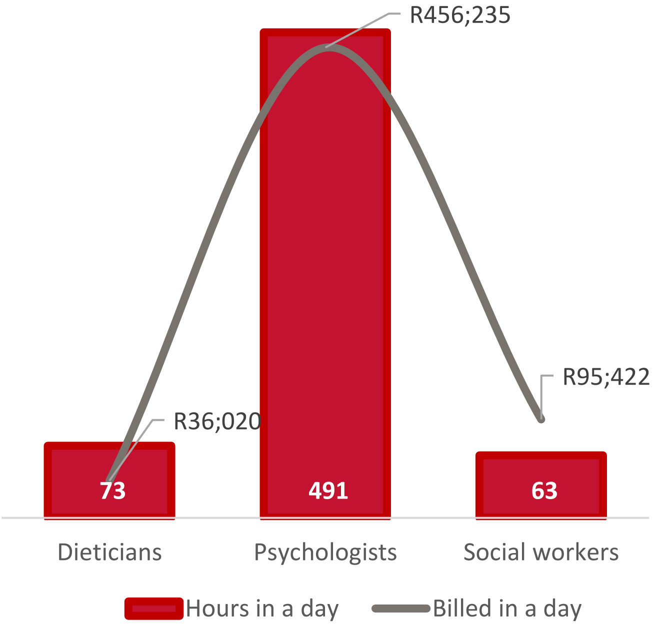
Examples of Fraud, Waste and Abuse

Examples of Fraud, Waste and Abuse

We should not neglect our obligation to tack fraud, waste and abuse. Fraud, waste and abuse is rife and needs to be responded to.

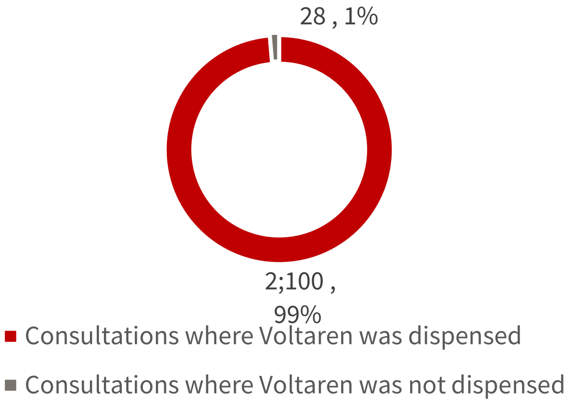
Examples of Fraud, Waste and Abuse

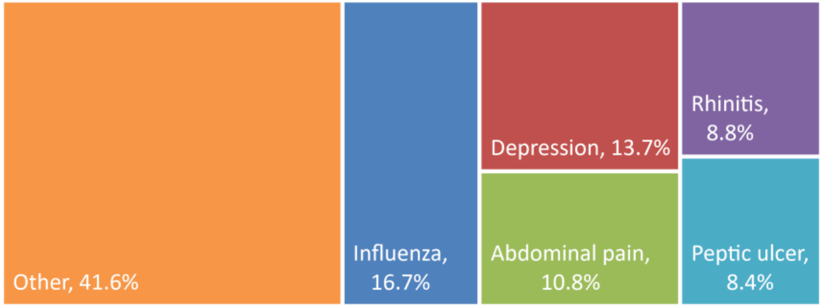
The tariff codes used by certain disciplines show exactly how many hours they are billing for



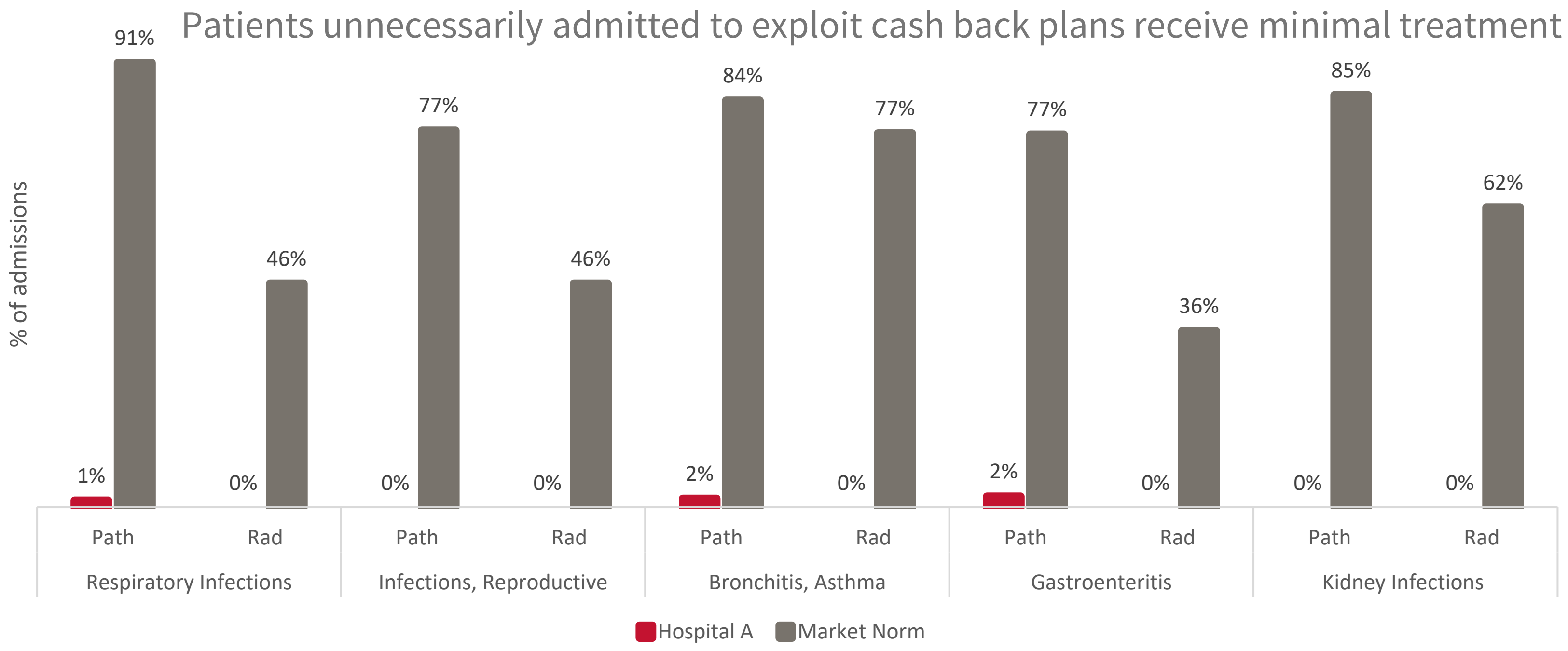
Examples of Fraud, Waste and Abuse

Voltaren for almost every patient including those with influenza, depression and abdominal pain

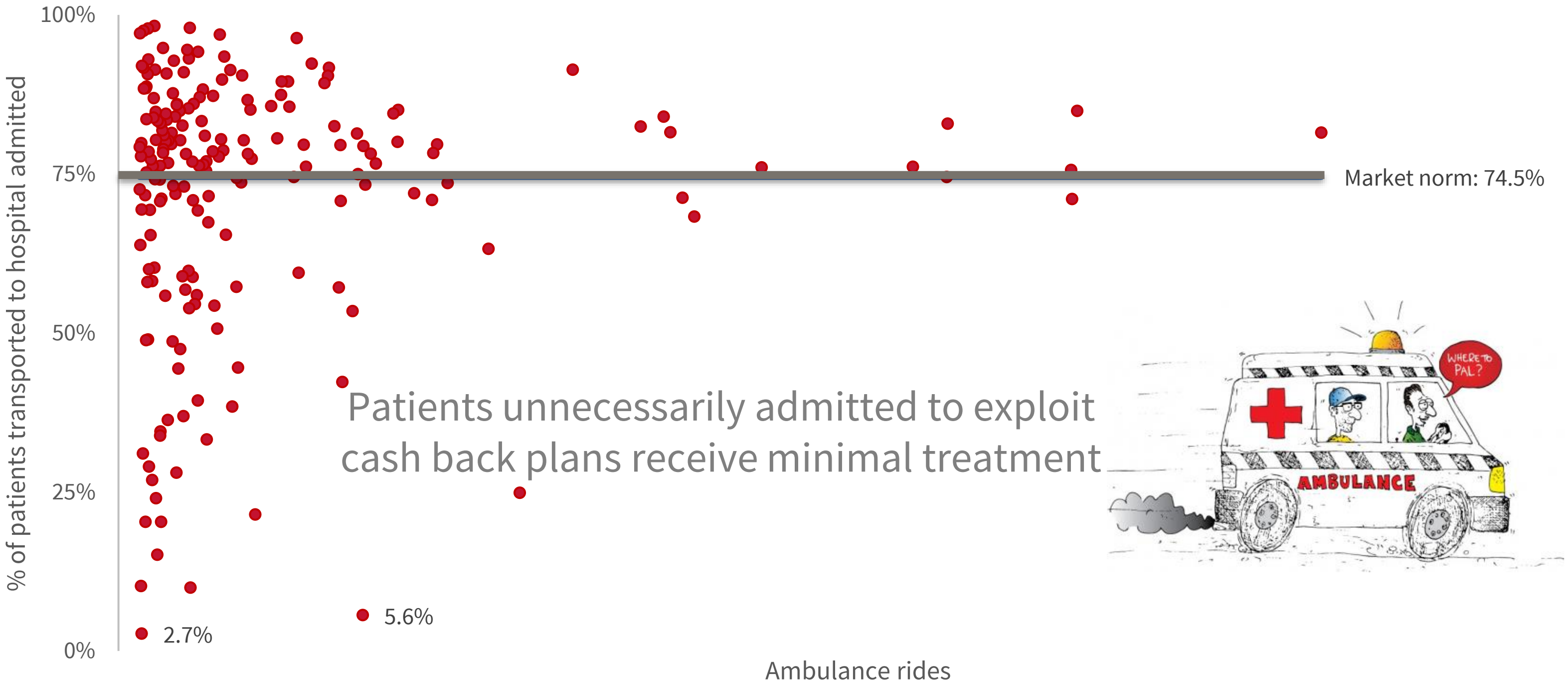




Examples of Fraud, Waste and Abuse



Examples of Fraud, Waste and Abuse



Patients unnecessarily admitted to exploit cash back plans receive minimal treatment

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Thank You!