The potential of the HCAHPS survey in identifying sub-scores linked to readmission rates in private hospitals in South Africa.

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INTRODUCTION

In South Africa's private healthcare sector, preventable readmissions are a quality improvement and value-based reimbursement focus. Voice of the Patient (VoP) is a branded platform for collecting and reporting patient-reported outcomes and experience measures. HCAHPS-inspired surveys were utilised to obtain insight into the experience of members of a private health insurer. The scores from the surveys were used to determine whether certain categories within the survey provide insight into readmission rates at private hospitals in South Africa.

METHODS

The HCAHPS-inspired survey is sent out to adult beneficiaries (>18 years) of the private health insurer, who have had a hospital admission that meets the inclusion criteria for a survey, within seven days after discharge from hospital. Beneficiaries are invited to complete the questionnaire via email and/or SMS utilising the VoP platform. The data collected from the completed surveys are analysed and scores calculated for each category.

30-day all cause and cause-specific readmissions for medical and surgical admissions have been considered in relation to the communication about medicine score, the discharge information score and the overall hospital rating.

Scores from the HCAPHS surveys have been calculated utilising the top box methodology. Readmission rates are calculated as the percentage of admissions where another admission occurred within 30 days for the same individual. It is hypothesised that medicine information and discharge information scores may be linked to readmission rates.

RESULTS

A total of 210 277 patients are included in this study, with a total of 102 319 medical and surgical admissions between January 2021 and March 2023. The response rate to the HCAPHS survey averaged 28.16% over the period under review.

The all-cause 30-day readmission rate for the full period is 19.1%, with a 30-day cause-specific readmission rate of 9.8%.

DISCUSSION

The scores for communication about medicine and discharge information are higher for surgical admissions compared to medical admissions. This filters through to the readmission rates, which show lower readmission rates for surgical admissions compared to medical admissions (for both all-cause and cause-specific).

Considering the changes in the variables from one quarter to the next, there appears to be an inverse relationship between the three category scores and the two types of readmission rates. However, these relationships are not consistent quarter on quarter. The correlation between the category scores and the readmission rates were therefore calculated to further define the relationship (Tables 1 and 2).

The correlation coefficients for the surgical admissions suggest that there is not a strong linear relationship between the communication about medicine, discharge information and overall hospital rating categories and the two types of readmission rates. The corresponding p-values for the correlation coefficients imply that the statistical significance of these results is low.

The correlation coefficients for the medical admissions suggest that there is a negative linear relationship between discharge information and the two types of readmission rates. The relationship is stronger for the cause-specific readmission rate (-0.301 compared to -0.276 for all cause readmission rate). This means that as the discharge information score increases so the readmission rate will decrease. The corresponding p-values for these two correlation coefficients are 0.127 and 0.163 respectively. These are higher than would typically be considered for statistical significance but are still low enough to place some weight on the results.

There are indications that there is merit to our hypothesis, however further analysis is required to quantify this relationship and the potential impact an intervention by health insurers and/or healthcare providers would have for patient outcomes.

LIMITATIONS

A notable limitation of this research is the inherent challenge in discerning whether the observed trends in the HCAHPS survey results are genuinely reflective of the specific factors under investigation or are merely coincidental outcomes influenced by broader, uncontrolled variables such as quality improvement interventions at private hospitals in South Africa. Correlation does not imply causation, as a possible confounder may be responsible for the causation, or the correlation may be coincidental.

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Table 1: Correlation coefficients for medical admissions

	All cause 30-day readmission Rate	p-value	Cause specific 30-day readmission rate	p-value
Communication about medicine	0.346	0.077	0.186	0.353
Discharge information	-0.276	0.163	-0.301	0.127
Overall Hospital Rating	0.044	0.828	0.044	0.827

Figure 1: Change in readmission rate for medical admissions; communication about medicine score; discharge information score; and overall hospital rating

Table 2 : Correlation coefficients for surgical admissions

	All cause 30-day readmission Rate	p-value	Cause specific 30-day readmission rate	p-value
Communication about medicine	0.10	0.615	0.09	0.659
Discharge information	0.05	0.800	-0.03	0.877
Overall Hospital Rating	0.29	0.135	0.26	0.183

Figure 2: Change in readmission rate for medical admissions; communication about medicine score; discharge information score; and overall hospital rating