



Possible Changes and Trends in Non-COVID-19 Vaccine Prescribing Patterns before and during the COVID-19 Pandemic

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KEY POINTS

- We included 67,830 children aged two years and younger from the database of a pharmaceutical benefit management company
- The proportion of children who received non-COVID-19 vaccines was higher before the COVID-19 pandemic (60%) than during the pandemic (55%).
- Measles vaccination rates in the first year of life declined by 5%, while an increase was observed for measles (5%), hepatitis A (7.7%), and the pentavalent vaccine (5%) during the second year of life

INTRODUCTION

Due to the COVID-19 pandemic, many children missed their routine vaccinations globally. There is insufficient evidence on the trends in vaccination coverage in the private healthcare sector in South Africa. This study explored the changes in childhood vaccination patterns (non-COVID vaccines) in the private healthcare sector of South Africa.

METHODOLOGY

Study design: We carried out an analytical, cross-sectional study.

Data collection: We obtained medication claims data from a South African pharmaceutical benefit management (PBM) company.

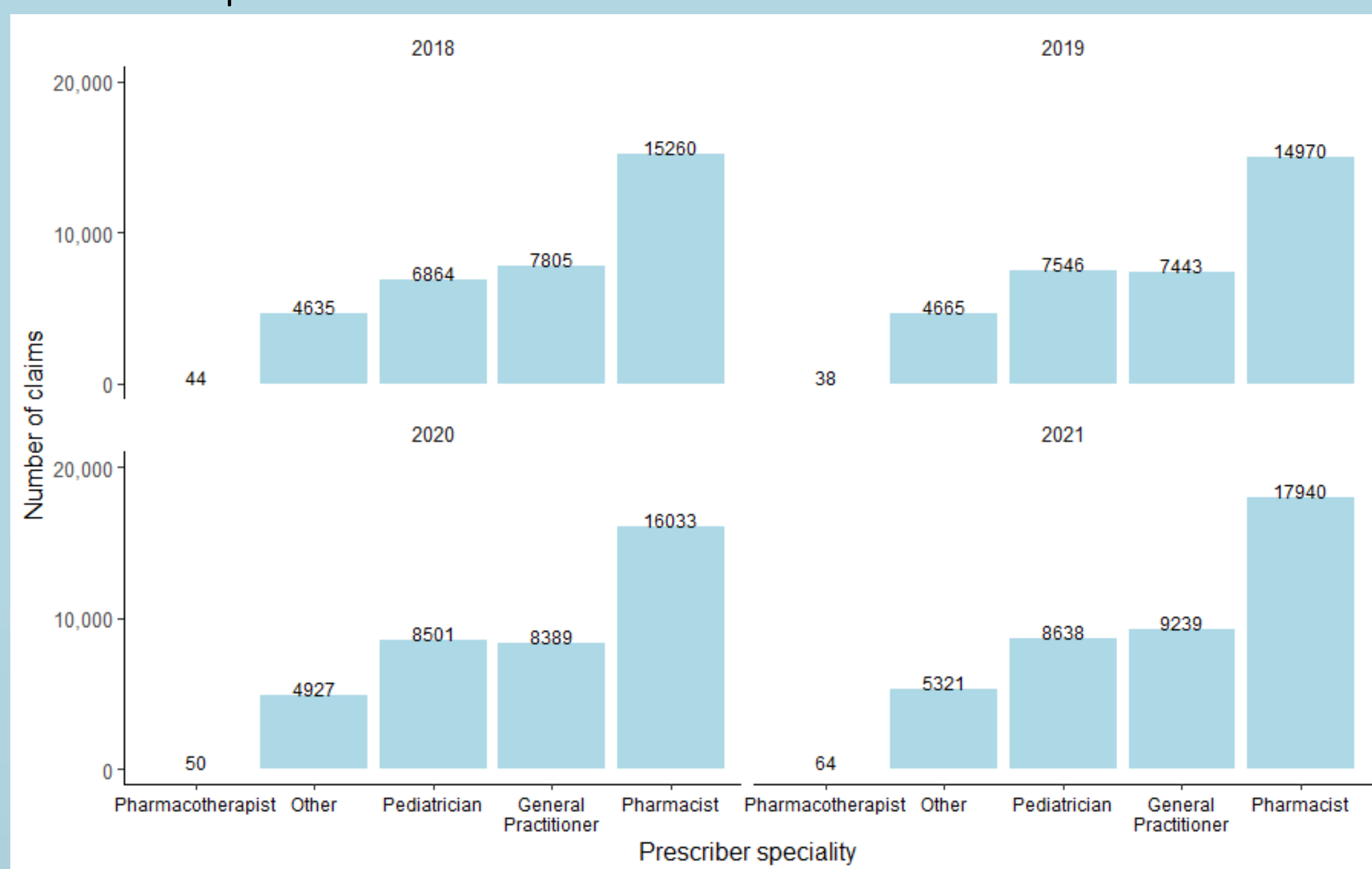
Participant recruitment: We included all patients who claimed for medicines through the PBM company within the study period.

Data analysis: Both descriptive (numbers and/or percentages) and inferential analyses were carried out using the statistical software R[®] version 4.3.1. compared the period before (2018–2019) and during the COVID-19 pandemic (2020–2021). The chi-squared test was the hypothesis test used for comparisons among distinct groups pertaining to categorical variables.

RESULTS

This study included 67,830 children aged two years and younger with a higher proportion of boys (52%) than girls (48%).

Figure 1: Prescriber specialties and number of medicine claims.



CONCLUSION

- There was a decline in measles vaccination rates during the first year of life, while an increase was observed for measles, hepatitis A, and the pentavalent vaccine during the second year of life.
- Pharmacists were the predominant healthcare prescribers and providers within the private healthcare sector in South Africa, both prior and during the COVID-19 pandemic.

Figure 2: Prescriber specialties and number of medicine claims

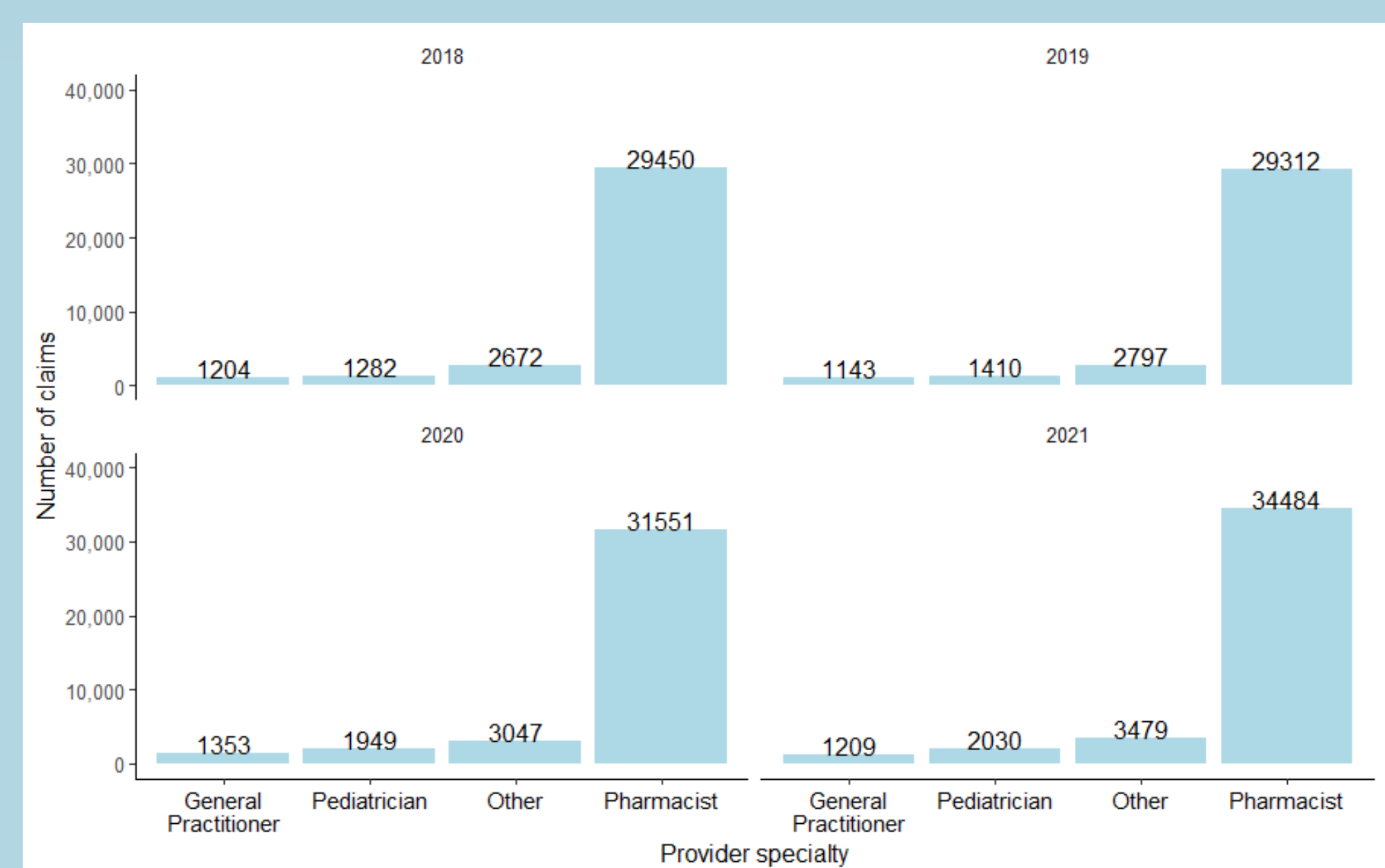


Table 1: Prescriber specialties and number of medicine claims.

Province	Before COVID		During COVID		p Value
	Participants (N)	Received Non-COVID Vaccine: n (%)	Participants (N)	Received Non-COVID Vaccine: n (%)	
Eastern Cape	3244	958 (30%)	2880	974 (34%)	<0.001
Free State	3531	1524 (43%)	3245	1537 (47%)	<0.001
Gauteng	20,725	7666 (37%)	18,761	7462 (40%)	<0.001
KwaZulu-Natal	5276	1657 (31%)	4556	1707(37%)	<0.001
Limpopo	3646	1177 (32%)	3825	1486 (39%)	<0.001
Mpumalanga	3491	1281 (37%)	4922	2143 (44%)	<0.001
North West	2224	725 (33%)	2114	798 (38%)	<0.001
Northern Cape	2850	759 (27%)	2696	877 (33%)	<0.001
Western Cape	14,947	2966 (20%)	12,949	2836 (22%)	<0.001
National	41,004	16,329 (40%)	38,977	17,615 (45%)	<0.001

The prevalence of children who received non-COVID-19 vaccines was higher prior to the onset of the COVID-19 pandemic (60%), as opposed to during the pandemic (55%) (Table 1) and this finding was consistently replicated across all provinces.

Compared to the period before the pandemic, there was a reduction in the proportion of children 12 months and below who received the oral polio vaccine (OPV) birth dose, rotavirus vaccine (RVV) at 10–12 weeks, PCV at 10–12 weeks, measles vaccine (at 6 and 9 months), and flu vaccine.

Regarding children in their second year of life, the proportion of children who received measles, hepatitis A, chickenpox, and pentavalent vaccines increased.

RECOMMENDATIONS

- Governments and private healthcare providers must take action to enhance vaccination coverage rates for children in their first year of life to prevent a resurgence of vaccine-preventable diseases.
- It is important to implement vaccine catch-up campaigns to address missed vaccination opportunities arising from the impact of the COVID-19 pandemic.

DISCLOSURES

The authors declare that they have no conflicts of interest.