GUEST EDITORIAL

Check my Beat: Hearts behind the wheel – Artificial intelligence to invoke a lifesaving campaign for cardiovascular health promotion

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We are excited that our novel community cardiac screening programme, "Check my Beat", is now in its third year. It is a truly positive South African story, epitomising *ubuntu* – a spirit that embodies humanity towards others and affirms the power of collective care.

For World Heart Day, the South African Heart Association (SA Heart®) rolled out a primary cardiac screening programme using artificial intelligence (AI). Our focus is the heart health of South Africa's minibus taxi drivers, who keep the wheels of our economy turning. They move approximately 17 million people every day, and many households depend on them for their daily commute, transporting workers to work and children to school.[1] The life of the taxi driver is difficult, with long days, high stress, lack of benefits, and often unhealthy lifestyles. Their diet is generally of poor quality, and many are sedentary, with a lack of exercise. Smoking, hypertension, obesity, and diabetes are common, putting them at risk for cardiovascular disease (CVD).[2,3] Drivers are often reluctant to attend clinics or hospitals for preventive screening, creating a barrier to early detection of disease risk.

We developed an innovative and culturally engaging approach to heart health promotion. Music, particularly Maskandi, a Zulu folk genre historically linked to migrant workers, forms an integral part of many drivers' daily lives, sustaining them through long hours on the road. Recognising this opportunity, we sought to connect with them in their own language and through the music they enjoy. The result is the Check my Beat Heart Health Tracks campaign: an AI-enabled initiative that transforms biometric data and lifestyle information into personalised songs. Each track carries a positive health message, designed to be shared within their own communities; and is created by combining screening parameters with lifestyle insights, such as exercise status, fruit and vegetable consumption, and added sugar and salt intake at meals. An AI music generator then transforms this data into lyrics and melody. Blood pressure readings dictate the song's rhythm and tempo, ensuring each track is uniquely tied to the person's health profile and reflects their own health journey, while also amplifying CVD awareness.

Over the last 3 years, we have screened 789 drivers and commuters at major taxi hubs in Johannesburg for World Heart Day. Assessments included blood pressure, body mass index, random glucose and cholesterol testing, and lifestyle questionnaires for diet and physical activity. Participants received tailored advice on exercise and nutrition. Those with abnormal results were referred to local clinics for further management. Vitals were measured using advanced AI tools: Syntro-P, a contactless plethysmography-based application developed by BrandMed, was used in 2024 and 2026; and Abby Health mobile screening stations were deployed in 2025. The latter eliminated the need for traditional medical equipment or specialised personnel, enabling scalable and accessible screening in the community. Most importantly, hundreds of South Africans received their first-ever heart health screening.

Preliminary data suggest that at least 70% of individuals are overweight or obese. This presents an opportunity to improve our population's health habits. To do this, our sports science partners (University of the Witwatersrand, Johannesburg, South Africa) created a circuit of exercises that can be done at the taxi rank and at the vehicles. Similarly, our dietitians provided alternative healthy food options that are cheap and easy to implement. The exercises and alternative foods are included as an infographic in the screening booklet, provided to participants.

The Check my Beat results are not only clinical. The project created about 500 minutes of personalised music, and the media campaign reached millions of South Africans. The project received international recognition, with inclusion in the BBC StoryWorks Beats of Change series, the 2025 European Society of Cardiology Congress, and a publication in The Lancet Primary Care.[4,5]

The long-term value of Check my Beat lies in its sustainability and integration into community care, and, most importantly, in creating broad national awareness of CVD. The programme will continue annually around World Heart Day, expand to additional transport hubs and provinces, and strengthen referral pathways to local clinics to ensure care continuity. Future phases will prioritise digital data capture to contribute to a real-world CVD risk registry.

Our success is owed to our many stakeholders, all of whom share an interest in heart health. Our project partners include Anglo American, Betway Cares Foundation, Cipla, Jozi My Jozi, the Nahana Foundation, Syntro-P, and the University of the Witwatersrand. We also acknowledge our incredible team who made this all possible: Katie Andrews, Erika Dau, Kate Gershuni, Ruan Kruger, Obakeng Matlhoko, Ruchika Meel, Georgia Torres, and Thobile Ziqubu.

REFERENCES

1. Kriel R, Burger M. Electrifying South Africa's minibus taxi industry: A data-driven approach [Internet]. TheCityFix; 2023. Available from: https://thecityfix.com/blog/electrifying-south-africas-minibus-taxi-industry-a-data-driven-approach/[S1.1]. Accessed 25 June 2026.
2. Mabetwa EM, Mokwena KE, Mphekgwana PM, Modjadji P. Metabolic syndrome and its components among taxi drivers in the city of Tshwane, South Africa. Appl Sci. 2022;12(3):1767. https://doi.org/10.3390/app12031767.
3. Ramukumba TS, Mathikhi MS. Health assessment of taxi drivers in the city of Tshwane. Curationis. 2016;39(1):1671. https://doi.org/10.4102/curationis.v39i1.1671.
4. BBC StoryWorks Commercial Productions. The initiative helping taxi drivers in South Africa keep on track with their heart health [Internet]. Global film series produced in partnership with the World Heart Federation. 2025. Available from: https://www.bbc.com/storyworks/beats-of-change/south-africa-heart[S2.1][S2.2]. Accessed 14 July 2026.
5. Jankelow D, Meel R, Torres G, et al. Check my Beat: A lifesaving campaign in South Africa for cardiovascular health. Lancet Prim Care. 2026. https://doi.org/10.1016/j.lanprc.2026.100197.