Music, tuberculosis and stats: Lessons from a Ugandan pop star

Epidemiologists **Sandra Alba** and **Amera Khan** catch up with Bebe Cool, their superstar collaborator on a passion-fuelled project to combat TB

Working with pop stars, lesson one. Do not rely on calendar invites emailed weeks in advance.

Bebe Cool is one of Uganda's most famous pop artists. His music has evolved over the course of his 20-year career, from reggae in the early 2000s to glamorous mainstream pop today. Bebe has millions of fans in his native Uganda and is known in many African countries.

As epidemiologists we rarely get to speak to – let alone work with – a pop star. It's been nearly a year since we met Bebe Cool in person and we're thrilled he has agreed to reunite with us over Zoom for this interview. It's 10 a.m. in Geneva and Amsterdam, midday in Kampala. Twenty minutes pass, and Bebe still hasn't joined the call. We send him a WhatsApp message: "Hi Bebe, will you still make it for today's meeting?" Thirty minutes later, still no news. We imagine him up all night for a concert and wonder whether we will ever have an equally cool excuse for missing a 10 a.m. meeting. Much later comes Bebe's candid reply: "Oh am so sorry dear I had forgotten" – together with crying and prayer-hands emojis. We settle on a new date: "Afternoon preferably!" types Bebe. "Send me the link the evening before."

Days later, we finally meet. Bebe (shades on, big smile) joins the call from a lush tropical garden. Immediately, the sun shines through the computer screen into our offices as we settle into a chat about music, tuberculosis (TB) and statistics.

The last time we met Bebe in the flesh was in 2019, at a meeting for new grantees of the Stop TB Partnership's TB REACH initiative, a platform that funds innovative approaches to combat TB. Bebe attended the meeting to represent the non-profit organisation he founded, the Amber Heart Foundation, whose mission is to find and treat people affected by TB. Between 2019 and 2021, he implemented this project with funding and support from TB REACH, overseeing the collection and interpretation of a range of public health statistics pertaining to his search for cases of TB. As epidemiologists, we worked with Bebe and his team to streamline the project's reporting so that comparisons could be made with other TB REACH projects.

So how do epidemiologists prepare for a meeting with a pop star? By watching far too many YouTube music videos, of course! While the videos certainly helped us get into the Ugandan musical vibe, they inevitably left us feeling rather … un-Cool. But we needn't have worried, as during that grantees' meeting we got to know Bebe as a friendly and relatable person, smart and passionate about his project's cause, with a sharp eye for detail yet a very good understanding of broader public health issues in his country.

What followed was a year of frequent email contact (and WhatsApp reminders about emails) as well as quarterly meetings with Bebe and his team to discuss his project's monitoring data. We analysed data relating to the number of people screened, tested, positive for TB, and treated for TB by the Amber Heart Foundation project over time to monitor project performance and progress towards targets.

Now that the project was drawing to an end, we were curious to reflect with him on

Above: Bebe Cool is one of Uganda's most famous pop stars.

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our collaboration. How did he experience his entry into public health? How does data use in public health differ compared to the music industry? What lessons can we draw for data use and communication in public health?

Music to public health ears

Globally, TB is one of the leading causes of death by infectious disease. In 2021 an estimated 10.6 million people contracted the disease and 1.6 million people died. TB is caused by bacteria, spread in the air from person to person, and continues to be a problem in many countries around the world (bit.ly/3Cuwlbo). With a 2021 estimated incidence rate of 199 per 100,000 population and a case fatality rate of 14%, Uganda is designated by the World Health Organization as a "high-burden" country for TB (bit.ly/3jV98IZ)

To help countries like Uganda find and treat people with TB, the Stop TB Partnership's TB REACH initiative funds innovative approaches which, if successful, can be sustained and scaled up by other donors. Bebe Cool's innovative approach was to use his musical career and popularity to create awareness about TB using social media and concerts. Simultaneously, community health-care workers were trained to screen and refer people with signs and symptoms of TB for diagnosis and treatment as appropriate.

From musician to public health professional

From the outset, Bebe Cool's Amber Heart team were very skilled at interpreting their project data and taking corrective actions where needed.

We therefore kick off today's interview with Bebe Cool by trying to understand how a musician became so skilled at using data for decision-making. Was he accustomed to it from his work in the music industry? He tells us that, at the beginning of his musical career in the late 1990s, he hardly relied on data at all: "I was young and I just wanted to break through as an artist."

Bursting with creative energy, he knew he wanted to become a star, but also needed to secure an income. "Put bluntly: I wanted to be rich and famous – and quickly." But as he developed as a musician, he realised there was a difference between "singing the music I like and singing the music other people like" and that in order to connect with the Ugandan public, he needed to know more about who was the listening to his music. He started paying more attention to the type of people going to his concerts, and realised that the more he tailored his music to his audience, the more successful he became. Soon there was no turning back.

Nowadays many data tools are available to musicians, and Bebe is keen to use them to make better-informed decisions. YouTube Analytics is one of the most accessible tools, and he uses it to monitor the success of new song releases. He's particularly interested in knowing where his listeners come from. YouTube also helped him extend his horizon beyond the Ugandan borders: it gives him inspiration for collaborations with artists abroad, and has made him think more about the language he sings in: "In the past I used to just sing in Luganda (one of the major languages in Uganda) but nowadays I also sing a lot in English, and sometimes I alternate between Luganda and English. It broadens my reach outside of Uganda." Herein lies an important lesson to public health professionals: the importance of "speaking" the language of our audience when disseminating public health messages; the importance of working with representatives of our target audience as "knowledge brokers" to ensure that messages are relevant and culturally appropriate.

Has he learned anything from the TB REACH experience that might affect his approach? His collaboration with public health professionals seems to have made him even more aware of evidence-based decision-making: "In health, every decision needs to be backed up by data." He really enjoyed using KoboToolbox (kobo.humanitarianresponse.info), an application developed for humanitarian efforts to collect data electronically using mobile phones or tablets: "I loved looking at the data every day, every week, to check how we were doing." Maybe, we suggest now, he should use Kobo to conduct post-concert exit interviews to get a better feeling for his audience: not only their demographics, but also what they enjoyed the most and least about his music and the concert? He laughs heartily.

Musical and epidemiological hotspots

What about the other way round? What could public health professionals learn from Bebe's experience as a musician? Bebe recounts that when developing his TB REACH project he was very concerned about where to implement his activities. Although he has millions of fans in Uganda, he is also aware that there are "hotspots" in the country where his music is most listened to. It was therefore clear to him that a project centred around his profile as an artist would be most successful in parts of the country where he is most popular: "I wanted to get the most out of my TB REACH grant so I was not going to waste time and effort in areas where I have no followers."

This "hotspot" thinking resonates very well with TB control approaches that recognise the heterogeneity in the spread of TB and advocate for targeted responses at subnational level – such as the MATCH approach (bit.ly/3Z8Ooxu). Indeed, as an infectious disease, TB concentrates in geographical and socio-demographic pockets of the country. In a country as large and diverse as Uganda, you cannot use the same blanket approach to finding people with TB in the rural northern part of the country as in an urban setting such as Kampala.

Tailoring a case-finding approach to different risk groups is just as important. Anyone can get TB since it is an airborne disease, but people at higher risk of getting infected and developing TB disease tend be men, people in marginalised and impoverished communities, people with

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Above: Pop-up screening desks in existing health facilities formed part of the public health intervention.

immunocompromising conditions (e.g., HIV, diabetes or cancer), health-care workers, and those living or working in crowded spaces with poor ventilation. To maximise efforts, public health interventions usually focus on finding or treating those at highest risk.

Bebe Cool's project's activities for finding men with TB are a good example of a targeted risk group approach. According to a recent brief by the Global Fund (bit.ly/3QhWz6K), globally, men and boys account for 64% of TB cases and men are less likely to have their TB detected and reported than women. The brief also provides insights into the mechanisms at play: "A growing body of literature highlights how notions of masculinity can negatively impact health-seeking behavior of men, which may be manifested as late or missing TB diagnoses and lower rates of TB treatment access and completion. In many places, men are more likely to have employment, such as mining or blasting, that is associated with increased risk of TB. Men are more likely to engage in behavior with increased risk of TB, including smoking, alcohol consumption, and drug use."

Similar patterns may apply in Uganda, where men are nearly twice as likely to be diagnosed with TB as women. However, Bebe Cool and his team knew that women are much more likely to be screened for TB than men, as they are more likely to attend health facilities, either for themselves or for their children. Bebe Cool's TB project therefore chose to look for men where they are more likely to congregate, such as in *boda boda* stations – ubiquitous bicycle and motorcycle taxis in East Africa that offer cheap and quick rides for city dwellers and/or their purchases (ranging from logs to chickens) as well as job opportunities for young men. The crowded and bustling *boda boda* stations around the cities are, therefore, ideal places to find young men who may also be at risk of TB for other reasons.

Make a wish

Bebe Cool's single "Make a Wish" (bit.ly/3X8Bxtr) was released around the time of our interview. What better excuse to wrap things up than by reflecting on wishes? We ask Bebe what he thinks went well in our collaboration, and what he wishes could have been improved. He tells us how surprised he was, upon embarking on this TB REACH project, at the sense of belonging and pride he felt knowing that he was contributing to the fight against a deadly infectious disease. This statement takes on a deeper and sadder resonance when you consider that he lost a sister to TB at a young age, and that delays in diagnosis may have contributed to difficulties with her treatment.

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We were glad to hear he appreciated the kick-off meeting with all other TB REACH Wave 7 grantees (37 projects in 23 countries) and that he experienced an open learning atmosphere: "Everyone was giving each other tips from what worked well in their previous TB REACH project, what didn't work so well, what they would do differently. We learned so much from everyone."

Although he acknowledges that he did not do any "advanced studies", Bebe's Wikipedia page reveals that he studied physics, chemistry, biology and mathematics in high school. This may explain how surprisingly at ease he is around public health professionals, always asking critical and spot-on questions. He says that the financial reporting of TB REACH was the least fun part of the project and that, while he understands the need to be accountable for the use of donor funds, "at times it felt as though we were spending more time on the financial report than on managing our TB-related activities".

And our wish? We certainly look forward to more collaborations of this kind in global public health. As one review recently concluded (bit.ly/3Qt9JOp), arts-based approaches – including music but also visual arts, storytelling and theatre – are a powerful platform to facilitate enquiry, achieve reach and support health-related change. Our positive experience with Bebe Cool also shows that it can be a very enjoyable learning experience for the health-care professionals working alongside artists.

We let African music pop our biomedical bubbles and learned that music and epidemiology have more in common than meets the ear. ■