

Closing the HIV Testing Gap in South Africa with SIMUL8

SIMUL8 is supporting the South African charity, Shout It Now, to improve HIV screening and treatment in an effort to save millions of lives. By gifting free software, SIMUL8 is helping Shout It Now in their groundbreaking efforts to bring mobile HIV screening to youth and adults in the communities where they live. The organization also provides an innovative Call Centre service that supports clients until they link to needed clinical care or psychosocial support.

For a small charity, Shout It Now is pioneering in its field. By using SIMUL8, their goal is to streamline processes to create a service as efficient as McDonalds, but with the goal of **saving millions of lives.**

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The situation in South Africa is unfathomable, with a suspected 6,300,000 people living with HIV (unaids.org, 2013). Shocked by the growing crisis, a small group of technology executives founded not-for-profit organization Shout It Now in 2007 to assist in the fight against HIV and teen pregnancy. Founder Bruce Forgive recognized the value of using technology and proven business practices to transform the way health education and screening is delivered in communities across South Africa.

Impressed by SIMUL8, a free license was gifted by SIMUL8's founder Mark Elder who wanted to contribute to the growing crisis.

“I met some smart people with big hearts in the NGO sector but they didn't have the business experience to deliver services comparable to what's found in the private sector. I saw an opportunity to make a real impact on the epidemic by combining my business skills with the public health skills of a few talented colleagues. This was the basis for founding Shout It Now.”

Bruce Forgive, Founder, Shout It Now.

Overcoming Complex Barriers

The HIV epidemic in South Africa is complex, entrenched with deeply-rooted cultural and societal beliefs that can challenge public health progress. HIV testing is underutilized by those who are most at risk for the disease, most often because they are either in denial about their risk or fear the test results. HIV treatment is also underutilized, with many newly diagnosed HIV positive people retreating from the health system after they learn their status.

According to Bruce Forgive “Unfortunately, in HIV there remains a high degree of denial and a high degree of stigma working against. That said, gains have been made in recent years and I think community-based programs like ours are helping more people learn their status in friendly settings and then helping those who are HIV positive realize the value of treatment”.

Why is Testing So Important?

Shout It Now developed an initial program in schools to educate children from an early age about HIV and associated risks, providing information on contraception and testing.

Despite the initial success of the schools program, with 98.5% of high school students getting tested, Shout It Now faced opposition from education authorities and the program was discontinued. Determined to continue, the team re-grouped and developed a similar service in communities, with the intention of reaching out to a wider population of not just youth but also adults.

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Community Screening

Using SIMUL8, Shout It Now developed a sophisticated logistical system that consisted of 4 teams of 14 staff. The teams offered screening and support to between 150 – 200 patients per day. They simulated the processes and timings at the team level so they had a uniform approach that could be applied across the teams with the same outcomes.

SIMUL8 enabled Shout It Now to answer questions including:

- How many people are required at registration?
- How many councilors are required?
- How many CD4 count machines are needed?
- How many rapid HIV test kit readers are required?
- What are the bottlenecks that occur at each stage of this process and how does that shift during the day?

Why SIMUL8?

To meet their goal of testing large numbers of people with a high quality service delivered in a cost effective manner, Shout It Now needed a solution to model their processes and identify bottlenecks, enabling them to create a highly efficient service. In the early days of the project, Excel spreadsheets were used which proved to be extremely difficult, time-consuming and ineffective for communicating plans and getting buy-in from staff. ***“We originally started out using spreadsheets and it was an absolute nightmare, so to have SIMUL8 as a way to model what we were doing was a God-send.”*** Kathryn Pahl Managing Director, Shout It Now.

Prior to using SIMUL8, Shout It Now had a system that collected a range of data including the arrival times of each patient and the appointment duration. While this system allowed them to run reports and calculate averages, it did not help them improve processes. Shout It Now needed a way to use this data to drive decisions and improvements and so turned to operations research as the solution. They approached the University of Cape Town who demonstrated SIMUL8 for modeling this type of process and were “completely sold”.

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The Solution

Using SIMUL8, Shout It Now could identify where bottlenecks were forming and easily eliminate these.

One bottleneck that was identified was the lack of PCs for the number of patients being treated. This slowed down the counseling stage and therefore impacted the entire process. According to Bruce Forgrieve, people are more inclined to give honest answers to questions about their sex life via a computer, rather than in person. Therefore it was critical they had enough computers prior to the counseling stage. The team also identified that by having additional PCs prior to patients being seen by a counselor, they could speed up the entire process. The computers were used to ensure all personal data was captured beforehand, freeing the counselor's time to focus on the patient's risks, based on the information presented in their risk profile.

A bottleneck was also identified at the registration desks where there was limited staff to cope with service demand at peak times. To eradicate this, a second registration desk was opened after 2 hours to prevent queues from forming at the desks which proved effective.

By using SIMUL8, the team could fine-tune the process to identify exactly how it had to be configured and how it had to evolve throughout the day to meet performance objectives. A culmination of small process changes created a big impact. Shout It Now developed a robust, reliable and highly efficient testing process that enabled them to reach targets and save lives.

The community project proved successful and Shout It Now were working in 4 provinces across South Africa, educating populations on HIV, contraception, testing and offering further support.

“We used a number of blue-sky ideas to ease bottlenecks, running multiple scenarios in SIMUL8 to ensure that by fixing one bottleneck, we weren't inadvertently introducing 5 more”.

**Dr Kathryn Pahl,
Managing Director, Shout It Now**

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The Result

Despite the cultural complexity of the present situation in South Africa, Shout It Now is continuing to make significant developments in the fight against the disease. Using SIMUL8, they were able to create a robust process that sees 150 – 200 patients per day being educated, tested and directed to treatment centers. Through their work, a staggering **390,000 people have gone for an HIV test**, placing them in the path of effective treatment to manage the disease.

SIMUL8 allowed Shout It Now to streamline their processes and demonstrate exactly how they were going to meet their targets. The “highly visual” nature of the software meant that they could present the process to non-technical audiences and they understood what was happening, rather than showing them a static spreadsheet or report. This enabled Shout It Now to get buy in from stakeholders and gave them the confidence to meet their aggressive performance targets.

The Shout It Now Team is continuing to work on exciting new developments to increase the number of patients being treated. Working with SIMUL8 consultants, they are using SIMUL8 to develop a **new process that would more than double the number of patients being treated, using no additional resources.**

This is a significant milestone for the charity and highlights the importance simulation brings to process improvement. Their achievements were recently recognized by the World Health Organization (WHO) for best practices in HIV counseling, testing and care for adolescents. The charity was praised for its innovative approach to community-based HIV counseling and testing. Like those they have treated, Shout It Now has a bright future and is continuing its groundbreaking efforts to close the HIV testing gap in South Africa.

With the help of SIMUL8, Shout It Now is making ground-breaking achievements:

- **150-200 patients** treated per day
- **390,000 people** have taken an HIV test through the program
- **42,000 students** educated through the schools program, with **98.5%** taking a test
- Using SIMUL8 to design new process that will **more than double** the number of patients being treated, using no extra resources

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