

GLOBAL HEALTH

Innovation Insight Series



Children collecting syringes to resell

SAFEPOINT I: Stimulating Adoption

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MARC KOSKA, FOUNDER

THE PROBLEM/SOLUTION SPACE

Each year, 17 billion injections are given around the world, more than 7 billion of which are unsafe.¹ An unsafe injection occurs when a needle or syringe is reused between patients without sterilization.² As recently as 1998, the World Health Organization (WHO) advocated needle and syringe reuse in developing countries (up to 200 times in some vaccination programs).³ However, this practice is now widely understood to be linked to significant morbidity and mortality as blood-borne diseases are inadvertently transmitted from one patient to another. The transmission of hepatitis B and C and human immunodeficiency virus (HIV) are particularly common. Unsafe injection practices are conservatively estimated to account for more than 1.3 million deaths and \$535 million in unnecessary costs each year.⁴

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Despite growing recognition regarding the harmful effects of unsafe injections, these practices persist. In places such as India, more than 62 percent of all injections were deemed unsafe according to a study conducted by the IndiaCLEN Program Evaluation Network on behalf of the Ministry of Health, Government of India, and World Bank.⁵ Unsafe practices were the highest at immunization centers (74 percent), followed by government health facilities (68.7percent), and private clinics (59.9 percent).⁶

In some areas, when needles and syringes are discarded after use, they are often thrown away with the regular trash where children scavenge for them to play with or to rinse and resell to local health practitioners for the equivalent of pennies each. This is yet another way in which unsafe practices lead to the transmission of potentially lethal diseases.

ABOUT AUTO DISABLE SYRINGES

In 1984, Marc Koska committed himself to addressing the threat of unsafe injections after reading a newspaper article that predicted the spread of HIV through medical syringes. He spent nearly 10 years in the field, investigating all aspects of the problem: clinical behavior, drug use, patient activity, syringe manufacturing/molding, distribution, disposal, procurement, public health, policy, and funding.⁷ The result was the K1 Auto

Disable (AD) syringe, which physically prevents reuse by locking the plunger once it has been fully depressed. Koska's design was not the first AD syringe, but it was intentionally simple to help keep costs low (the K1 could be manufactured for only about a penny more per unit than a regular low-cost syringe⁸), and it was engineered to fit on all syringe manufacturing machines to prevent companies from having to invest in new manufacturing equipment. He patented the K1 in 1997 and established Star Syringe as a vehicle for openly licensing the technology.

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ONE CHALLENGE: STIMULATING ADOPTION

Koska, who was convinced he had a breakthrough on his hands, shopped the product to the major syringe manufacturers. “They saw that there was a need, but they didn’t see the demand, which are two completely different things. So the manufacturers said, ‘Hey, nice product. Best one I’ve ever seen. I love the simplicity of it. And you made it so we can produce it on our existing machines—nice move.’ And I would say, ‘Great. How many do you want, and when should we get started?’ And that’s when they would say, ‘Oh, well, bring me a customer and I will.’”⁹

It wasn’t until 2001, when Koska landed his first major order from UNICEF, that he started to build momentum. “It’s an incredible badge to the outside world to have UNICEF in your corner,” he noted. Prior to that, Koska suspected that his efforts to disrupt the traditional syringe market were hampered to some extent by manufacturers seeking to maintain the status quo. For example, his first licensee in the developing world was abruptly acquired by an anonymous party and then shut down, while another company licensed the design but never produced any AD syringes.¹⁰

By the mid-2000s, Star Syringe had 9 to 10 licensees that had collectively sold roughly 2 billion syringes around the world. “But when I was honest with myself,” recalled Koska, “it wasn’t growing to the logic. I kept thinking, surely we’ve got over the hump now.

Koska in the field



We’ve proven that safe injections are better than unsafe injections. So why are we not growing at a fantastic rate?” It was then that he decided dramatic action was needed to catalyze a more significant change.

THE SOLUTION: DRIVING CHANGE THROUGH PUBLIC AWARENESS

According to Koska, “To go to a Minister of Health and say, ‘Hi, I think you ought to give only safe injections,’ would lead to the Minister putting out his hand and saying, ‘Great, pay me,’ because I was a manufacturer. I’m in the commercial field. So it’s very obvious that as soon as you’re talking about a few hundred million syringes, someone’s going to put their hand out, and they did many, many times.” He realized that he had to approach the adoption challenge from a different angle. After carefully analyzing the problem, he hypothesized that he needed to get the public involved. “I thought that, actually, the best bang for the buck would be to inform larger populations to create a demand,” he said.

Koska established a nonprofit—called The SafePoint Trust—in 2006, using a gift of \$1.2 million “from a private individual who believed,” he explained. The sole purpose of this organization was to raise awareness about the dangers of unsafe injections. SafePoint’s first order of business was planning and executing a massive public awareness campaign in India. “My overall goal was to get a mandate for the use of auto-disable syringes—not mine, anybody’s—in all the public clinics and hospitals, which were a travesty in terms of delivery of unsafe injections,” Koska said. In the span of a week, the campaign reached 509 million people through thousands of public service announcements delivered via television, cinema, and radio. SafePoint also held 14 press conferences across the country that resulted in more than 200 newspaper articles. In total, the campaign cost just over \$1 million.¹¹

Koska had repeatedly tried to meet with the Indian Minister of Health, but those requests had been refused. However, after the campaign, the Minister not only agreed to see him, but quickly endorsed a mandate for all states to use AD syringes in government hospitals and health centers.¹² “We were able to force his hand,” said Koska. In the end, 11 out of India’s 26 states converted to AD syringes in their public health facilities.

When asked what gave him the assurance to launch such an aggressive marketing strategy, Koska explained: “I have two elements that give me a ballsy confidence, if you like. One is that I’m very sure of my product. And the other thing that makes me absolutely sleepless is the inequity of a doctor and a nurse, who are trusted beyond belief. ‘Doctor is second to God’ is often a phrase I hear. They’re completely entrusted, and yet these are the scumbags who are carrying out this procedure and letting down their public. So I don’t care what name I have to call the Minister of Health in India to try and draw attention to the issue...I’d run down the street naked if it was going to work.” ♦

NOTES

- 1 “LifeSaver Re-Use Fact Sheet,” SafePoint Trust, http://safepointtrust.org/images/Syringe_Re-use_Facts.pdf (February 9, 2012).
- 2 L. Simonsen, A. Kane, J. Lloyd, M. Zaffran, M. Kane, “Unsafe Injections in the Developing World and Transmission of Bloodborne Pathogens: A Review,” *Bulletin of the World Health Organization*, 1999, <http://www.ncbi.nlm.nih.gov/pubmed/10593026> (February 9, 2012).
- 3 Ernest Drucker, Phillip G Alcabes, Preston A Marx, “The Injection Century: Massive Unsterile Injections and the Emergence of Human Pathogens,” *The Lancet*, 2011, [http://alexandria.healthlibrary.ca/documents/notes/btb/medicine_and_society/Drucker_\(Lancet\).pdf](http://alexandria.healthlibrary.ca/documents/notes/btb/medicine_and_society/Drucker_(Lancet).pdf) (February 9, 2012).
- 4 M.A. Miller and E. Pasani, “The Cost of Unsafe Injections,” *Bulletin of the World Health Organization*, 1999, [http://www.who.int/bulletin/archives/77\(10\)808.pdf](http://www.who.int/bulletin/archives/77(10)808.pdf) (February 9, 2012).
- 5 “Assessment of Injection Practices in India,” International Clinical Epidemiology Network (INCLIN), 2004, http://www.ipen.org.in/images/stories/exec._summary.pdf (February 9, 2012).
- 6 Ibid.
- 7 SafePoint Media Pack, http://safepointtrust.org/resources/Safepoint_Media_Pack-1.pdf (February 9, 2012).
- 8 Jenn Warren, “Slumdog Scandal,” *The Sunday Times Magazine*, March 22, 2009, http://www.jennwarren.net/content/SafePoint_SundayTimes.pdf (February 9, 2012).
- 9 All quotations are from an interview with Marc Koska conducted in December 2011 unless otherwise cited.
- 10 Joshua Robinson, “How to Save a Million Lives,” *The Daily Beast*, October 20, 2010, <http://safepointtrust.blogspot.com/2010/10/how-to-save-million-lives.html> (February 10, 2012).
- 11 “The India Campaign,” SafePoint, February 2009, <http://www.safepointtrust.org/news-feb09-indiacampaign.htm> (February 10, 2012).
- 12 Ibid.