innovations

Radio Australia - Innovations - Snapit Ampoule Opener

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Snapit Ampoule Opener

An emergency nurse's device to open glass ampoules easily and safely

Contact: Glen Riverstone
C/- Qlicksmart Pty Ltd.,
PO Box 5677, West End, Brisbane, QLD 4101
International Telephone: +61 7 3844 1182 FAX: +61 7 3844 1183
Email: mjs@qlicksmart.com
Website: http://www.snapit.com.au

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TRANSCRIPT:

DESLEY BLANCH : A 24 year-old emergency nurse, Glen Riverstone began his career three years ago in a Queensland regional hospital after graduating from university. Toward the end of his first year nursing, a trauma came through the emergency department and as he opened the medication ampoule, the lid cut his fingers, which made him think that here was a genuine health and safety risk.

Glen became aware the problem was more widespread, after hearing continual complaints and stories of cut hands and fingers and breakages from nursing colleagues and paramedics.

Millions of glass ampoules are opened every year in operating theatres, intensive care units, emergency departments and general wards within hospitals, when the small sealed glass vial which holds hypodermic solutions has its top snapped off to access its contents.

For his invention which Glen came up with on the job, he has won ABC TV's "New Inventors Peoples Choice Award for 2007" and a trip to Hong Kong's Innovation, Design and Technology Expo for his Snapit Ampoule Opener.

DESLEY BLANCH : So first Glen, congratulations and let me explain that the New Inventors Peoples Choice Award goes to the invention that receive the most votes from audiences throughout the year; so you're Snapit safety device must have struck a chord with a lot of nurses and paramedics and anaesthetists who were watching at home. But what's been your feedback after winning the award?

GLEN RIVERSTONE : Well, the show aired to 1.2 million people, so naturally there has been a flood of interest both on the web site and by mail. Feedback has been largely positive and it's confirmed both the safety and practicality for users.

For example, I had one elderly lady who has to give herself daily injections at home and has arthritis in her hands. I got a letter from her. She purchased the product and has found it fantastic and doesn't have trouble with them any more. So little things like that have been encouraging, it's all positive.

DESLEY BLANCH : Your device gives medical staff this quick, clean and safe access to these glass

vials. What are the hazards associated with opening glass ampoules apart from cutting your fingers of course?

GLEN RIVERSTONE : Cutting of the fingers, although simple, attributes to the largest cause for sharps injuries. I think in some cases over 30 per cent of studies. But you've got the risk of infection and also a wasted resource, which sometimes the content of the ampoule can be quite expensive.

DESLEY BLANCH : And some anaesthetists, I mean they open up 50 to 100 ampoules a day and this made you consider the device as ergonomic design. So what are some of the aspects of that design?

GLEN RIVERSTONE : There are two main features that we have that result in its ergonomic design. One is that it acts as an extended lever when snapping the lid off, therefore less effort is required. Then the Snapit can also be used without overturning your wrists, so it's in an upright, natural position.

DESLEY BLANCH : Yes, give us a description of how the device works. I mean how it is used by the health care worker and something of what it looks like if we can.

GLEN RIVERSTONE : Well, it's just a small cylindrical device that fits quite comfortably in your hand. Effectively, it just locks onto the ampoule lid and then takes the place of your hand when you snap the lid off, making it safe and reducing the risk of cutting your hand. It then contains the lid quite securely until you purposely eject it into a Sharps bin.

DESLEY BLANCH : Do you hang this around you neck?

GLEN RIVERSTONE : Yes, we have what we call a personal edition. It's a very lightweight slim design that you can hang from a lanyard or can just tuck in your pocket, making it just very practical for users who use it frequently, like myself in emergency departments.

DESLEY BLANCH : So, how does your device differ? There must be other ampoule openers. How does yours differ from those?

GLEN RIVERSTONE : That's right, ampoule openers are obviously not a new concept, but the design of the Snapit and its mechanical function is. It's the first that, sort of, effectively combines practicality, durability and re-usability, without using a blade or a file.

DESLEY BLANCH : Well you obviously didn't sit on your hands, whether they were cut or otherwise from broken ampoules, because from concept to commercialisation, it only took you nine months. So, what was your first move and when did you make it? Because here you are, you're, what, 22 years-of-age at the time?

GLEN RIVERSTONE : That's right. If you added the amount of hours I didn't sleep onto it, you could say it was about 18 months from concept to commercialisation. But I was very motivated and basically pursued it with every spare minute.

The first step was actually coming up with the design on paper, putting it so we could make a prototype and through a friend's machining business we were able to get that made.

DESLEY BLANCH : Yes, you did some drawings and made a first prototype, this was I understand out of balsa wood. So, what happened then?

GLEN RIVERSTONE : From there, the next one was metal. We made it out of some metal. The design actually worked perfectly from a lathe to be machined, so from there we were able to make a few metal prototypes and slowly refine it to what it is now.

DESLEY BLANCH : How did you take it from there on, because it's not an easy thing to say, 'okay, here it is in my hand, now what do I do with it?' Who did you approach next?

GLEN RIVERSTONE : Hm, basically it just came down to a lot of research and just being very proactive. I had to get out, search out on certain inventors' sites. A lot of them offer advice and steps to take. But we refined the prototype.

I then got a patent and trade mark attorney, got them on board so we could start looking at the intellectual property protection side of things and from there got a production line going. I got a web site, went through some advertising, did a product launch locally up in Central Queensland and from there just started some marketing and face-to-face sales.

DESLEY BLANCH : When did you realise that this could be a business opportunity?

GLEN RIVERSTONE : Well, business is about supply-and-demand and I was experiencing a demand for safer practices when it comes to opening glass ampoules and I figured out if I could supply the solution, then it would go beyond a good idea and become a commercially viable idea.

DESLEY BLANCH : I thought you did your nursing training at university. It sounds as though might have been doing some business training as well!

GLEN RIVERSTONE : I've certainly been through a real life business course, that's for sure.

DESLEY BLANCH : Now, is the device reusable and therefore does it need sterilisation after each ampoule?

GLEN RIVERSTONE : No, it doesn't. It doesn't need sterilisation. Normally you'd use your hand or a tissue or something, but the aim was to make a quality product that could be cleaned regularly, and, you know, increase hygiene. So it's made from stainless steel. It can be soaked or washed after each use if necessary.

DESLEY BLANCH : You mentioned that you're selling it over the web site, but is the product being distributed and sold in other ways apart from the web?

GLEN RIVERSTONE : The products available through a Brisbane-based company called Qlicksmart, they specialise in safety products that they supply worldwide. So it's available through them, both through distributors and directly to end users.

DESLEY BLANCH : Well, you've returned from Hong Kong, and that Innovation, Design and Technology Expo. What were your experiences up there?

GLEN RIVERSTONE : Yeah, well, last December we went to Hong Kong for the expo. It was very impressive, had thousands of people from all over the world taking part. It was a great opportunity to showcase the product, but also to browse around and have a look at some other innovations from around the world, and managed to fit a few days of tourism in.

DESLEY BLANCH : And what was the reaction, were you getting orders? What was the story?

GLEN RIVERSTONE : Aah, there was a lot of interest. It wasn't a medical expo so to speak, but like all industries there was a bit mix of industry there and we had leads to about four or five countries which we're following up, which is great.

DESLEY BLANCH : So has your success with the Snapit device turned your head away from nursing?

GLEN RIVERSTONE : Hm, simple answer, not at all. I really enjoy nursing and take great pride in it. But it does require a lot of time with the business stuff I'm doing, so I'm nursing a little bit less, but nevertheless still nursing.

DESLEY BLANCH : From Queensland, Glen Riverstone, the emergency nurse who took it upon himself to solve a health and safety risk which confronted him at work, by inventing the Snapit Ampoule Opener.

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