MediPurpose®
Lancing Devices

White Paper: Reinventing a Better babyLance® Infant Heel Incision Device

babyLance®

Understanding the Needs of End-Users

Abstract

After launching the highly successful and innovative SurgiLance® safety lancet in 1999, medical product manufacturer and master distributor MediPurpose® introduced a complementary product in 2010, the babyLance® infant heel incision device.

+ evaluation of end-users to gauge heelstick device preferences

+ feedback validated key features to redesign or maintain

Soon after launch, MediPurpose discovered that babyLance's innovative design was not fully meeting the preferences and expectations of users in the U.S. market. Although a number of U.S. and European healthcare facilities expressed a desire to continue use of the product, feedback indicated that the heelstick device needed a number of modifications in order to fully satisfy customer demands.

MediPurpose initiated intensive evaluation of end user preferences, which confirmed features that end users would want in a redesigned babyLance, which included:

- Changing the trigger activation to a "pull back" mechanism rather than "push forward"
- Reducing the device's propensity to "rock" when placed on infant's heel
- Changing the housing and trigger colors
- Enhancing the device's intuitive visual cues
- Easier removal of trigger lock

Further, the company's end-user evaluations confirmed features that they wanted to be maintained in a redesigned babyLance, which included:

- Smooth cutting profile
- Dimples on the sides of the housing for good grip
- Distinctive baby footprint on the sides of the housing
- Curve and arrow indicators at the bottom of the housing

Introduction

+ what did end-users like about original heelstick device?

+ what did end-users not like?

+ what improvements would they most want to see in a redesigned babyLance?

After launching the highly successful and innovative SurgiLance® safety lancet in 1999, medical product manufacturer and master distributor MediPurpose® introduced a complementary product in 2010, the babyLance® infant heel incision device.

Soon after launch, MediPurpose discovered that babyLance's innovative design was not fully meeting the preferences and expectations of users in the U.S. market.

Although a number of U.S. and European healthcare facilities expressed a desire to continue use of the product, feedback indicated that the heelstick device needed a number of modifications in order to fully satisfy customer demands. Trigger activation was among them—more specifically, an indicated preference for a "pull trigger" activation mechanism, rather than babyLance's "push-forward" trigger.

Aside from trigger activation preferences, what were the other needs of end-users? What did they like about the current babyLance? What were the features they liked the least? What improvements would they most like to see in a redesigned babyLance?

This white paper illustrates the process of understanding end-users' needs and preferences for a redesigned babyLance infant heel incision device.

The new, reinvented "pull trigger" babyLance heel incision device.

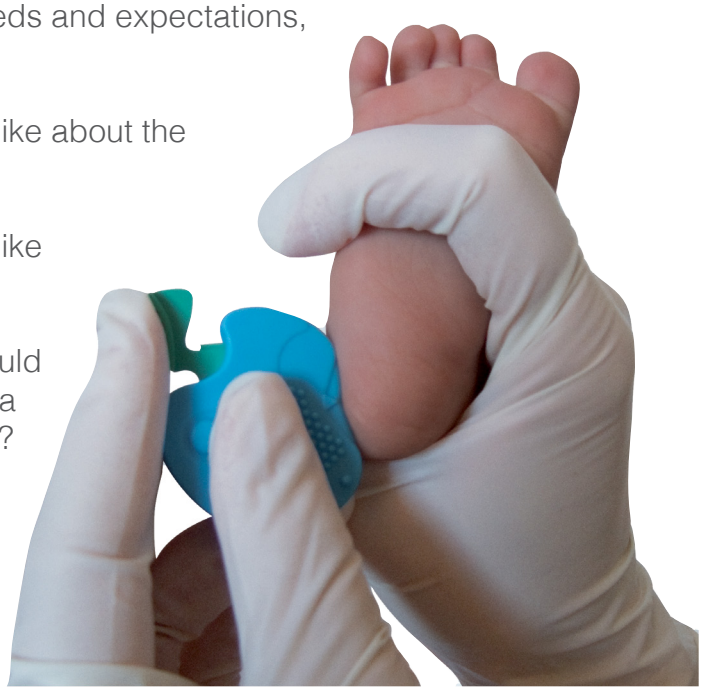
Problem Definition

Soon after launching its new babyLance® infant heel incision device in 2010, MediPurpose® discovered that the device was not fully meeting the preferences and expectations of users in the U.S. market. The heelstick device's "push-forward" trigger—a design change from the "push-down" or "pull" trigger mechanisms offered by some competing brands—was identified as one key issue.

MediPurpose needed to more fully understand the requirements and preferences of end-users to successfully reinvent babyLance.

Along with trigger activation preferences, MediPurpose wanted to better understand end-users needs and expectations, such as:

- What features did they like about the current babyLance?
- What features did they like the least?
- What improvements would they most like to see in a redesigned babyLance?



The original, "push-forward trigger" babyLance heel incision device.

Meeting with End-Users and Distributors to Understand Market Preferences

In its unambiguous mission of carefully listening to market feedback throughout the babyLance® infant heel incision device's reinvention process, MediPurpose® met with end-users and distributors to evaluate the following:

- What did end-users like about the current babyLance?
- What did end-users dislike about the current babyLance?
- What improvements would end-users most like to see in a redesigned babyLance?
- Which trigger activation mechanism was preferred by end-users: pull back, push down, or push forward (which was used by the current babyLance)?

+ 12-month period

+ 3 distributors

+ 8 hospitals

+ 180+ end-users

+ United States, Europe and Singapore

Over a 12-month period, MediPurpose met with three distributors, eight hospitals and more than 180 end-users in the United States, Europe and Singapore to get their answers.

Throughout the reinvention process, MediPurpose routinely showed models and prototypes of different babyLance design ideas to neonatal nurses in those countries for evaluation—using their feedback for supplementary adjustments and modifications.

MediPurpose also critically reviewed its previous end-users evaluations prior to the launch of the first version of babyLance.

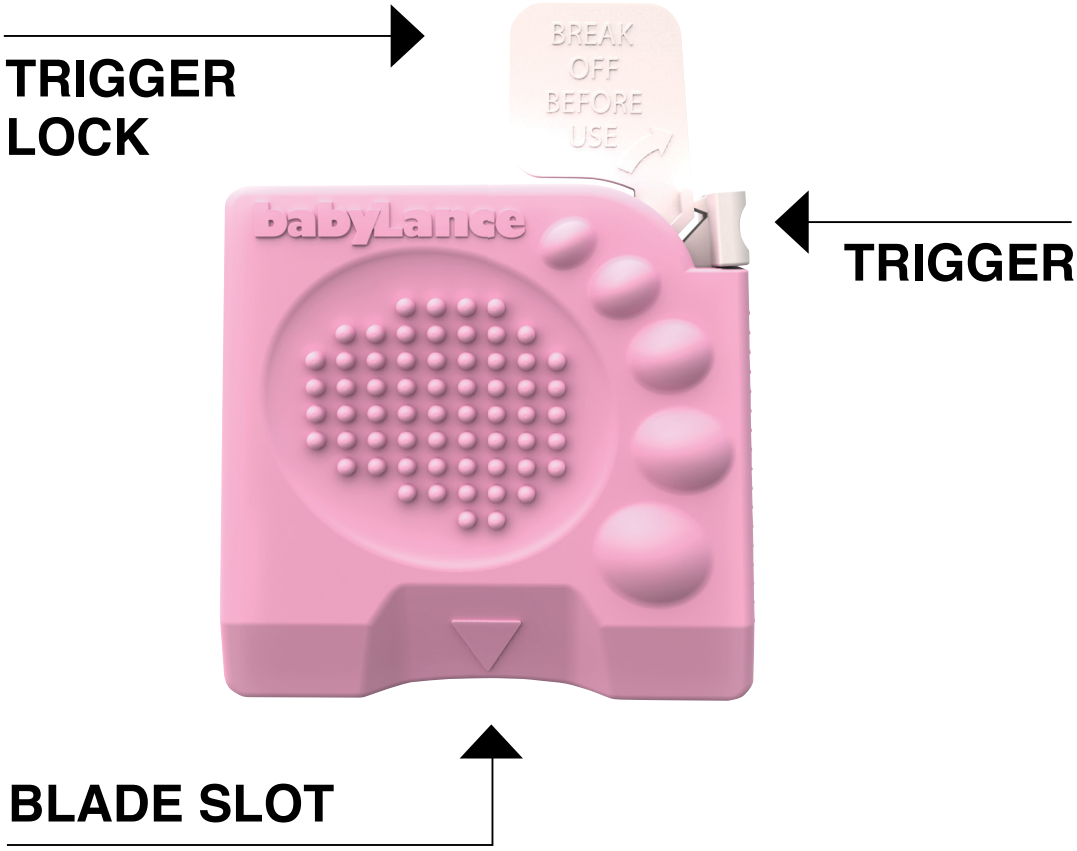
End-Users' Requirements for New babyLance® Infant Heel Incision Device

MediPurpose® initiated intensive evaluation of the babyLance® infant heel incision device's end-users' preferences, which confirmed their desire for a redesigned heelstick device that featured:

- A "pull-back" activation trigger activation, as it was the most commonly preferred action due to prior experience with other devices.[1]

- Reduced propensity for the device to "rock" when placed against the infant's heel, accomplished by:
  - Changing the base and overall design of the housing to ensure a more stable placement on the baby's heel.
  - Reducing the trigger's activation force and distance to make activation easier.
  - Distinguishing colors for each model's housing so that the preemie (BLN) or newborn (BLN) device would be easier to identify, especially in dimly lit rooms where the device is frequently used.
  - More intuitive visual cues to ensure babyLance's correct handling and usage.
- Easier removal of the device's trigger lock, in particular, so that it could be removed with only one hand.

1 Learn more in MediPurpose's white paper, *Reinventing a Better babyLance® Infant Heel Incision Device: Listening to End-Users–Activation Trigger Survey at the NANN 2011 Conference*.



End-users also confirmed that the following features should be maintained in the redesigned babyLance:

- Smooth cutting profile to minimize trauma to the baby's heel.
- Ergonomic dimples on the sides of the housing for good grip, especially with gloves.
- Curve at the bottom of the housing to match the baby's heel contour.
- Arrow at the bottom of the housing to indicate the device's incision point.
- Distinctive baby footprint on the sides of the housing.

Business Benefits of Listening to End Users When Reinventing the babyLance®

After listening carefully to the end users, MediPurpose® launched a redesigned "pull trigger" babyLance® infant heel incision device in August 2012 that will satisfy the unique needs of both its end user customers and distribution partners.

The company's confidence is fostered by the knowledge that its new heelstick device:

- Is designed with intensive input from a diverse range of highly qualified users.
- Provides a preferred pull trigger activation mechanism that is comfortable and easy to use.
- Is assured to provide safety and quality from a proven and trusted manufacturer with worldwide distribution channels.

Additionally, this interactive process further validates MediPurpose's medical product innovation process and capabilities.

Calls to Action

- Learn more about babyLance®
- Please visit www.medipurpose.com/babylance.

- Request no-cost samples and pricing
- Please visit medipurpose.wufoo.com/forms/q7x3s5/

- Participate in clinical evaluations
- Please e-mail sales@medipurpose.com.

- Arrange for in-servicing from an approved distributor
- Please e-mail sales@medipurpose.com.

babyLance®

Advanced Heel Incisions

Our babyLance device was developed with over ten years of proven product development expertise, and leveraging the advanced thinking behind our SurgiLance® lancet. The result is a precise, safe and consistent device specifically designed for babies.

Performance You Will Appreciate

The proprietary spring design provides a swift pendulum action of the cutting blade that makes a gentle incision and complies with CLSI LA4-A5 guidelines[1].

Easy on You and Baby

The industry's easiest trigger reduces finger pressure and activation distance for improved stability and incision quality, which greatly minimizes the risk of bruising.

Fits Your Hand Like a Glove

Designed with you in mind. Ergonomically, the dimples give you a secure grip. While functionally, the device cradles the baby's foot for stability and reduced rock, with visual markings that enable better alignment and a more accurate incision.

The Perfect Incision Every Time

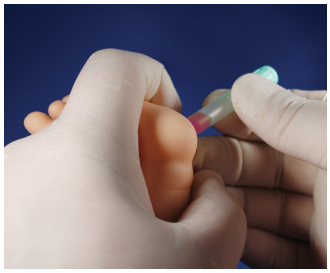
The innovative spring design controls the consistency of the depth and width of the incision for better blood flow, without touching the baby's tender nerve fibers.

4 Easy Steps

1. Select an incision site on the flat bottom surface of the heel, then clean the area.

2. Remove the Trigger Lock, but do not pull back the trigger until ready for use.

3. Align the Blade Slot with the incision site using the visual marking and pull the trigger back with your index finger. Discard.



4. Gently wipe away the first droplet of blood, then collect the desired quantity. That's it.

Product	Code	Incision Depth	Color	Packaging
Preemie	BLP	0.85mm	Pink	50/box | 200/case
Newborn	BLN	1.00mm	Blue	50/box | 200/case

medipurpose.com/**babylance**

1. Clinical and Laboratory Standards Institute. Blood Collection on filter paper for newborn screening programs – Fifth Edition; Approved Standard. CLSI document LA4-A5. Wayne, PA: CLSI, 2007.

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