amount of pressure (between systolic and diastolic pressures) required to optimize engorgement of the veins.

Currently used tourniquets are elastic bands that have no means of measuring the pressure applied. Thus, very often, the pressure is either too much, so that the arteries are also occluded, or too little, so that the veins are not closed. Both scenarios result in suboptimal venous engorgement and significant discomfort. Alternative devices use HD imaging and infrared lights to illuminate blood vessels, however, these are much more expensive.

This device is constructed by connecting three primary components: 1) an inflatable cuff from which pressure can be both measured and regulated, 2) a pressure-regulating unit, and 3) a pulse-detecting unit (sensor). The cuff inflates automatically and feedback from the pulse sensor maintains the pressure between arterial systolic and diastolic.

Advantages

Four out of every 10 patients who require venipuncture get pricked more than once, causing unnecessary

discomfort and bruising. This device will reduce unsuccessful attempts, while also costing less than the HD-imaging devices.

Market Opportunities

The target market size is all medical practitioners regularly performing venipuncture. According to the National Phlebotomy website, approximately 263 million vein-access procedures were conducted in the year 2008.

Areas of Application

IV insertion, blood draws

Patent Information

U.S. National application 15/102,035 published; National applications pending in Canada, Australia, and Europe (published)

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Stage of Development

Design/Prototype

Types

Devices

Devices › Hospital Care