

The image is a promotional graphic for SecurAcath. It features a large, stylized 'V' shape in the background, with the top part being white and the bottom part being orange. The SecurAcath logo is prominently displayed at the top center. Below the logo, the text 'Reduce Infections' and 'Decrease Dislodgements' is written in large, white, sans-serif font. At the bottom left, there is a 'Learn More' link with a right-pointing arrow. On the right side, there is a close-up image of the SecurAcath device, which is a yellow, handheld device with a syringe attached. The device has 'LIFT' and 'HOLD' buttons and the SecurAcath logo on it. The background of the device image is a gradient of orange and yellow.

SecurAcath.

Reduce Infections

Decrease Dislodgements

Learn More ►



This article describes the design and evaluation of AutoSyP, a low-cost, low-power syringe pump intended to deliver intravenous (IV) infusions in low-resource hospitals” Juarez et al (2016).

Abstract:

This article describes the design and evaluation of AutoSyP, a low-cost, low-power syringe pump intended to deliver intravenous (IV) infusions in low-resource hospitals. A constant-force spring within the device provides mechanical energy to depress the syringe plunger. As a result, the device can run on rechargeable battery power for 66 hours, a critical feature for low-resource settings where the power grid may be unreliable. The device is designed to be

used with 5- to 60-mL syringes and can deliver fluids at flow rates ranging from 3 to 60 mL/hour. The cost of goods to build one AutoSyP device is approximately \$500. AutoSyP was tested in a laboratory setting and in a pilot clinical study. Laboratory accuracy was within 4% of the programmed flow rate. The device was used to deliver fluid to 10 healthy adult volunteers and 30 infants requiring IV fluid therapy at Queen Elizabeth Central Hospital in Blantyre, Malawi. The device delivered fluid with an average mean flow rate error of $-2.3\% \pm 1.9\%$ for flow rates ranging from 3 to 60 mL/hour. AutoSyP has the potential to improve the accuracy and safety of IV fluid delivery in low-resource settings.

ReTweet if useful... Review of low-cost infusion pump for use in low-resource settings
[@ivteam #ivteam](http://ctt.ec/6Z_v0+)

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Reference:

Juarez, A., Maynard, K., Skerrett, E., Molyneux, E., Richards-Kortum, R., Dube, Q. and Oden, Z.M. (2016) AutoSyP: A Low-Cost, Low-Power Syringe Pump for Use in Low-Resource Settings. The American Journal of Tropical Medicine and Hygiene. July 5th. .

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