

# Introduction of a compact alarming device to safeguard tourniquets

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# Tourniquets

PEOPLE-FIRST

FAIRNESS

INNOVATION

RESPECT

SAFETY

TEAMWORK



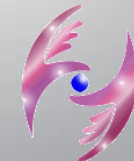
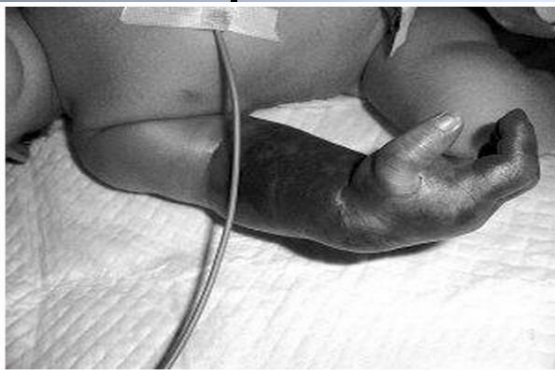


# Actual Problem

PEOPLE-FIRST  
FAIRNESS



- Tourniquet can be inadvertently left by healthcare professions, in a variety setting. And cause harmful to patients.





## Forgotten But Not Gone: Tourniquets Left on Patients

Since the implementation of PA-PSRS a year ago, Pennsylvania healthcare facilities have submitted more than 125 reports of tourniquets being left on patients' extremities.

The longer a tourniquet is left in place, the greater the chance of significant injury. In only 5% of the reports submitted to PA-PSRS was the tourniquet discovered within a half hour of application. Two-thirds were left on patients for up to two hours. The remaining third were left in place from two to 18 hours.

Many of the reports indicate that the cause of the error was related to failure to follow procedures or individual clinicians' proficiency. However, multiple reports were submitted by more than 60 hospitals, suggesting that this is a systemic problem that could benefit from system-wide solutions.

## How Does It Happen?

In approximately half of the reports, the tourniquet was being used in conjunction with starting an IV line, while in the other half it was used for drawing a blood specimen for laboratory tests.

## 病人安全事件提醒：靜脈注射後止血帶未鬆綁

## Patient Safety Alert:

## Tourniquet left on patients after venopuncture

提醒：使用止血帶後（特別是對於意識不清的病人），應確認已鬆綁移

除；機構亦可考慮採用具偵錯或防呆之設計與流程，以減少止血帶未鬆綁之風險。

## 案例描述

- 一、病人送入加護病房時，從急診帶入兩條靜脈置管針。於更晚病人醒時，發現右手衣物很鬆，將衣物捲開後發現止血帶仍綁在右手臂，且手尚未活動。立即鬆開後，未就該問題改善。
- 二、白班替病人改打兩條靜脈置管針，小夜班翻身檢查病人時，發現右手上臂綁著乳膠手套（白班人員打上去忘記移除），立即鬆開乳膠手套，發現手套上有一圈綁的勒痕及水泡，右手較左手腫，溫度較低；病人可聽指令舉起右手，但握拳時困難。

# Global clinical safety problem

百度文库 > 专业资料 > 医药卫生 > 临床医学

## 输液忘去止血带 老人截肢后死亡

发布时间: 2010-03-23 来源:

## 一、案情经过

病员,女,76岁。咳嗽、憋气及发热2个月入院。初步诊断为慢性支气管炎并发感染,肺心病及肺气肿。入院后由护士甲为其静脉输液。甲在患者右臂肘上3厘米处扎上止血带,当完成静脉穿刺固定针头后,由于病人的衣袖滑下来将止血带盖住,所以忘记解下止血带。随后甲要去给自己的孩子喂奶,交护理员乙继续完成输液。乙先静脉推注药液,然后接上输液管进行补液。在输液过程中,病人多次发出“手臂疼及发凉”等。乙认为疼痛是由于西环素刺激静脉所致,并且解释说:“因为病情原因,静脉点滴的速度不宜过快”。经过6个小时,输完了500毫升液体,由护士丙取下输液针头,发现局部轻度肿胀,以为是少量液体外渗所致,未予处理。静脉穿刺9个半小时后,因病员局部疼痛而做热敷时,家属才发现止血带还扎着,于是立即解下来并报告护理员乙,乙查看后嘱继续热敷,但并未报告医生。

我的位置: 法律快车 > 法律社区 > 医疗事故 > 医疗事故 > 医疗事故赔偿 > 正文

## 婴儿因护士忘解止血带手臂面临截肢危险

来源: 作者: 时间: 2011/09/02

推荐医疗事故律师:

婴儿的半截胳膊已经发育,有截肢的危险。一个6个月大的婴儿到方城县人民医院儿科住院治疗,该院护士给该子输液扎针时,把止血带绑在孩子胳膊上一天半,造成孩子半截胳膊发育。目前孩子已转入郑州大学第一附属医院住院治疗,止血带是否不排除截肢可能。方城县人报

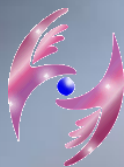
其它新聞

## 醫護忘拆止血帶 半年六病人傷

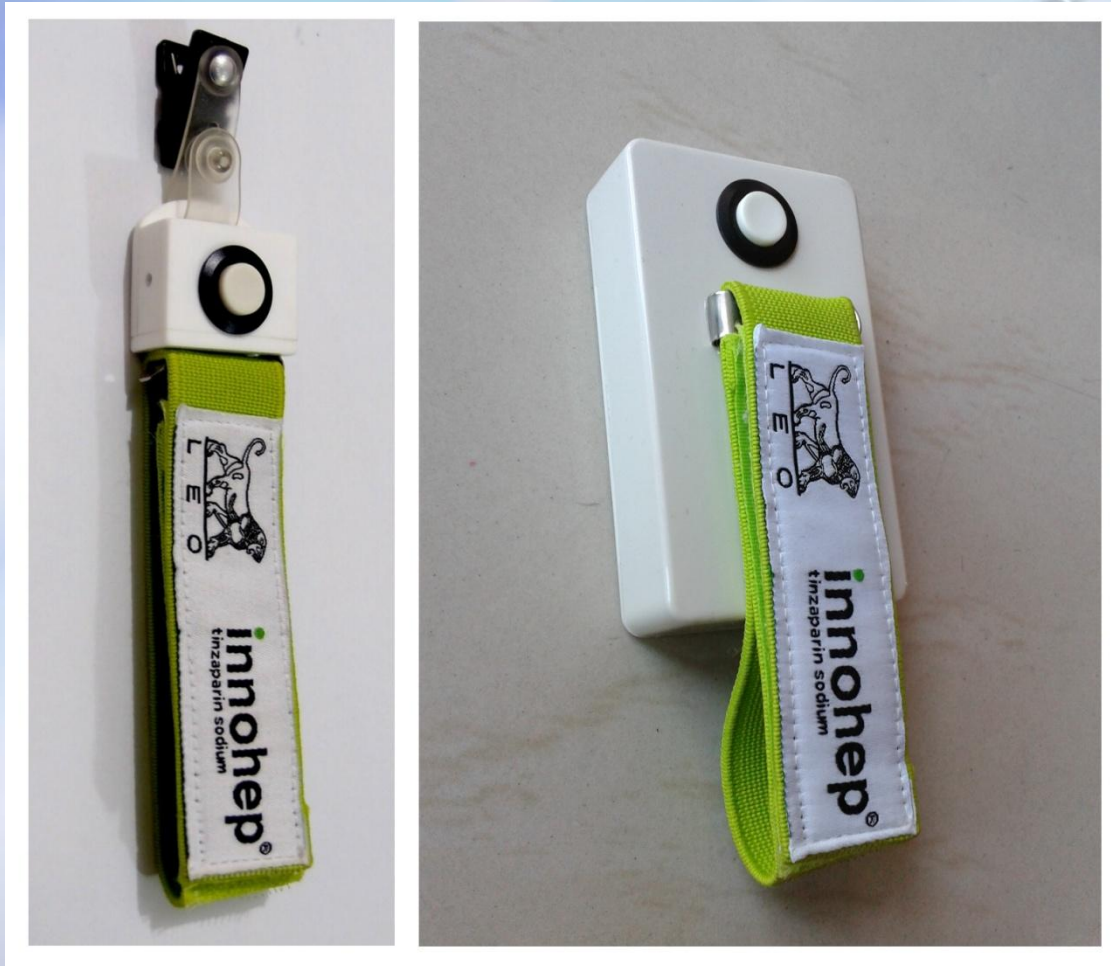
頭條日報 醫院管理局公佈近期在公立醫院發生的醫療事故，

過去半年有六宗醫護人員未有為病人拆除止血帶，令病人手臂因血液不流通而受傷。另外在兩個月內，亦再有五宗遺留醫療儀器在病人體內。

新一期《風險通報》指，醫護人員為病人抽血及插入靜脈導管後，忘記為病人拆除止血帶，令病人手臂血管長時間受壓，造成血液不流暢，六名病人的手臂因而出現微輕至嚴重的損傷，《通報》又提醒醫護人員要注意難與外界溝通的病人。



# The world's first alarming system tailor-made for tourniquets



Tournimates





# Operation principle



# Tournimates use in ward



Blood taking trolleys



Contact  
Precaution  
Box



E-trolleys



# 6 months pilot study

- Tourniquets used for 15,976 times (89 times/day)
- 7 incidents being investigated
- 4 incidents tourniquet left on patients' bed side or bed table
- 3 incidents tourniquet left on patients' arm
- All incidents being discovered within few minutes
- No patient harmful, no tourniquet found missing





# Personal Tournimate

PEOPLE-FIRST

FAIRNESS

SAFETY  
TEAMWORK



# 3 important advantages

- (1) Compatible with disposable tourniquets



- (2) Long lasting battery for 5 years operation
- (3) Evidence- based practice

ERGONOMICS, 1995, VOL. 38, NO. 11, 2300-2312

## **Human probability matching behaviour in response to alarms**

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# Conclusion

- **Tournimates** had shown very effective to safeguard tourniquets and patients in a hospital setting.
- It also reduce the stress of users too.



Phlebotomists



Houseman

