

# Needlestick Safety and Prevention Act of 2000: Impact and Limitations

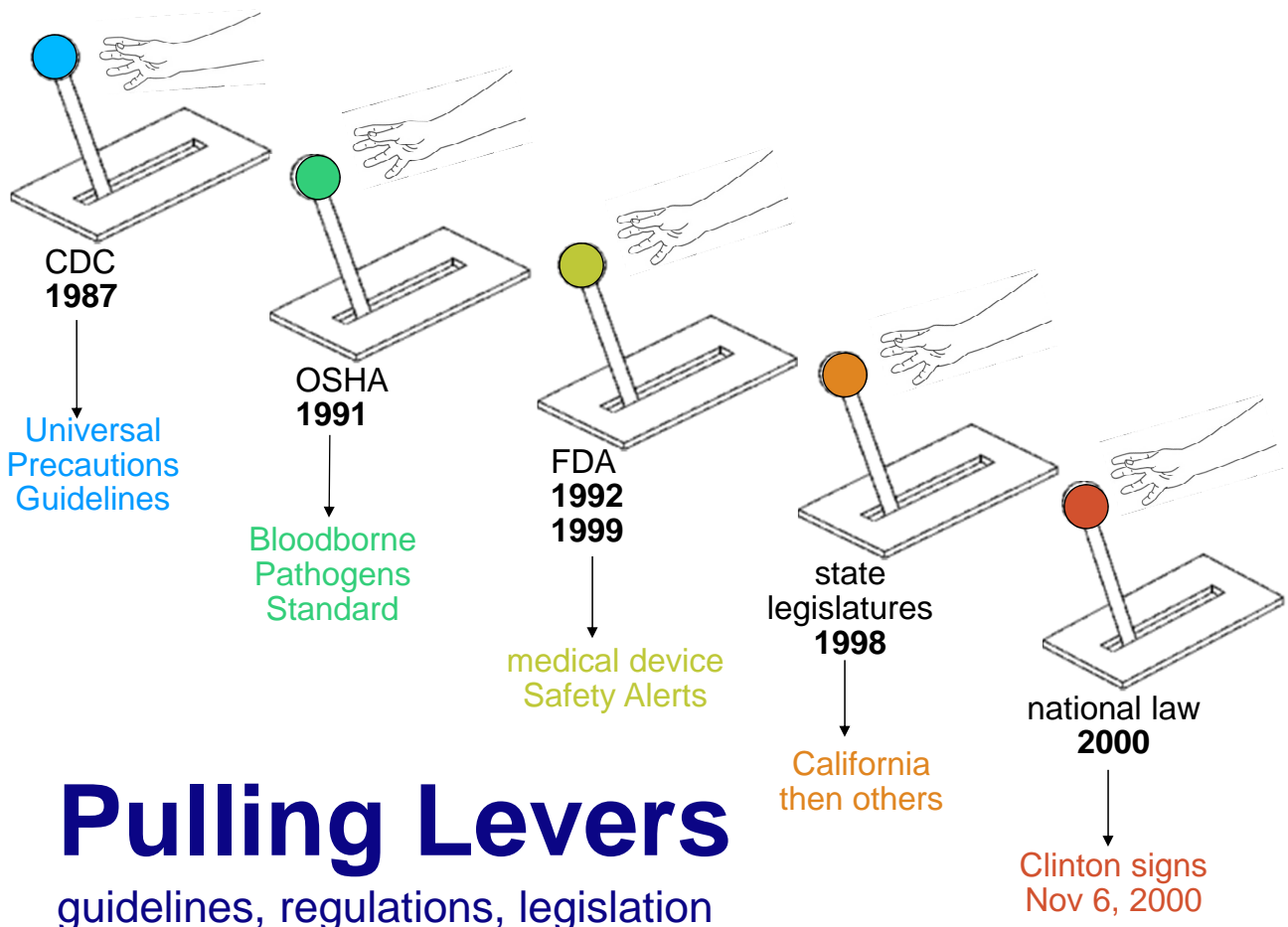
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International Healthcare Worker Safety Center

University of Virginia

## GERES 21<sup>eme</sup> Journee Annuelle

Paris, December 9, 2011



# FDA SAFETY ALERT: Needlestick and Other Risks from Hypodermic Needles on Secondary I.V. Administration Sets -- Piggyback and Intermittent I.V.

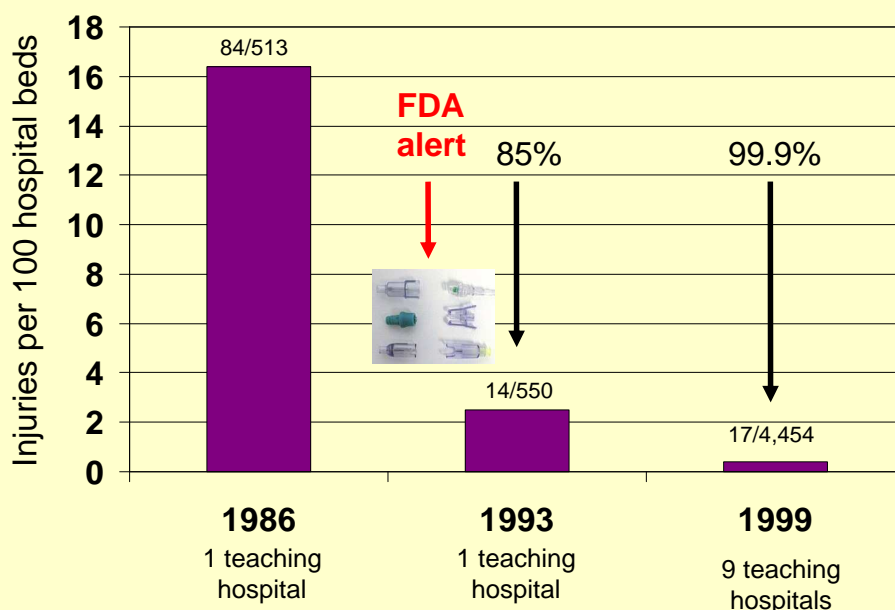
April 16, 1992

Dear Colleague:

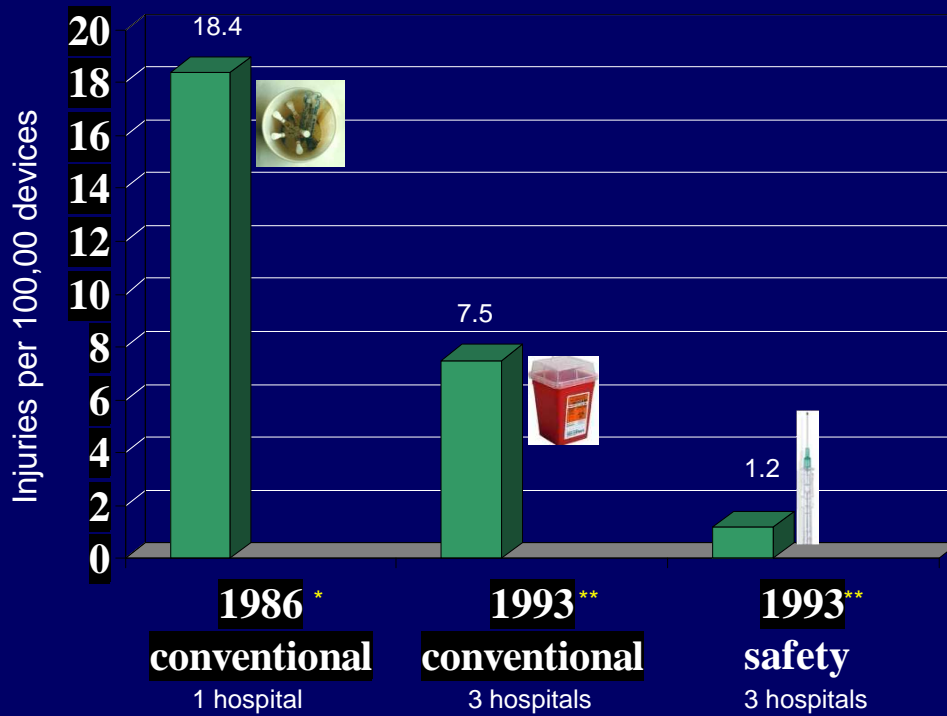
This is to alert you to the risk of needlestick injuries from the use of hypodermic needles as a connection between two pieces of intravenous (I.V.) equipment. The use of exposed hypodermic needles on I.V. administration sets or the use of syringes to access I.V. administration set ports or injection sites are unnecessary and should be avoided. Hypodermic needles should only be used in situations where there is a need to penetrate the skin.

## Injury Rates from Needles on IV Lines Before & After the 1992 FDA Safety Alert

EPINet hospitals, International Healthcare Worker Safety Center



# IV catheter injury rates per 100,000 devices



\*Jagger J, Hunt EH, Brand-Elnaggar J, Pearson RD.. NEJM 1988; 319(5):284-288.

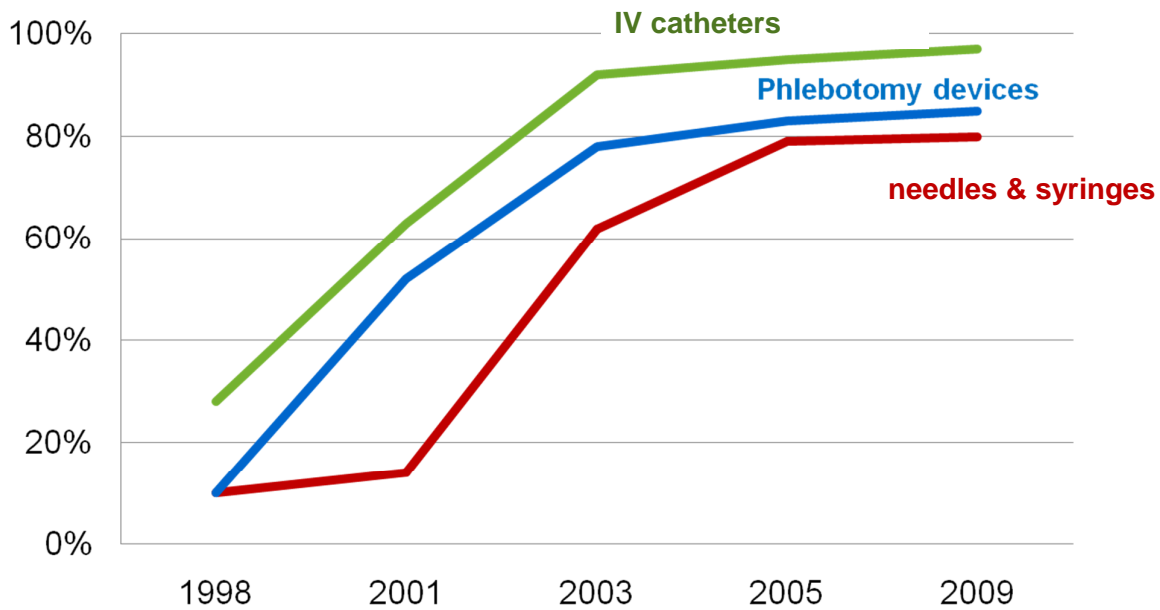
\*\*Jagger J, Bentley M. J Intraven Nurs 1997;20(6):S33-S39

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## The Needlestick Safety and Prevention Act November 6, 2000



## U.S. Estimated percent market share\* of safety compared to conventional devices, 1998 – 2009



\* Market share (reflects \$ spent/purchase volume) and is a proxy for conversion or use

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## Injury Rates from Hollow-bore Needles: Safety versus Conventional, U.S. EPINet 1995-2006

87 hospitals; total injuries = 24,440 (excludes injuries occurring before use of device)

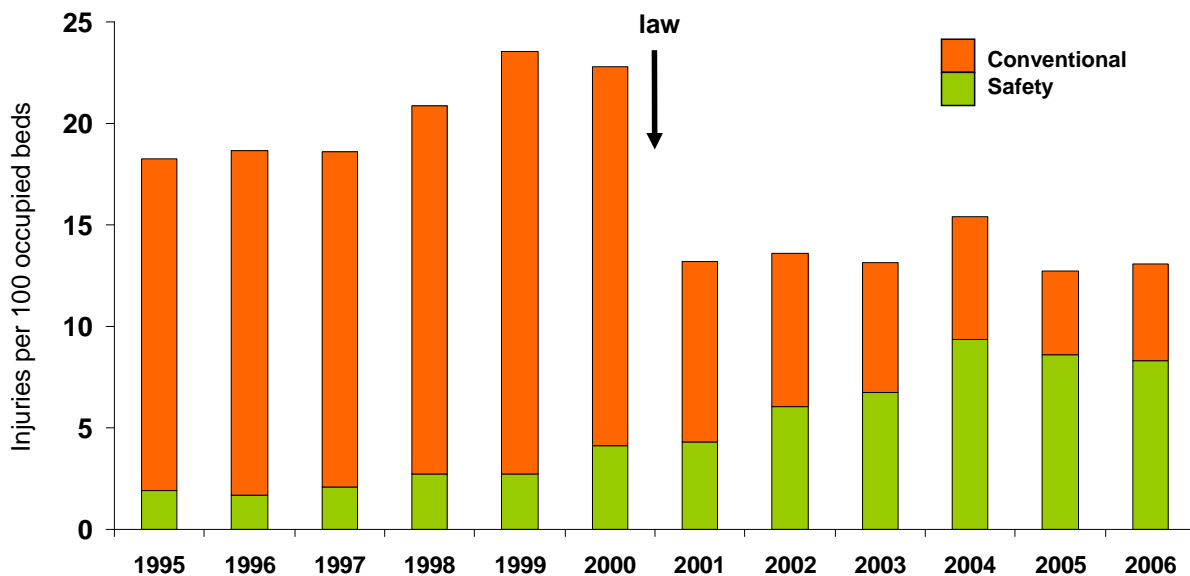
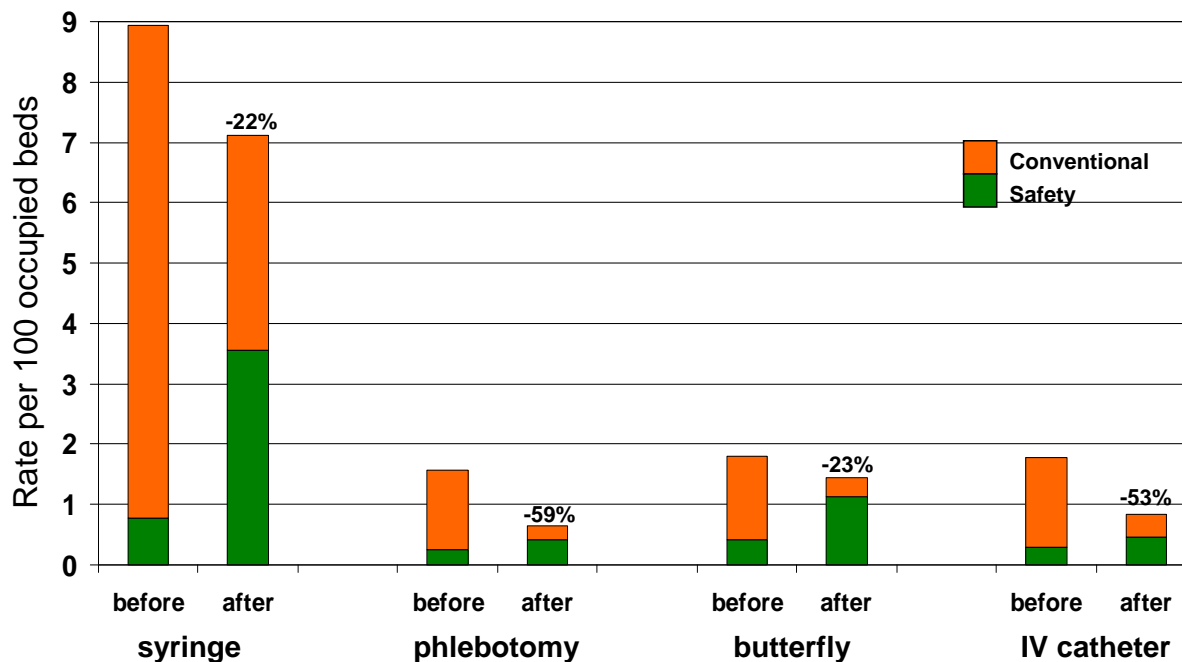


Figure 3

## Device Specific Injury Rates Before (1993-2000) versus After (2001-2004)

US EPINet 1993-2004: 87 hospitals; total injuries = 10,778. Excludes injuries occurring before use of device

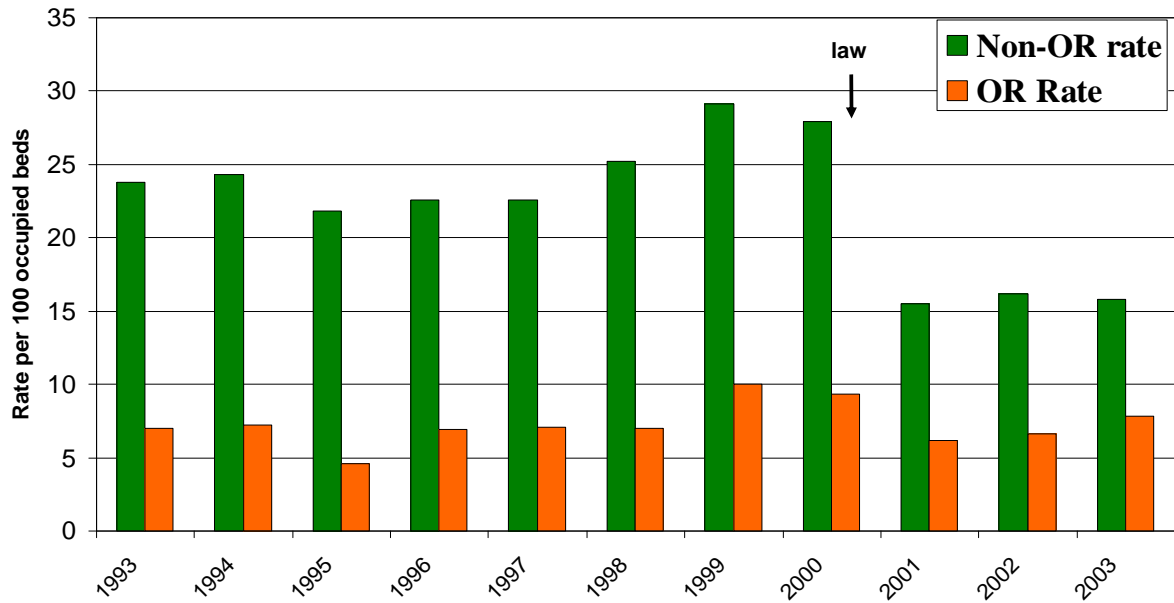


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**Two areas where progress lags:**  
**Operating Room**  
**Non-hospital settings**

# OR versus Non-OR Injury Rates

EPINet 1993-2003: 87 hospitals; total injuries = 28,895. Excludes injuries occurring before use of device



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Figure 2

## National Market Share of Safety Phlebotomy Needles, U.S. Compared to the Increasing Proportion of Injuries from Safety Phlebotomy Needles 1997-2007

Conventional phlebotomy needle injuries = 425 Safety phlebotomy needle injuries = 253

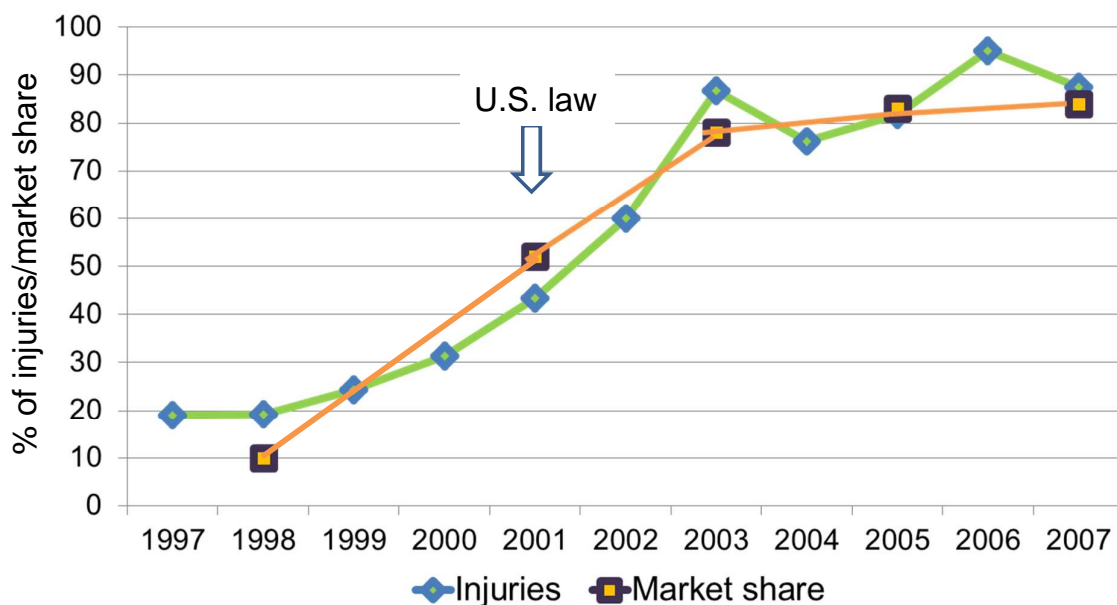


Figure 3

## Syringes Used for Venous Blood Drawing: Percent of Injuries from Safety Syringes

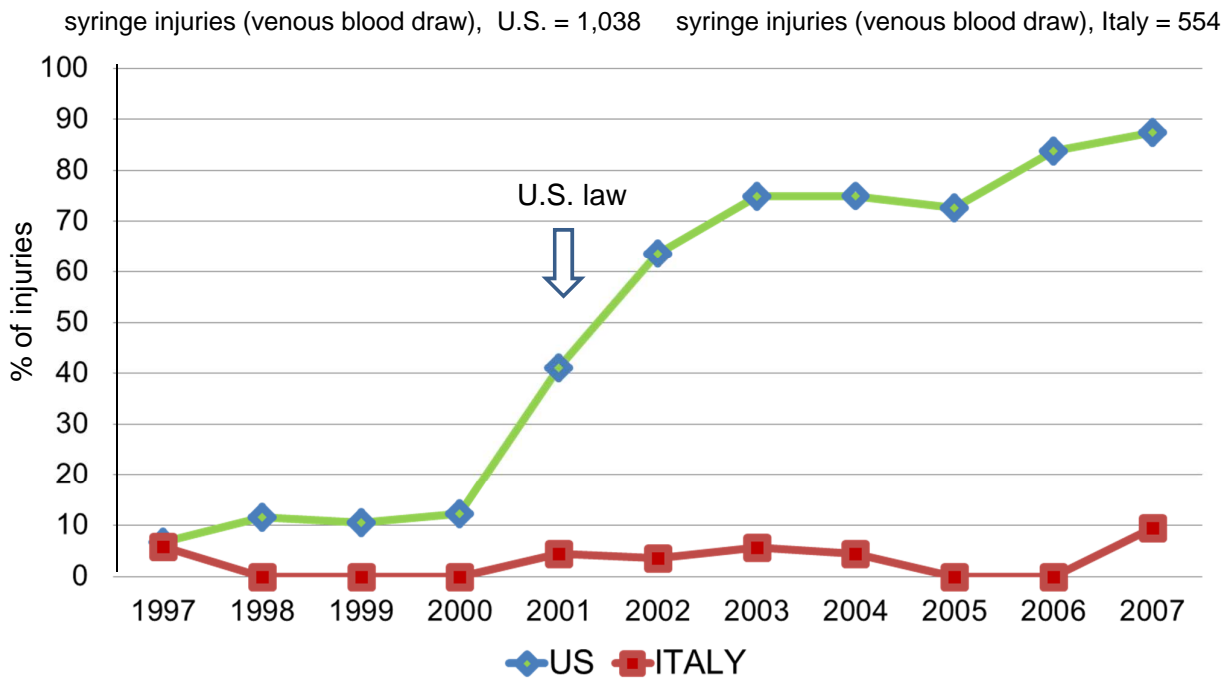


Figure 4

## Syringes Used for Arterial Blood Drawing: Percent of Injuries from Safety Syringes

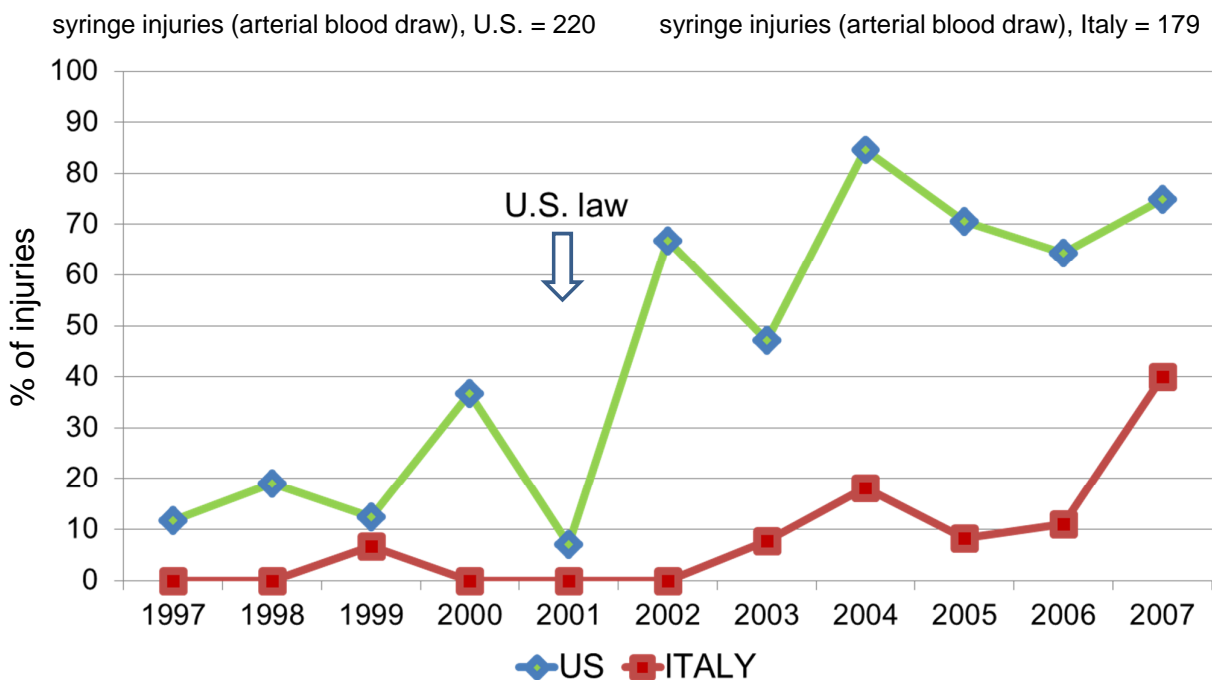


Figure 5

### Winged Steel Needles: Percent of Injuries from Safety Winged Steel Needles

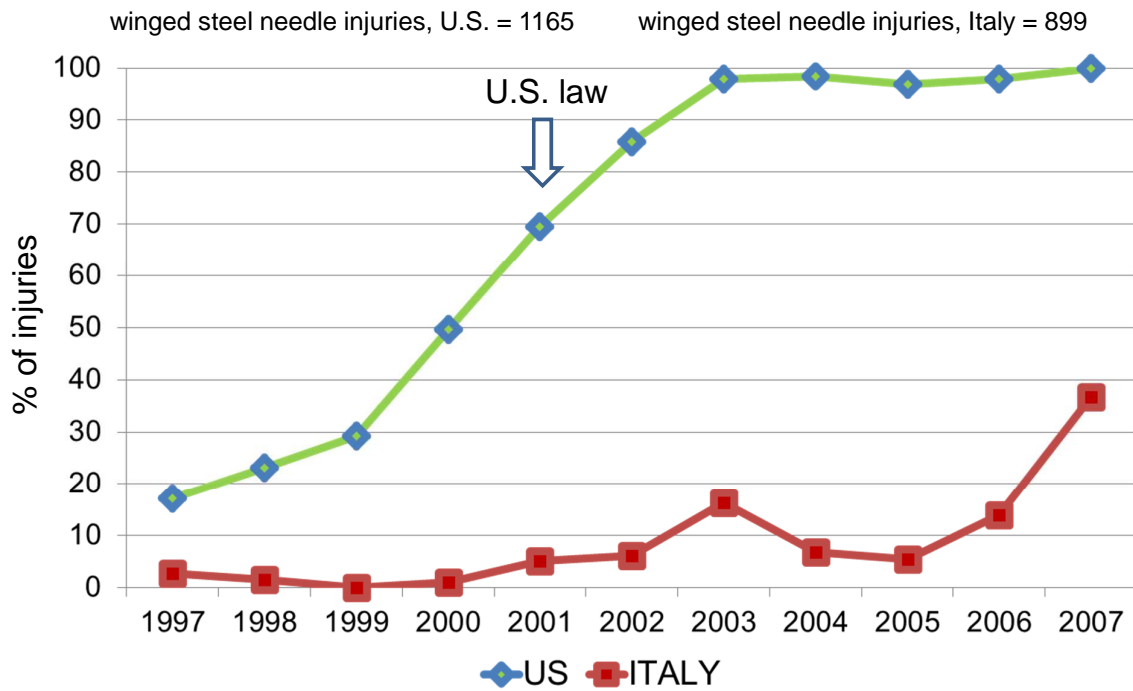


Figure 6

### Phlebotomy Needle Injuries: Percent of Injuries from Safety Phlebotomy Needles

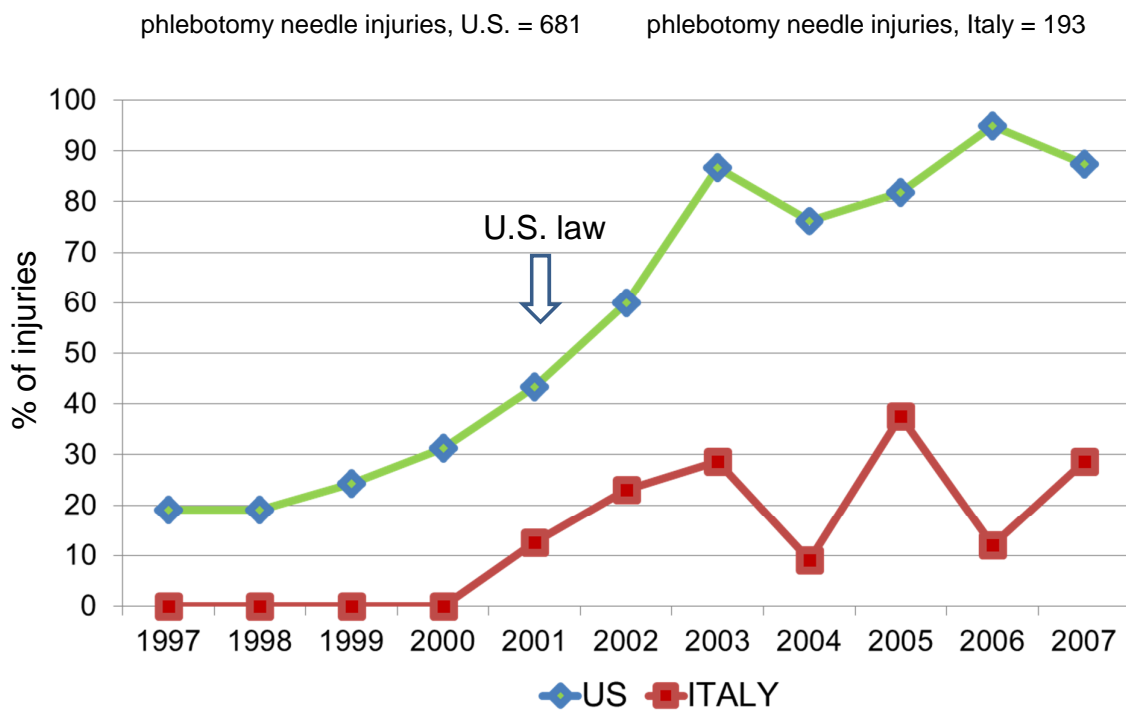




Figure 7

## Lancet Injuries: Percent of Injuries from Safety Lancets

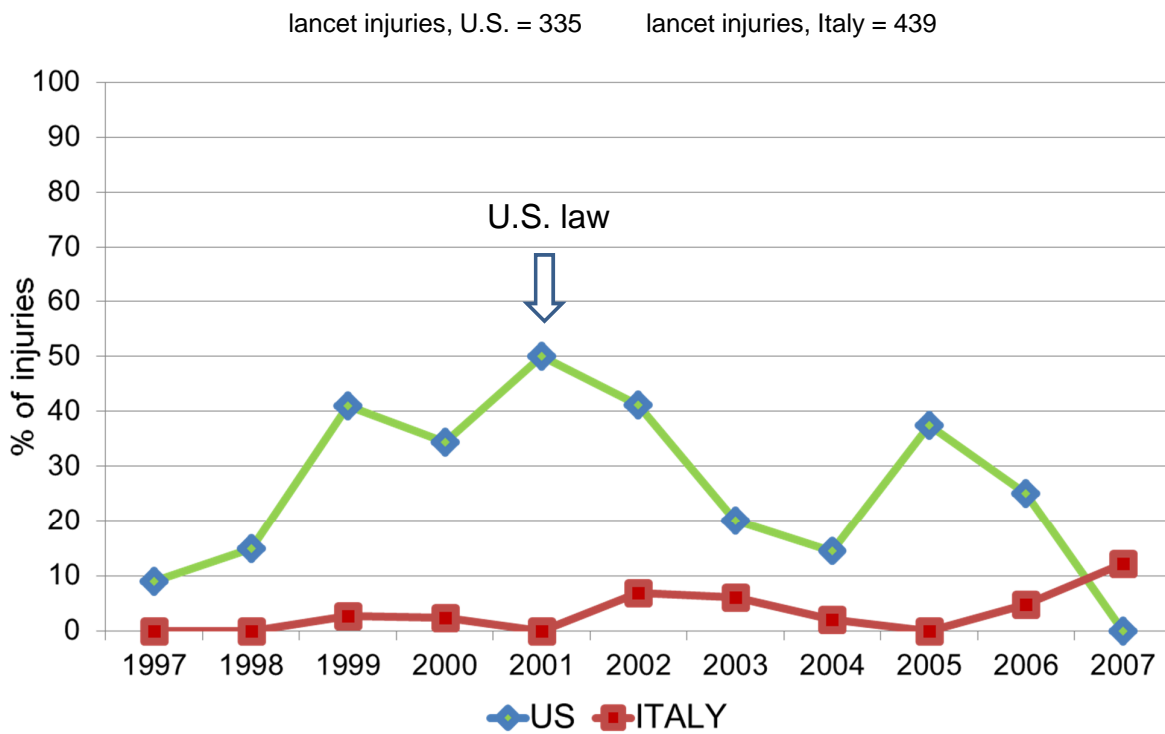
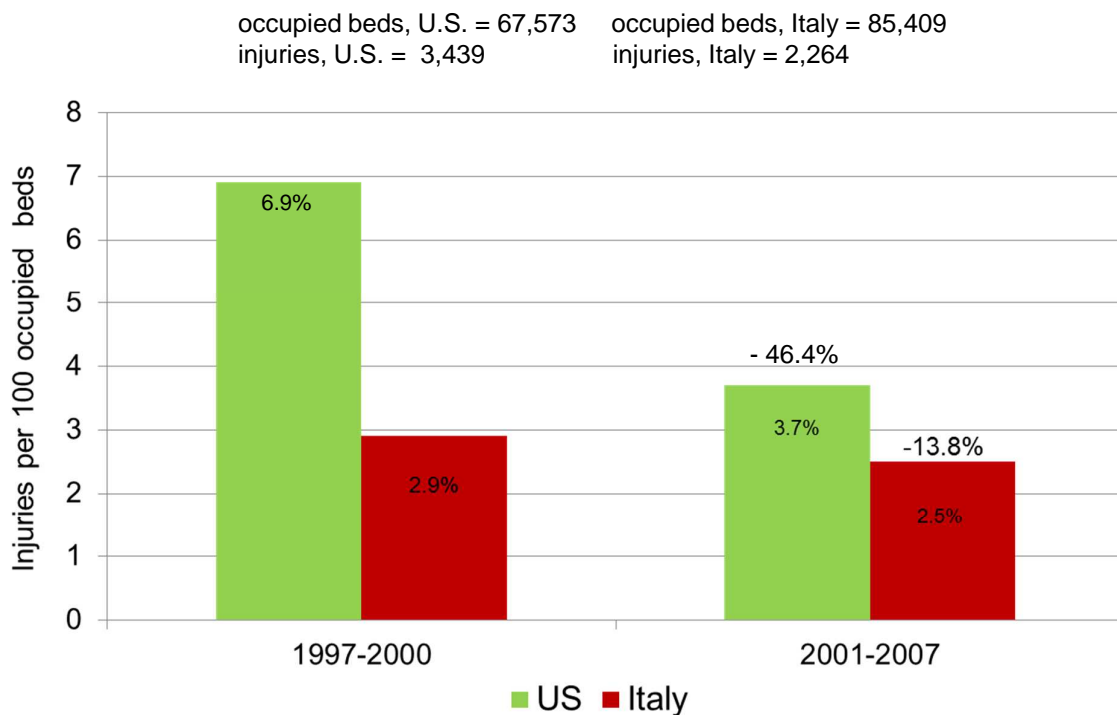
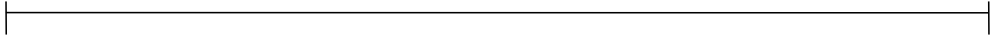


Figure 9

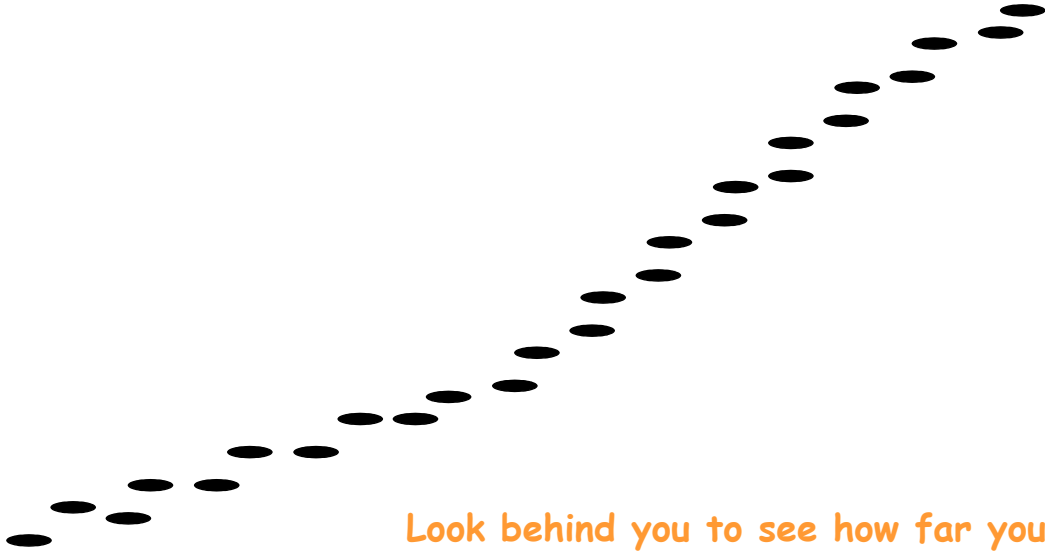
## U.S. – Italy: Needlestick Rates for Five Blood-Drawing Devices Before and After 2000

syringes (venous blood draw), syringes (arterial blood draw), winged steel needles, phlebotomy needles, lancets





**Distance traveled**



**Look behind you to see how far you have come.**