



**NATIONAL
VIRAL HEPATITIS**
PREVENTION CONFERENCE 2005

Hyatt Regency Hotel
December 5 – 9, 2005



From syringes to finger tips: the
evolution of blood-borne virus
prevention among IDUs

T. Stephen Jones, MD

Injection drug use is a key factor
in HIV and hepatitis B & C
transmission

Goals of this talk

Review the evolution of the understandings of

- blood-borne virus transmission risks occurring in injection drug use and
- relevant prevention interventions

Goals of this talk

Illustrate the importance of understanding

- how drugs are prepared and injected
- to be able to select appropriate prevention interventions

This talk includes still and
video images of preparing and
injecting drugs that are
disturbing

Syringe/Needle Sharing

When drug use was first recognized as an HIV transmission risk, the risk was usually described as “syringe sharing” –
“Don’t pass the spike”

First Understanding of Risk: Syringes & Syringe Re-use

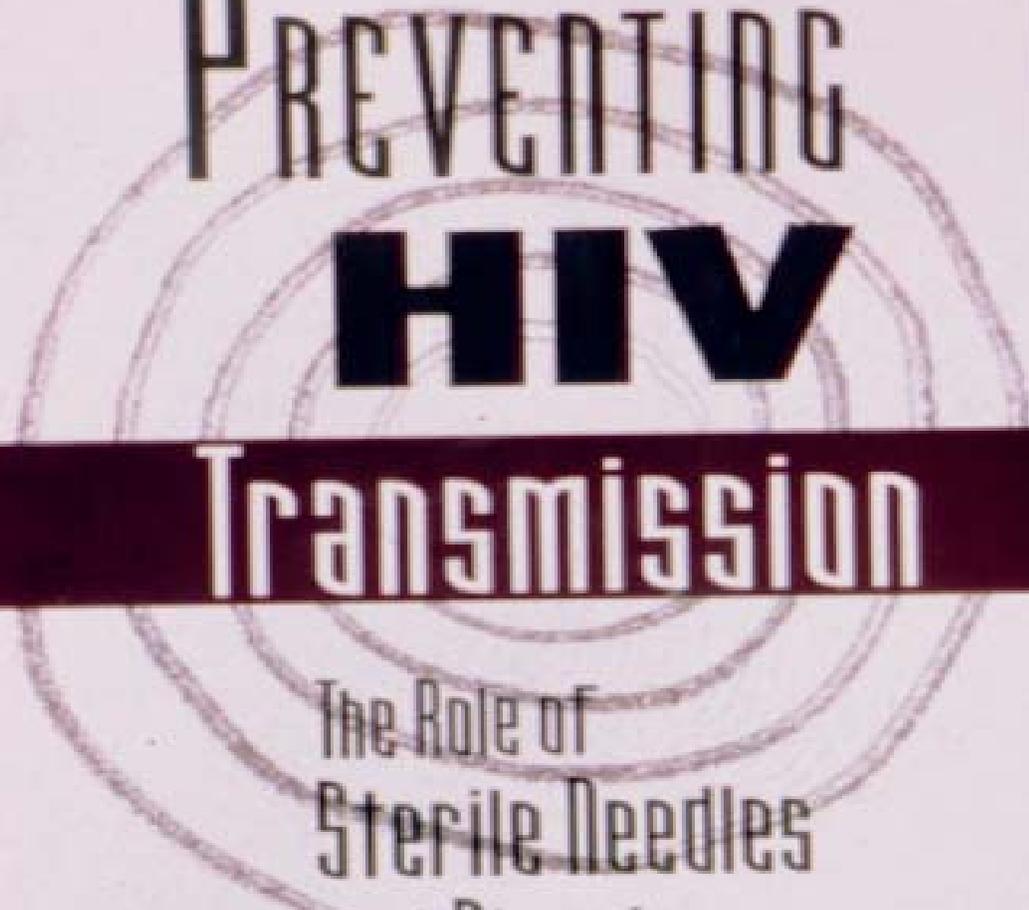
Blood pulled into the syringe, contaminates it and may contain HIV, hepatitis B, hepatitis C



Source: adapted from Kathryn O'Connell, Cambodia I-RARE team, *Drug Use and Sexual Risk Patterns, and Risk for HIV Infection among non-Injection and Injection Drug Users in Cambodia*

Prevention Responses for Syringe/Needle Sharing

- Increase the availability of syringes
 - Reduce barriers to syringe sale
 - Reduce criminal penalties for syringe possession
 - Syringe exchange
- Reduce the risk of using a “shared” syringe
 - Disinfection (usually bleach)

The background features a series of concentric circles drawn in a light, sketchy style, centered behind the text.

PREVENTING **HIV**

Transmission

The Role of
Sterile Needles
and Bleach

NATIONAL RESEARCH COUNCIL • INSTITUTE OF MEDICINE

Institute of Medicine Statement on Sterile Syringes (1995)

“For injection drug users who cannot or will not stop injecting drugs, the once-only use of sterile needles and syringes remains the safest, most effective approach for limiting HIV transmission.”

Normand J, Vlahov D, Moses LE, eds. Preventing HIV Transmission: The Role of Sterile Needles and Bleach. Washington, DC: National Academy Press, 1995.

BLEACHMAN

BLEACHMAN COMES

Clean it with bleach.

When you're ready to clean, you'll find Bleachman in the Bleach aisle. He'll help you clean up everything from your car to your house. Bleachman is here to help you clean.

WASH



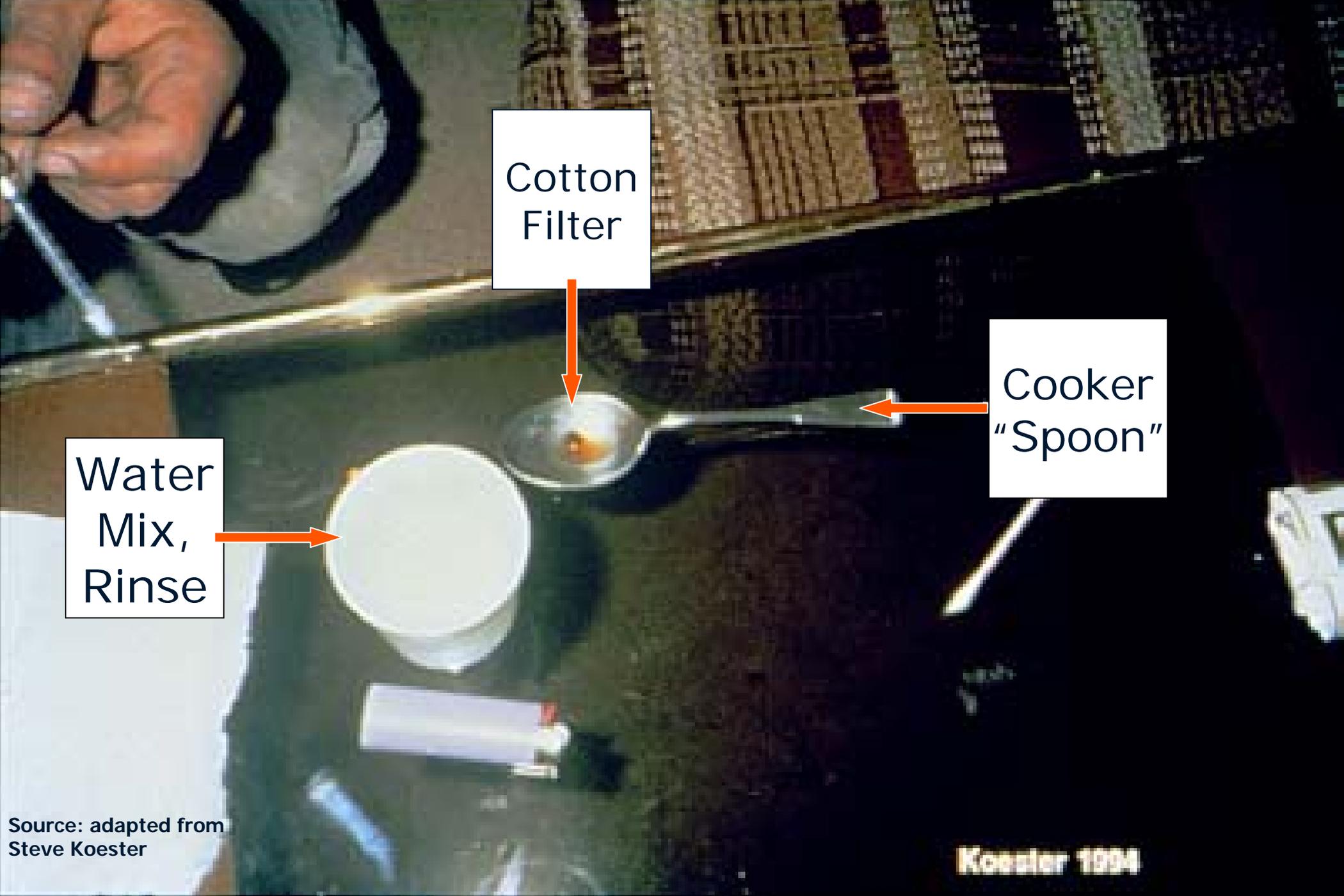
WASH



Second Understanding of Risk:

Drug preparation equipment

and drug solutions



Cotton
Filter

Cooker
"Spoon"

Water
Mix,
Rinse



Two drug users using one water container

Source: adapted from Steve Koester

Drawing up drug solution through cotton filter

Cotton
Filter



Shared drug purchase → ↑ Risk of IDU → IDU blood transfer

- When short of cash, drug users pool their money to buy drugs together.
- Preparing the drugs and splitting the drug solution between the joint purchasers → exposure to other drug users' blood



Source: adapted from Steve Koester

Two users drawing heroin solution from one cooker; often a way to split a joint drug purchase



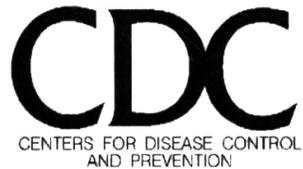
Source: adapted from Steve Koester

“Back loading” from one syringe into a second syringe with risk of **blood** transfer; a way to split a shared drug purchase



Source: adapted from Steve Koester

If this heroin injection was prepared with a syringe, cotton, water, or cooker previously used by another IDU, it may contain **blood** and blood-borne viruses



May 9, 1997

HIV PREVENTION BULLETIN:
MEDICAL ADVICE FOR PERSONS WHO
INJECT ILLICIT DRUGS

HIV Prevention Bulletin (2)

III. Take the following steps to reduce personal and public health risks, if they continue to inject drugs:

- Never reuse or “share” syringes, water, or drug preparation equipment.
- Use a new, sterile syringe to prepare and inject drugs.

Third Understanding of Risk:

“Finger tips” & environmental

“Environmental” Transmission

- Intravenous injections are often **bloody**
- Hand blood contact is common

“Environmental” Transmission

- Blood and blood-borne viruses could be transferred from one IDU to another by
 - **Bloody** finger tip contact with drug preparation equipment (e.g., cotton or cooker)
 - **Bloody** finger tip contact with broken skin of another person
- Could contribute to HCV transmission

Videos of drug preparation and injection

- Four video segments
 - Two illustrate how bloody drug injection can be
 - Two illustrate extensive finger contact with drug preparation equipment



**NATIONAL
VIRAL HEPATITIS**
PREVENTION CONFERENCE 2005

Hyatt Regency Hotel
December 5 – 9, 2005



Hard to prove that **bloody** fingers transmit blood-borne viruses

- While biologically plausible
- Epidemiologic proof that this transmits blood-borne viruses will be challenging

Prevention responses for “environmental” transmission

- Hygiene
 - Blood awareness
 - Handwashing, clean surfaces, etc.
- “Non-injection drug use”



Being aware of blood!

Being aware of blood!

So being aware of blood means being alert to what is happening throughout the injecting process so you won't accidentally expose yourself to any viruses. **If** you think blood, yours or someone else's, has contaminated any surface or equipment you should replace any sterile equipment, re-clean any other things that may have been contaminated, and re-wash your hands before proceeding.

The hygiene response

- Wash hands before and after preparing and injecting drugs (or hand sanitizer)
- Use disposable equipment (including tourniquets)
- Set up a clean surface to prepare drugs
- Alcohol swab injection site preparation
- Rigorous use of new, never used water, cotton, cookers
- Cloth or gauze to compress injection site(s).

3) Make sure you have everything you need within reach: new sterile fits, new sterile water (or cooled boiled water in a clean glass), new swabs, a clean filter, clean spoon and a clean tourniquet.



4) Wash your hands in warm soapy water. Hand washing is very important to remove viruses, bacteria and plain old dirt from your injecting environment.



5) If you can't wash your hands use single wipes with new swabs to clean them. Rubbing swabs backwards and forwards spreads the dirt and bacteria around.



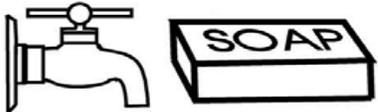


Hep C and other nasties can pass through filters!

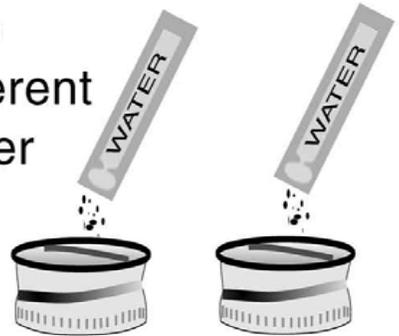
Wash your hands, swab your fingers....

Dirty Fingers = Dirty Filters

1
CLEAN SURFACE
with BZK pad or
use a sheet of
fresh paper

2
 or
WASH hands
with soap or
BZK pad

3 USE NEW
stuff every
time


4 RINSE MIX
Use
different
water


5
CLEAN
site with
alcohol
pad


6
AFTER
injecting
press
gauze pad on
injection site


7 USE
band aid


8 RETURN
syringes to
Exchange


9
THROW
everything
else out!


©2001 SAFETY WORKS

Barriers to the “keep it clean” hygiene approach

- ❑ “External” circumstances; homeless, hurry because of police or “exposed” public location; no water
- ❑ “Internal hurry” – “drug sick”/withdrawal drive to get the drug into the body quickly
- ❑ Impaired judgment – drug effects, mental illness

Situations that allow better hygiene

- ❑ Preparing and injecting drugs in a stable setting with water, soap, and clean surfaces
- ❑ Money to support disposing of equipment after one use
- ❑ Supportive institutions (e.g. exchange programs) providing sterile/clean equipment
- ❑ Safer injection rooms (e.g. Vancouver)
- ❑ Preparing and injecting drugs alone
- ❑ Syringe law deregulation and police and pharmacy practices that facilitate access to sterile syringes



Break the cycle

To reduce drug injection initiation

“Break the Cycle”

- U.K. trial campaign aimed at encouraging current injectors to
 - avoid injecting in front of non-injectors,
 - avoid discussing the benefits of injecting in front of non-injectors, and
 - to resist requests to give someone their first hit.

Helping IDUs switch to non injection drug use

- Australia “non-injecting routes of administration” (“NIROA”)
 - Small scale intervention trial
 - Promotes snorting, chasing the dragon, swallowing, rectal drug use
- In the eastern US, there was a major shift from heroin injection → snorting

Too many prevention
messages?

Detailed understanding of
how drugs are prepared
and injected
is important

Thank you



**NATIONAL
VIRAL HEPATITIS**
PREVENTION CONFERENCE 2005

Hyatt Regency Hotel
December 5 – 9, 2005



