



Sharp Disposal Project

Promotional Video & Container Design

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Abstract



Used sharps carry dangerous virus and bacteria. If they are not disposed properly, people can be stabbed by accident and be infected by incurable diseases. A huge number of health-care workers, as well as unexpected people are infected by used sharps every year all over the world. This project will develop a promotional video and a sharp disposal container instruction to help prevent sharp accident from happening.

One Sentence & Key Words

All sharps have to be disposed properly.

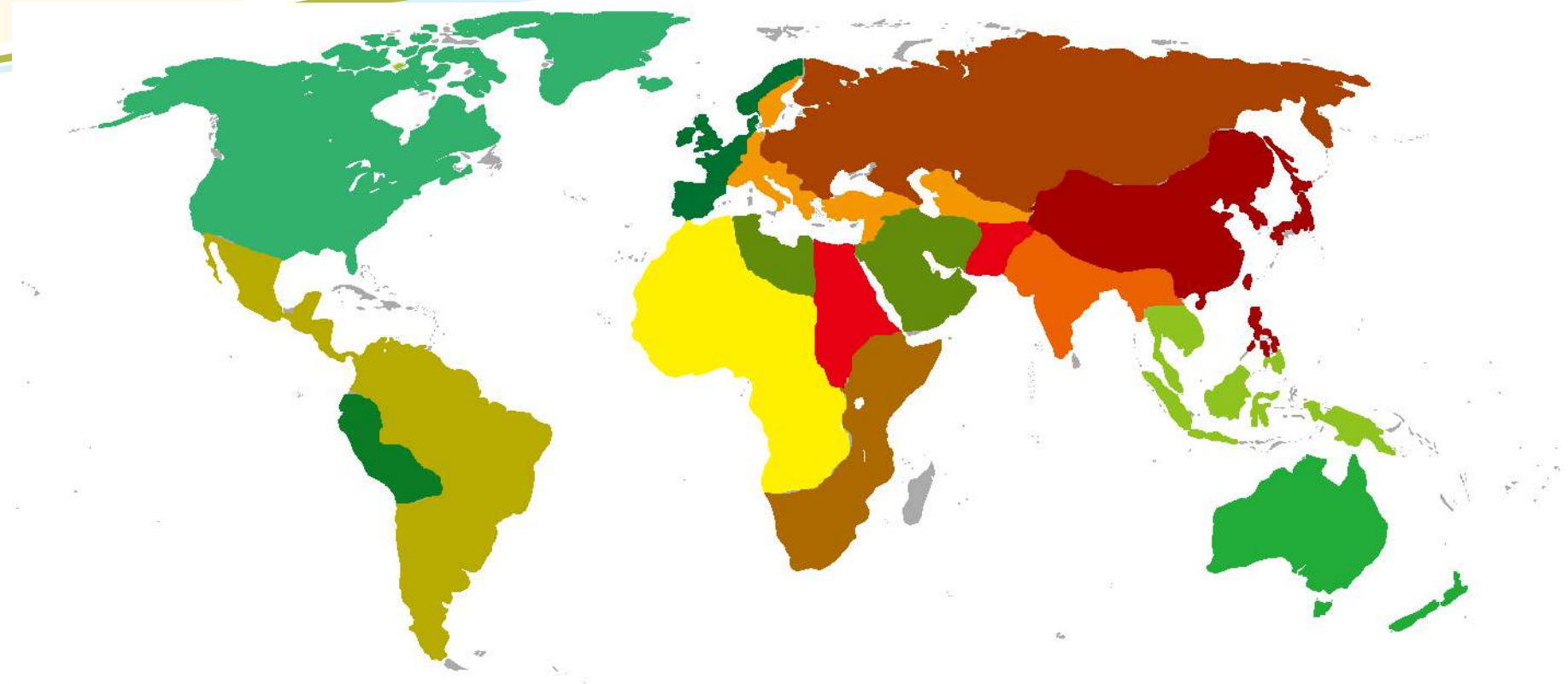
Health

Sharps

Disposal

Statistics

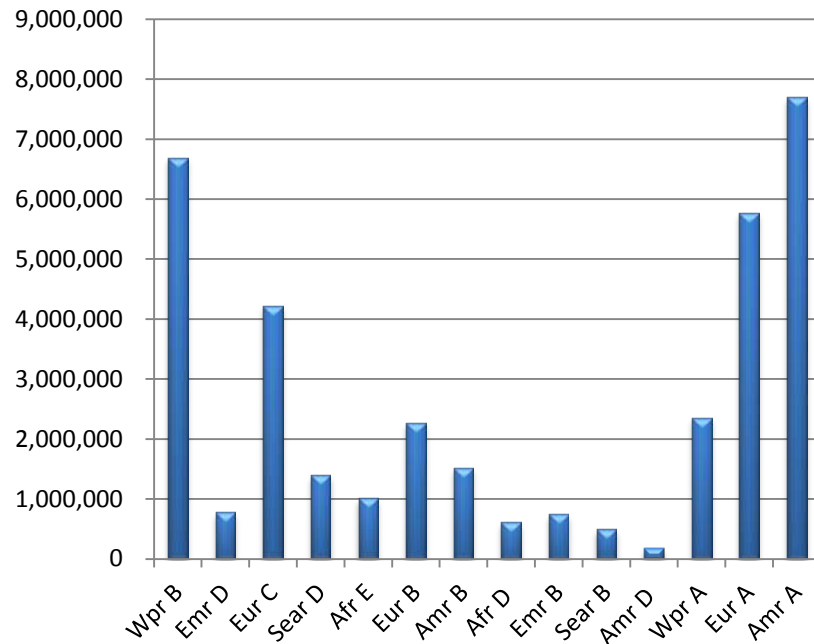
Number of infections among health-care workers attributable to sharps injuries



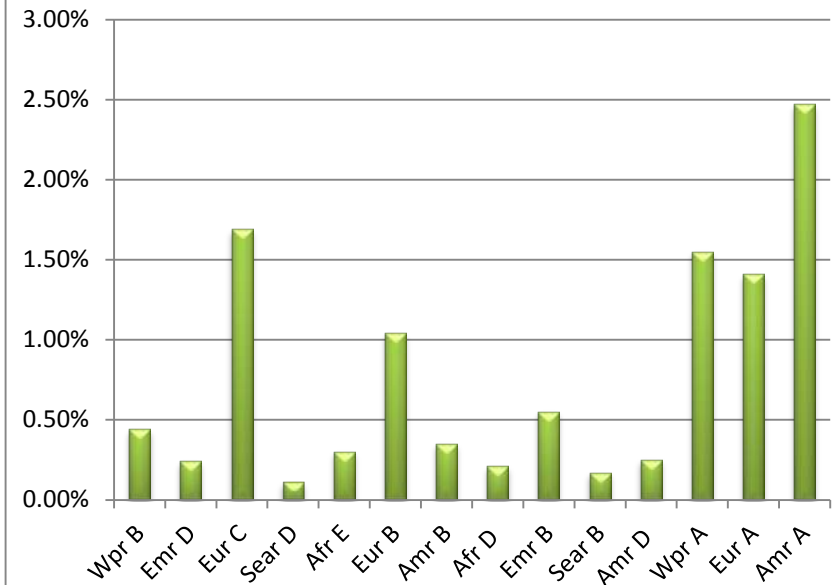
| | | | | |
|---------------|---------------|--------------|---------------|---------------|
| Wpr B - 20730 | Emr D - 10007 | Eur C - 9940 | Sear D - 8370 | Afr E - 7820 |
| Eur B - 7091 | Amr B - 7070 | Afr D - 4280 | Emr B - 2611 | Sear B - 2020 |
| Amr D - 954 | Wpr A - 940 | Eur A - 506 | Amr A - 435 | |

Statistics

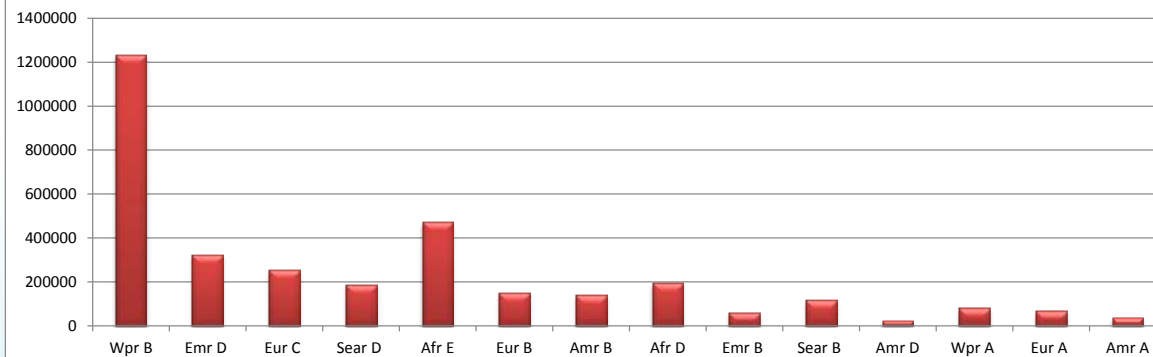
Number of Health-care workers



Proportion of health-careworkers in total population (%)



Health-care workers exposed to at least one percutaneous injury with a sharp object contaminated with HBV, HCV and HIV



Interview



"Accidentally stabbed by sharps could destroy a person's life."

"It's a serious problem especially in low-resource countries."

- Dr. June Fisher

Audience

- Health-care workers in small hospitals and clinics in developing countries.
- House hold sharp users, for example, people who has diabetes.



Problem Statement

Many people who use sharps at home and who works in small clinics lack the knowledge of how to dispose sharps properly or lack the accessibility to standard containers and service system, especially in developing countries. How to reduce the number of people who is exposed in the danger of being injured by sharps remains a challenge.



Proposal



A promotional video that tells people the severity of getting sharp.

- To convey audience that a great risk can happened easily if we don't use a correct container with proper way.
- Once a sharp accident happen, it can change any infected people's whole life.
- To promote the rules of the making a proper container in home.
- To promote the tips for disposing sharps.
- Through target audience to share the idea: People who give themselves sharp&People who can to share this information&Groups with Great risk, such as sanitation workers and custodial personnel.

An instruction of how to choose and make a proper sharp disposal container with cheap and easy accesible material.

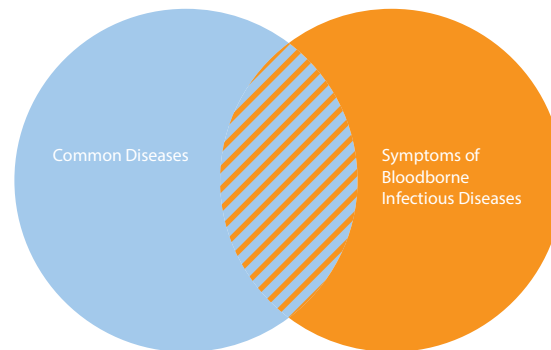


Design Development_Main Story Elements

Family Love, Needle, A Second of Negligence,
Infection, Regret, Worry



The Best Way to Emphasize “Infection”



| Bloodborne Infectious Diseases | Symptom |
|--------------------------------|---|
| Acute Hepatitis B | Loss of Appetite, Weakness, Fatigue, Vomiting, Jaundice |
| Acute Hepatitis c | Loss of Appetite, Fatigue, Bloating |
| Acute Hepatitis D | Loss of Appetite, Weakness, Fatigue, Vomiting, Jaundice |
| Venereal Diseases | |

- Main roles: a Grandfather and his granddaughter
- Grandchildren are always grandparents' favorite baby. During this roles setting to highlight the strong nervous emotions and audience's ups and downs feelings. To reach the target that we want to achieve the goal of a strong warning.
- The Infectious Disease: Acute Hepatitis B
- Compared to other bloodborne infectious diseases, the symptoms of acute hepatitis are more light and acceptable for a story with family background. To use “loss of appetite”as the hint to bring the idea that once people get infected their life will be changed. Many people had this experience of “loss of appetite”, so it can find an echo in audiences.

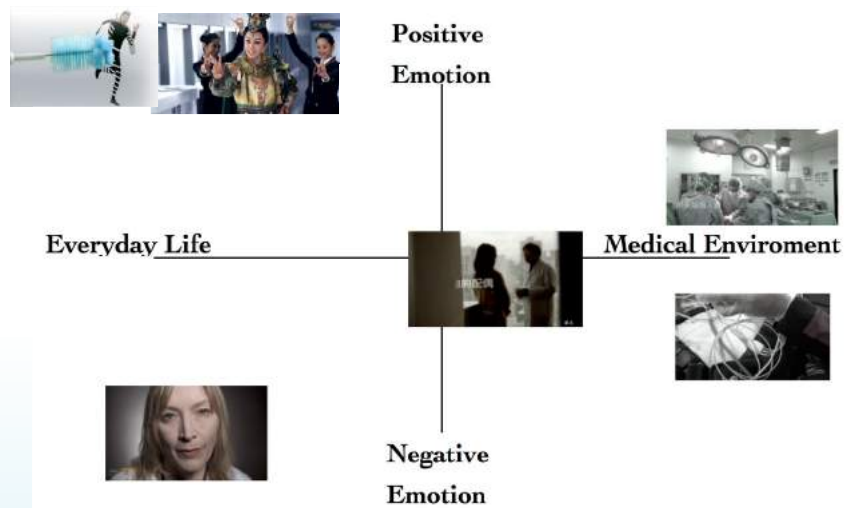
Design Development_ Impressive Film

Makes Audiences WANT to Do It



- After data collection and analysis. We found out that a good promotional film does not have to show how dangerous the becერიyor or virus is. As long as the content elements are ingenuity, this film can grasp the attention from audience.
- Films that can impress audiences with interesting dialogues or other special elements use to make audiences think of it randomly. It can encourage and make people feel “I want to do it!”

1. Mapping Matrix



1. Mapping Matrix



Film Mockup

Interesting & Positive Style

This promotional film was starred by Ran Yang (the grandfather), written by Fang-Yi Lee, and shot by Yilun Zhang.



Ran Yang,



Fang-Yi Lee



Yilun Zhang

- Film Brief:
- The grandfather's life is limited by diabetes, and he got acute hepatitis B these days. The acute hepatitis B make he has a bad appetite. The grandfather's life is strongly contrasting with his healthy happy baby granddaughter .
- One day, the granddaughter got infected accidentally by grandfather's disposal sharp. Since the grandfather didn't check the container cap well. And after this, the grandfather deeply feels remorse, and worried.



Basic Features of a Household Sharp Disposal Container & Market Research

The FDA recommends that used needles and other sharps be immediately placed in FDA-cleared sharps disposal containers.



Sharps Container Biohazard Needle Disposal 1 Qt Size

by Superior Tattoo Equipment

\$4.95 Prime

Get it by **Thursday, Apr 16**

More Buying Choices

\$4.18 new (16 offers)

★★★★☆ ▾ 207

#1 Best Seller in Needle Destruction & Sharps Containers

Product Features

Sharps Container 1 quart. Safely dispose of used tattoo needles.

Industrial & Scientific: See all 1,005 items



Kendall Sharps Container with Rotor Lid - 2 Gallon - 1/Each

by Sharps Container

\$8.04 ~~\$12.26~~

More Buying Choices

\$1.09 new (13 offers)

★★★★★ ▾ 135

FREE Shipping

Product Features

... separately) frees up valuable counter space. Phlebotomy Sharps container ...

Industrial & Scientific: See all 1,005 items



Kendall/Covidien AutoDrop Portable Phlebotomy Sharps Containers 1-Piece, 2.2 Quart (7.25 Height X 6.5 Width X...

by Kendall/Covidien

\$15.49 ~~\$49.99~~ Prime

Get it by **Thursday, Apr 16**

More Buying Choices

\$13.24 new (8 offers)

★★★★☆ ▾ 49

Product Features

Container locks

Health & Personal Care: See all 564 items

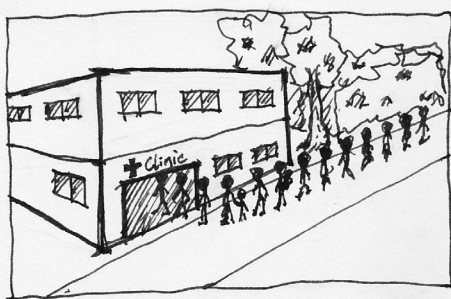
Persona



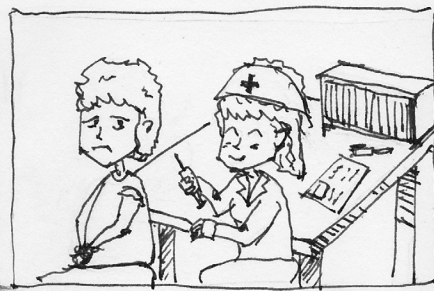
- **Wenjuan Liu**
- **29 years old**
- Wenjuan Liu is a young nurse working in a clinic in a small town located in middle west of China. The clinic is very busy everyday because it's the only health-care facility in the town of 30,000 people. It's in the middle of a mountain, 100 miles away from a larger city with more resources. Medical wastes generated by her clinic are collected once a month by companies from the city. There is no place to buy sharp disposal containers in the town, so they have to ask people to bring back containers from the city or they can only use other containers as a replacement. However, due to the fact that the clinic is small and busy, knocking down things by accident is not rare. And sometimes she could also see used sharps stick out inproper containers they use or be thrown away in the field. She knows it's dangerous, but she is too busy to care and don't know what to do to help.

Story Board

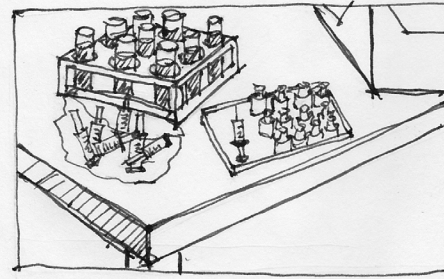
Biohazard in the Clinic



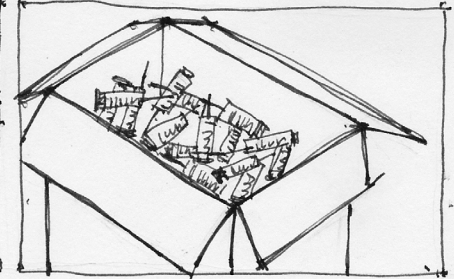
A normal day for the clinic, busy as usual.



Wenjuan is giving shots to patients.



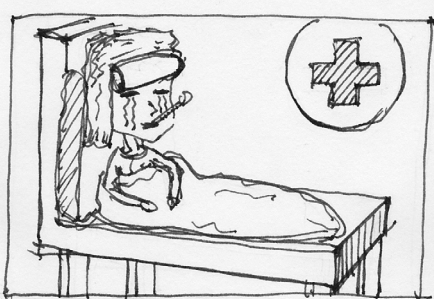
There are many unused syringes and medicines on the table.



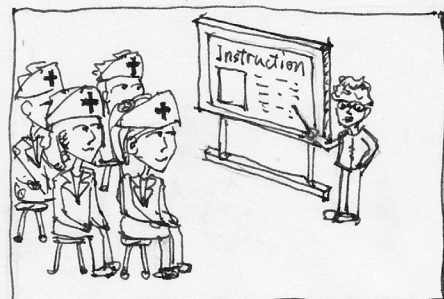
Used ones are thrown in the cardboard box with no cover.



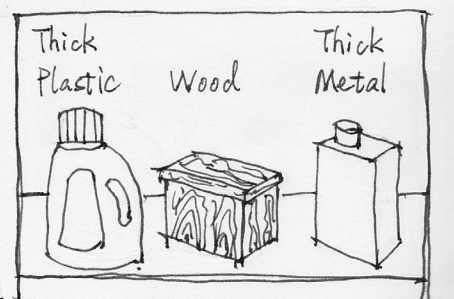
When Wenjuan is taking the sharp disposal box out to the waste storage place, a needle stick out the cardboard and stab her hand.



She got sick because of the stick. Fortunately, it's a curable disease and she recovered after a week.

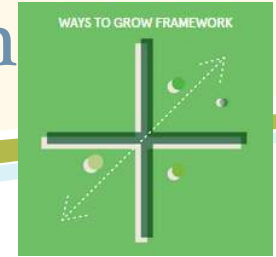


The clinic invited a professor to give a lecture on the proper way to dispose sharps and how to choose the right container.



The material of the container should be hard and thick enough that couldn't be penetrated by sharps.

Extending Topic_Bring the sharp infection prevention concept to developing country



• Problem Statement

Many developing countries do not provide people proper health education information. Residents generally lack of awareness of the potential risk of disease from medical wastes. So we need to assist developing countries to establish correct medical waste knowledge.



• Things We Need to Overcome

- Environment: Inadequate Mass Communication Facility
- Opportunity: There is not enough education and knowledge dissemination media. (Ex: Internet magazines and books)
- People Residents have become accustomed to think medical waste is not dangerous. They might be opinionated, so it would be difficult to convince them to follow the correct medical waste knowledge.



Extending Topic

Proposal



Developed country can provide knowledges. People in developed countries can design for developing countries. For instance, homemade medical waste containers and appropriate health education system with a suitable propagation mode for the certain developing country.

Work with Product Designer:

To create safe medical containers that developing country residente can make with their local resource materials in a cheapest way, for instance, bamboo, wood, dirt.

Work with people who familiar with the knowledge dissemination mode in developing country:

To understand in the certain region, who play the major role of spreading knowledge. Ex: Many adults receive new knowledge through children who take compulsory education.



One Laptop per Child

<http://one.laptop.org/>

Extending Topic x Promotional Film



- Promotional Film to Developed Countries_Donation

After we found partners, we need enough research and development funds.
We need promotional film to find sponsors and encourage people to donate our R&D plan.



- Promotional Film to Developing Countries_Donation
To share correct medical waste disposal knowledge.



Live Prototyping



Alternative Sharp Disposal Container

An Instruction of choosing the proper container

● Basic Features of Household Sharp Containers

Made of a heavy-duty plastic, wood, or metal, which couldn't be penetrated by sharps
Able to close with a tight-fitting, puncture-resistant lid, without sharps being able to come out
Upright and stable during use
Leak-resistant
Properly labeled to warn of hazardous waste inside the container

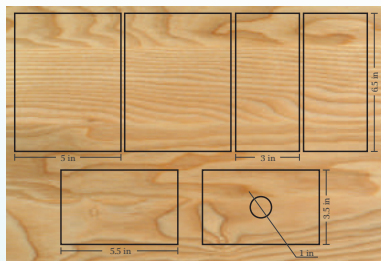
● Heavy-duty Plastic Bottles



● Metal Boxes



● Make a Wooden Box



Cut the pieces out from a 0.25 in thick wood board.



Glue and nail them together to be a box.

- Use tapes to wrap up the box after it's about three-quarters (3/4) full, and ensure no one can open it again. Dispose it properly following the community guidelines.



- A prototype of DIY wood box
- Posters and flyers to promote the knowledge of using proper sharp disposal container

Design Strategy

Build Partnerships & Keep Iterating

- Visit hospitals and clinics in developing countries to see how is their medical waste system working now and what resources they have.
- Promote and communicate cheap easy accessible container ideas with them, and get feedback.
- Keep improving the design of DIY sharp container.



Design Strategy

Roadmap



Experts



Hospitals and
clinics



Cheap and easy
accessible sharp
container



Promotional
materials



Medical waste
retrieval service
system



Local health
organizations



Regulators



Sharp accident
reports and
statistics