

# Developing Effective Training Materials for U.S. Customs and Border Protection Officers

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Division of Global Migration and Quarantine  
National Center for Preparedness, Detection, and  
Control of Infectious Diseases  
Centers for Disease Control and Prevention



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# Overview

- Introduction
- Process
- Results
- Applications: Materials Development



# Role of CBP Officers

**Public Health Role: Identify and respond to a variety of public health events at ports of entry**

**Training challenges for CBP Officers at ports of entry:**

- **Public health not primary function**
- **Many demanding responsibilities**
- **Short timeframe for action**
- **Limited information to make decisions**



# CBP Response

Public Health Event

Ill travelers



Animals, cargo,  
other items



IMPORTATION OR TRANSFER AUTHORIZED BY  
**CDC**  
 PHS Permit No. \_\_\_\_\_  
 Expiration Date \_\_\_\_\_

TO: *DNA Laboratories*  
 7439 State Street, Ste 1800  
 Minneapolis, MN 59802

**DO NOT OPEN IN TRANSIT**

BIOMEDICAL MATERIALS  
 ETIOLOGICAL AGENTS OR VECTORS

NOTICE TO CARRIER: If inspection on arrival in U.S. reveals evidence of damage or leakage, immediately notify: Director, Centers for Disease Control and Prevention (CDC), Atlanta, Georgia 30333 - Telephone 404-633-5313.

CDC 0.1007 4/08

Immigrants  
and refugee  
medical exams

THE INFORMATION ON THIS SAMPLE FORM IS NOT REAL  
 AND IS TO BE USED FOR TRAINING PURPOSES ONLY

11. U.S. Department of State  
 MEDICAL EXAMINATION FOR  
 IMMIGRANT OR REFUGEE APPLICANT

Name (Last, First, MI): *Keelo*  
 Date of Birth (DD-MY-YY): *09-12-1977*  
 Sex:  M  F

Country of Birth: *Nigeria*  
 U.S. District Office: *Abuja, Nigeria*  
 Passport No.: *123-56-982*  
 Alien Registration Number: *555555555*

From What Region or Area: *Abuja, Nigeria*  
 Name of Doctor: *Dr. J. Koolhaan*  
 Name of Facility: *Abuja Hospital*  
 Date of Exam: *12-12-2006*

12. Classification of the Applicant:  
 No apparent defect, disease, or disability (see instructions 10.12.14, 10.13.12 and 10.13.13)  
 Class A Condition (see 10.13.14) or Class B Condition (see 10.13.15) or Class C Condition (see 10.13.16)

13. Infectious Diseases (see 10.13.17):  
 Tuberculosis (see 10.13.17.1)  
 Syphilis (see 10.13.17.2)  
 Gonorrhea (see 10.13.17.3)  
 Chlamydia (see 10.13.17.4)  
 HIV (see 10.13.17.5)  
 Malaria (see 10.13.17.6)  
 Dengue (see 10.13.17.7)  
 Yellow Fever (see 10.13.17.8)  
 Other (see 10.13.17.9)

14. Physical Examination (see 10.13.18):  
 No apparent defect, disease, or disability (see 10.13.18.1)  
 Class B Condition (see 10.13.18.2)  
 Class C Condition (see 10.13.18.3)

15. Laboratory Findings (check all boxes that apply):  
 Syphilis:  Not done  Done (see 10.13.19.1)  
 VDRL:  Negative  Positive  
 RPR:  Negative  Positive

16. HIV:  Not done  Done (see 10.13.19.2)  
 HIV-1:  Negative  Positive  
 HIV-2:  Negative  Positive

17. Malaria:  Not done  Done (see 10.13.19.3)  
 Malaria:  Negative  Positive

18. Dengue:  Not done  Done (see 10.13.19.4)  
 Dengue:  Negative  Positive

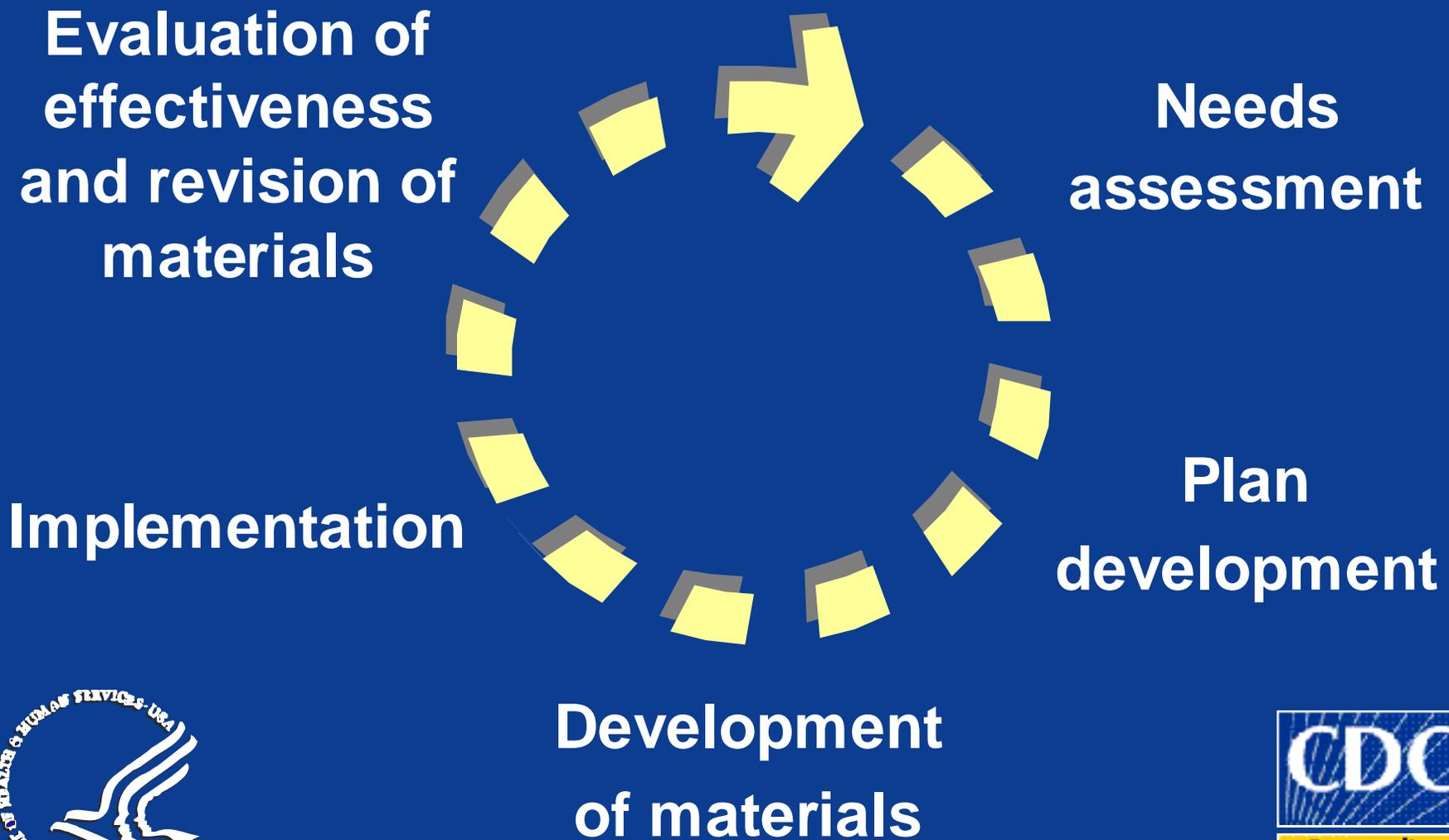
19. Yellow Fever:  Not done  Done (see 10.13.19.5)  
 Yellow Fever:  Negative  Positive

20. Other:  Not done  Done (see 10.13.19.6)  
 Other:  Negative  Positive

21. Date of Exam: *12-12-2006*  
 22. Signature of Doctor: *Dr. J. Koolhaan*  
 23. Signature of Applicant: \_\_\_\_\_

01-2007-01-2007 THE INFORMATION ON THIS SAMPLE FORM IS NOT REAL AND IS TO BE USED FOR TRAINING PURPOSES ONLY Page 1 of 2

# Health Education Process



# Needs Assessment

## Formats of needs assessment

- Focus groups
- Key informant interviews

## Areas of interest

- Current training methods
- Format of training seminars
- Types of media to include
- Types of materials to provide
- Suggestions and possibilities for in-service training

# Needs Assessment: Results

## Focus Groups Interviews

```
graph LR; A[Focus Groups Interviews] --> B[Develop job aids]; A --> C[Add video clips]; A --> D[Incorporate case studies]; A --> E[Include practical exercises]; A --> F[Add role-playing activities]; A --> G[Address all CBP work environments]; A --> H[Use computer-based training for followup];
```

**Develop job aids**

**Add video clips**

**Incorporate case studies**

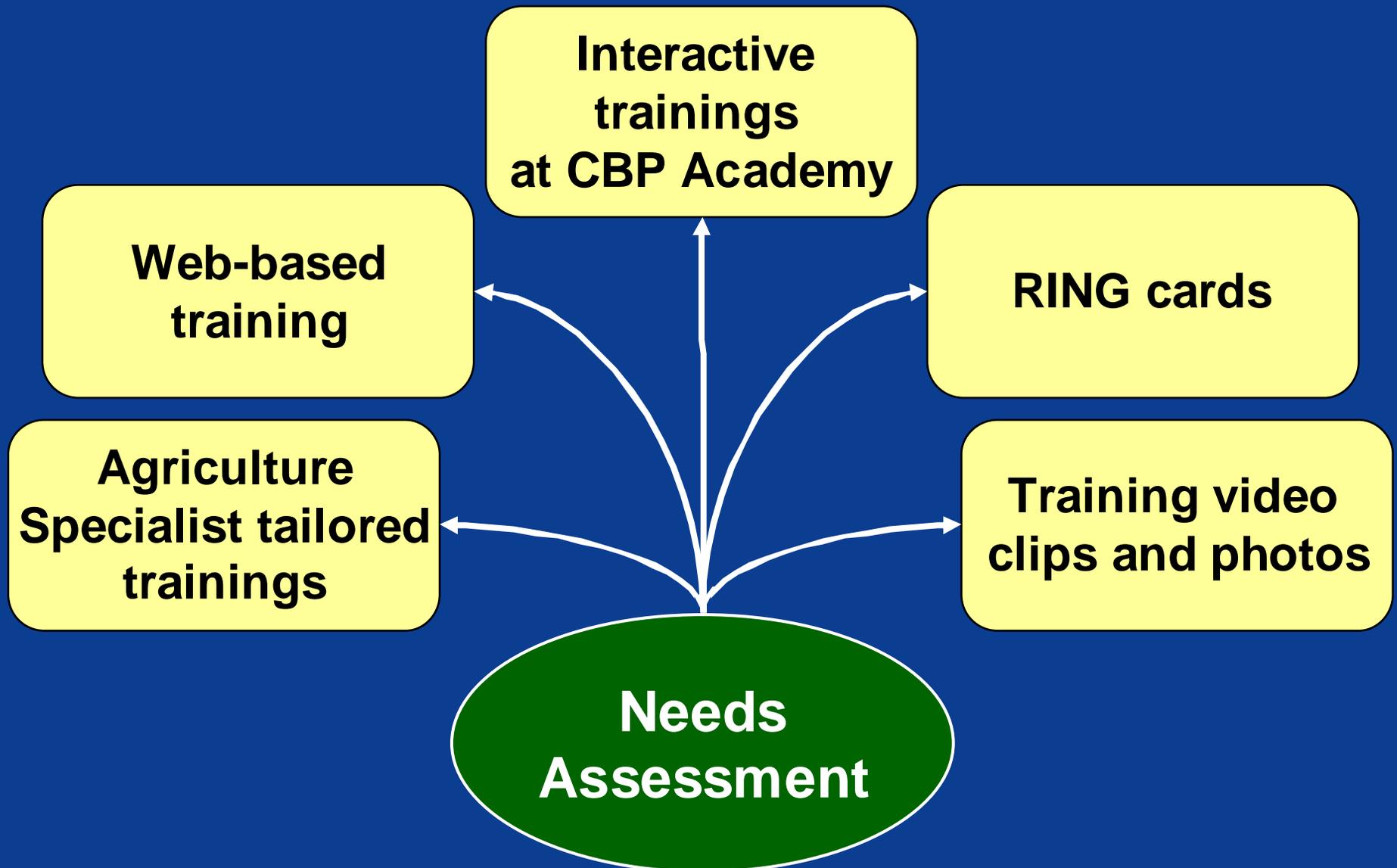
**Include practical exercises**

**Add role-playing activities**

**Address all CBP work environments**

**Use computer-based training for followup**

# Plan Development



# **Material Development: CBP Academy Basic Training**

## **Training challenges**

- Restricted to a 2-hour time block**
- Rigid classroom environment**
- Limited practical exercise capacity**
- Seated early in curriculum  
(3rd week of 15-week program)**

## **Possible solutions**

- Maximize lecture interactivity**
- Add practical exercises elsewhere in curriculum**

# Material Development: CBP Academy Basic Training

Revised training included:

- Case studies
- Engaging activities
- Dynamic visual aids
- Simplified language/  
removal of excessive jargon

The collage features several training materials:

- Public Health and the CBP Role**: A slide from the CDC, Division of Global Migration and Quarantine, National Center for Prevention, Detection and Control of Infectious Diseases, Centers for Disease Control and Prevention. It includes images of an airport, an airplane, and a ship.
- Case Study #1**: A slide featuring a photo of a child and text: "Departure Port: Paris, France", "Port of entry: Newark, NJ", "5-year-old female", "French citizen", "Coughing", "Rash on face". It also mentions "Other reports the child has..." and "er since yesterday".
- Nonhuman Primates: CBP Response**: A slide with a photo of a primate and text: "Quarantine Station", "Collect all related documentation requested", "Provide additional assistance as requested".
- Case Study #5**: A slide with a photo of a primate and text: "You discovered this in the carry-on baggage of a traveler arriving from Uganda, Africa:", "DENIED ENTRY", "Nonhuman primate bushmeat".
- CBP Response**: A flowchart diagram showing "Public Health Event" leading to "Ill Person" and "Animals, cargo, other items". "Ill Person" includes symptoms like fever, rash, swollen glands, jaundice, and sore throat. "Animals, cargo, other items" includes dogs, cats, nonhuman primates, and restricted items. "Immigrants/Refugees" includes expired exams and Class A/B conditions.
- Etiologic Agent Package Label**: A sample label for "Yield Diagnostics, Inc." with fields for "PHS permit no. & expiration date required" and "Address of recipient". It includes a biohazard symbol and "DO NOT OPEN IN TRANSIT".
- Medical Exam DS 2053 Form**: A form with three numbered sections: "1. Expiration date", "2. Class A conditions", and "3. Class B conditions".

# Evaluation of Training

- **Two training classes (groups) received evaluation instrument**
  - Group 1 received original training
  - Group 2 received revised training
- **10-question instrument given as a pre-test and post-test**
- **10-question instrument given again 8 weeks later**
- **Results analyzed using SPSS, v. 14.0**

# Evaluation Results

Table 1. Change in evaluation scores by group

	n	Mean Scores			Pre/Post		Post/Delayed	
		Pre	Post	Delayed	Diff	p-value	Diff	p-value
Group 1 (original training)	40	7.8	8.6	8.0	0.8	0.011	-0.6	0.021
Group 2 (revised training)	44	6.9	8.7	8.4	1.8	0.001	-0.3	0.096

Table 2. Comparison of scores between groups

	Mean Diff	p-value
Pre-test to post-test	-1.0	0.011

# Evaluation Conclusions

- **The revised presentation:**
  - Helped trainees learn more
  - Helped trainees retain that information longer
  - Suggested additional revisions are needed (more case studies, video clips, practical exercises)
- **Limitations**
  - Small sample size
  - Only compared two groups of officers
  - Variability of presentation delivery
  - Evaluation limited by time to 10 questions
  - Other unidentified factors

# Future Work: Video and Photo Shoots

## Purpose

- Provide visual element to trainings
- Demonstrate action steps realistically

## Challenges

- Security at ports
- Privacy for travelers
- Minimal window of time

## Solutions

- Stage photos during down-time of aircraft
- Stage photos at mock port



# Future Work: Job Aids

**Needs assessment highlighted CBP workplace challenges:**

- **Time pressure requires quick decision-making**
- **No time for referencing materials**
- **Many simultaneous decisions to make**
- **Need accessible instructions for ancillary public health duties**
- **Need easy, quick access to Quarantine Station phone number**

# Future Work: RING Cards



# Conclusion

Application of health education principles to developing training materials for CBP Officers produced:

- A better understanding of training needs
- Possible solutions to training challenges for CBP Officers who work under unique environmental conditions
- A more effective training for increasing CBP Officers' knowledge of public health issues
- Guidance for the continued development and revision of training materials



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