

Environmental Health Literacy: Can the public be healthy without it?

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**We live in an ever changing
landscape of health and
environmental risk (& fear)**

WHO warns of more bird flu cases



- ◆ Thursday, September 22, 2005;
Posted: 6:53 p.m. EDT (22:53 GMT)

Health workers inspect an exotic bird at a bird market in Jakarta, Indonesia, earlier this week.

GENEVA (CNN) -- The World Health Organization has announced a third confirmed case of H5N1 avian flu in Indonesia and warns of more to come.

So, what's the problem with environmental health outreach / education/ communications?

- ◆ Often top down – deficit model
- ◆ Rarely start with where people are at
- ◆ Seldom mindful of fundamental literacy
- ◆ Not mindful of health & environmental literacy principles and guidelines

What is health literacy?

- ◆ **The wide range of skills, and competencies that people develop over their lifetimes to seek out, comprehend, evaluate, and use health and environmental information and concepts to make informed choices, reduce health risks, and increase quality of life.**
 - (Zarcadoolas, Pleasant & Greer, 2003; 2006)

Benefits of health literacy

- ◆ A health literate person is able to use **health concepts and information generatively – applying information to novel situations.** A health literate person is able to participate in the ongoing public and private dialogues about health, medicine, scientific knowledge, and cultural beliefs.

Communication seems easier
than it really is.

4 Domains of Health/ Environmental Literacy

◆ Fundamental literacy

◆ Science literacy

◆ Civic literacy

◆ Cultural literacy

(Zarcadoolas, Pleasant & Greer, 2003; 2004;
2006)

Functional literacy

- The National Adult Literacy Study (NALS 1993) 49% (almost half) of all Americans do not have functional literacy above the 8th grade level.
- Twenty five percent (25%) are functionally illiterate – that's 40 to 44 million adults. Another 50 million adults are only marginally literate.

Policy cont'd ...

- ◆ Institute of Medicine consensus report on Health Literacy (2004)
- ◆ Agency for Healthcare Research and Quality (AHRQ) evidence report/ technology assessment (#87) 2004
- ◆ American Medical Association
 - Health literacy toolkit (incl. video)
- ◆ Partnership for Clear Health Communication (AMA, Pfizer, many others)

Fundamental Literacy

- Reading
- Writing
- Speaking
- Numeracy



Definition

What is anthrax?

What is the case definition for anthrax?

What is anthrax?

Bacillus anthracis, the etiologic agent of anthrax, is a large, gram-positive, non-motile, spore-forming bacterial rod. The three virulence factors of B. anthracis are edema toxin, lethal toxin and a capsular antigen. Human anthrax has three major clinical forms: cutaneous, inhalation, and gastrointestinal. If left untreated, anthrax in all forms can lead to septicemia and death.

What is the case definition for anthrax?

A confirmed case of anthrax is defined as

1. a clinically compatible case of cutaneous, inhalational, or gastrointestinal illness that is laboratory-confirmed by isolation of B. anthracis from an affected tissue or site, or
2. a clinically compatible case of cutaneous, inhalational, or gastrointestinal disease with other laboratory evidence of B. anthracis infection based on at least two supportive laboratory tests.

(Source: <http://www.bt.cdc.gov/DocumentsApp/FAQAnthrax.asp>)

Science Literacy

- knowledge of fundamental scientific concepts, scientific process
- comprehend technical complexity,
- understand technology
- understand scientific uncertainty and that rapid change in the accepted science is possible.

NSF, Public Understanding of Science

- ◆ Between 5 and 15% of the public qualify as scientifically literate.
- ◆ 18% can be considered an attentive science public.

Civic Literacy

- ◆ enable citizens to become aware of public issues, to participate in critical **dialogue** about them, and to become involved in **decision-making processes**.
 - media literacy skills,
 - knowledge of civic and governmental systems and processes,
 - knowledge of power, inequity and other hierarchical relationships, and
 - knowledge that personal behaviors and choices affect others in a larger community and society



AFP/Gett
3:47 AM

Two residents wade through chest-deep water after finding bread and soda from a local grocery store after Hurricane Katrina came through the area in New Orleans, Louisiana. (AFP/Getty Images)

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Two residents wade through chest-deep water after finding bread and soda from a local grocery store after Hurricane Katrina came through the area in New Orleans, Louisiana. (AFP)



AP Associated Press AP - Tue

A young man walks through chest-deep flood water after looting a grocery store in New Orleans on Tuesday, Aug. 30, 2005. Flood waters continue to rise in New Orleans after Hurricane Katrina did extensive damage when it made landfall on Monday.

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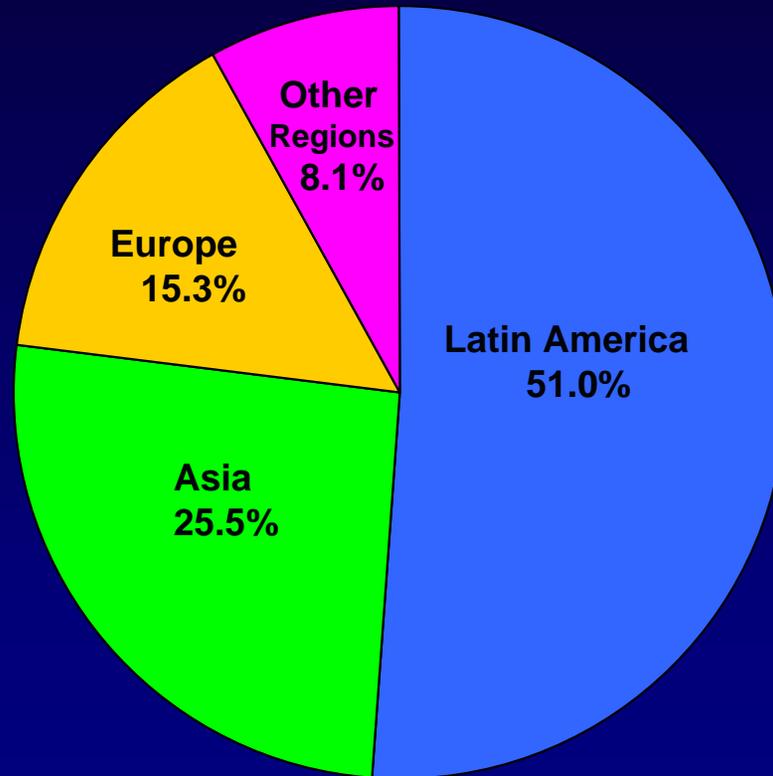
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A young man walks through chest deep flood water after looting a grocery store in New Orleans on Tuesday, Aug. 30, 2005. Flood waters continue to rise in New Orleans after Hurricane Katrina did extensive damage when it made landfall on Monday. (AP)

Cultural Literacy

- ◆ Ability to recognize, understand and use the **collective beliefs, customs, world-view, and social identity** of diverse individuals to interpret and act on information. Bilateral - experts should understand aspects of the culture of the recipient and visa versa.

Percent Distribution of Foreign Born by World Region of Birth: 2000



There is little capacity for health and environmental equity without good, effective communication. There is no civil society without it.

Guidelines

- ◆ Understand people's current conceptions and cultural models for understanding and acting on environment/ health information
- ◆ Collaborate to tailor communications to their environmental health literacy
- ◆ Evaluate the impact of communications on an ongoing basis.
- ◆ Advance the public's env health literacy.

*Forgive me for writing such a long letter.
I did not have the time to write a shorter
one.*

(Pascal)

