Ebola information for the public: an assessment of suitability and readability of information available through US, UK, Canada and European public health agencies

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Updated on EID!

Background

The epidemic of **Ebola** virus disease (EVD) has been declared an international public health emergency[1]. Surveillance and strict observation of infection prevention and control measures, aided by public awareness regarding symptoms and prompt health care-seeking behavior, are essential to control Ebola. Public participation requires understandable information. Readability indicators measure the ease with which text can be read and understood.

As inadequate information has resulted in unfounded fear in non-EVD-affected countries[2], we review the **readability** of EVD public information available from websites of selected public health agencies in those areas.

Methods

Information sheets were downloaded on 1st September 2014 from ECDC, CDC, PHE and Canada websites. Readability scores were obtained using software, and central tendency and dispersion measures calculated using Stata v10.1. Population literacy levels obtained from OECD.[3]

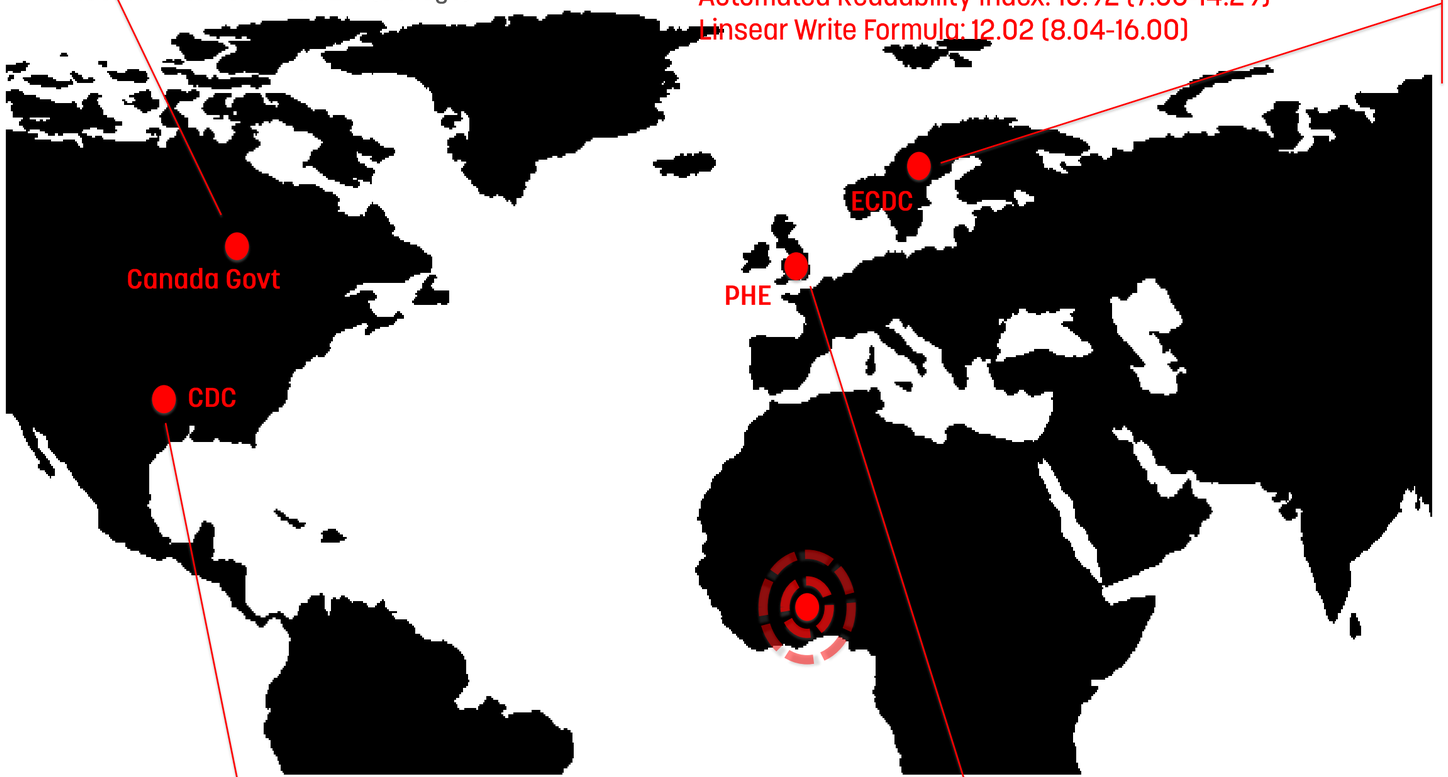
Results

Box 1 presents aggregated results for all websites analysed.

- ECDC, PHE and Canada factsheets were 'difficult to read', requiring a US school grade of 12, and 17-18 years old reading age.
- The CDC page was 'fairly difficult to read', with a US school grade of 9, and 13-15 years old reading age.

Box 1. All readability measures, mean (95% CI)

Flesch-Kincaid US Grade (US education years needed to understand text): 11.1 (9.01 -13.18)
Flesch Reading Ease (100= easiest, 60= well written): 47.2 (39.91-54.48)
Coleman-Liau Index (US grade necessary to understand text): 11.75 (9.74-13.75)
Gunning Fog (US grade): 12.8 (10.46-15.13)
SMOG (US education years needed to understand text): 10.55 (9.30-11.79)
Automated Readability Index: 10.92 (7.55-14.29)
Linsear Write Formula: 12.02 (8.04-16.00)



Population: **35 million**
% at risk of not understanding Ebola info: **16.3**
Flesch Reading Ease score: 42.2 (difficult to read)
Gunning Fog: 12.9 (hard to read)
Flesch-Kincaid US Grade Level: 11.8 (12th grade)
Coleman-Liau Index: 13 (College)
SMOG Index: 11.1 (11th grade)
Automated Readability Index: 11.8 (12-18 years old)
Linsear Write Formula: 12.6 (College)

Population: **332 million (EU-17)**
% at risk of not understanding Ebola info: **20**
Flesch Reading Ease score: 48.2 (difficult to read)
Gunning Fog: 13.7 (hard to read)
Flesch-Kincaid US Grade Level: 11.3 (11th grade)
Coleman-Liau Index: 12 (12th grade)
SMOG Index: 10.7 (11th grade)
Automated Readability Index: 11.6 (17-18y old)
Linsear Write Formula: 13 (College)

Population: **318 million**
% at risk of not understanding Ebola info: **17.49**
Flesch Reading Ease score: 53 (fairly difficult to read)
Gunning Fog: 10.7 (hard to read)
Flesch-Kincaid US Grade Level: 9.2 (9th grade)
Coleman-Liau Index: 10 (10th grade)
SMOG Index: 9.4 (9th grade)
Automated Readability Index: 7.8 (12-14 years old)
Linsear Write Formula: 8.4 (8th grade)

Population: 64 million
% at risk of not understanding Ebola info: **16.4**
Flesch Reading Ease score: 45.4 (difficult to read)
Gunning Fog: 13.9 (hard to read)
Flesch-Kincaid US Grade Level: 12.1 (12th grade)
Coleman-Liau Index: 12 (12th grade)
SMOG Index: 11 (11th grade)
Automated Readability Index: 12.5 (18-19y old)
Linsear Write Formula: 14.1 (College)

Conclusion

Information on EVD provided on websites of different public health agencies is written at a higher than recommended reading level. A substantial proportion of citizens would have difficulty understanding such information, potentially hindering effective health-seeking behaviours, prolonging ineffective self-care strategies and perpetuating the stigma towards people with Ebola.

1. WHO. http://www.who.int/mediacentre/news/statements/2014/ebola-20140808/en/
2. Mosquera M et al. Am J Infect Control. 2015;pii: S0196-6553(15)00033-4
3. OECD skills outlook 2013: first results from the survey of adult skills. Paris. Organ. 2013

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