

RISING AWARENESS IN BIORISK MANAGEMENT IN GEORGIA

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Introduction

Risk assessments and biosafety/biosecurity management at both an organizational and national level is not fully implemented in Georgia. Supervision and control on compliance with biosafety standards is not widespread at research institutes, diagnostic and clinical laboratories, medical facilities, and many other private laboratories/facilities that work with biological materials/components and their derivatives. This creates a possible risk for occupational health. There is no clear policy for managing biomedical facilities (e.g., certification, accreditation by biosafety levels, etc.) and there is a lack of legislative instruments for combating possible biological threats that can arise from uncontrolled activities. Insufficient biosafety/biosecurity management, a lack of accountability for risk assessments, and a low level of awareness of biosafety/biosecurity by specialists all represent a threat for them, other personnel, and the environment. No statistical data exists related to occupational damage within the institutions. The country does not have a strong biorisk management practice or pool of specialists with specific biosafety education. As such, the development of a national strategy for biosafety/biosecurity management and biorisk assessment is critical for state defense authorities as well as for the health of the public and animals. The objective of our campaign was to assess the status of biorisk management in public health and veterinary facilities in Georgia, and to raise awareness in cases where deficiencies were identified.

Methods

To assess the level of awareness on biorisk management, the Georgian Biosafety Association (GeBSA) carried out a survey in selected public health and veterinary facilities (n=55) working or preserving biomaterials, their components, and/or derivatives. To assess the awareness of biosafety/biosecurity risks, respondents were randomly sampled from different institutions from central and remote areas of Georgia and were questioned using a standardized questionnaire. A questionnaire consisting of questions on: biosafety; biosecurity; laboratory biorisk management standard CWA-15793:2011; dual-use issues; bioethics; etc. was created by GeBSA. The responses of the respondents were entered into the SPSS Data Entry Builder 3.0. database and were processed by SPSS 16. The data was processed separately by sub-chapters and also as a whole. All positive responses (score of one) and negative responses (score of zero) were later summed and analyzed by sub-chapters and as a total. Frequencies were calculated by this methodology. Tabular and cross-tabular statistical analysis were performed.

Also, a series of trainings were held with the initial training covering general biosafety/biosecurity/biorisk management. In later trainings, more specific topics were discussed in groups of representatives of the institutions of the sample pool. Several seminars on codes of ethics for scientists were held by GeBSA. All participants mentioned they lacked training, however, their interest in the topics was great. Additionally, GeBSA staff distributed copies of the W.H.O. Laboratory Biosafety Manual (3rd edition) translated in Georgian (published using funds donated by CBRN CoE regional office for Eastern Europe and the Caucasus) (Figure 1).

Results

Statistical analysis of responses identified significant challenges existing in lab and other research-related institutions regarding biorisk management awareness. The level of biorisk awareness is quite low in most of the institutions (Figure 2). Although there were a number of biosafety/biosecurity/biorisk management seminars/workshops/ trainings by different agencies, these activities are not systematic and most of our respondents acknowledged that they lacked a deep knowledge of these issues. This is likely compounded by the fact that the term “biosecurity” was only recently introduced in Georgia. As with many languages, the terms biosecurity and biosafety do not translate well, leading to their confusion with one another. The analysis of the situation revealed a number of key-findings:

- Biosafety awareness is higher compared to biosecurity awareness;
- Awareness of laboratory biorisk management standard CWA 15793:2011 was extremely low, most respondents had never heard of it;
- Public health and veterinary facilities in central and remote areas show a significant difference in awareness between them. This is more prevalent when comparing facilities that collaborated or were involved in programs with western countries (e.g., USA, UK, France), with those that had not.
- Personnel (often with advanced educations) mentioned their lack of education in this field. Curricula and/or training at universities/research facilities sometimes contain references to aspects of biosafety, but rarely contain any aspects related to biosecurity, therefore the staff are not acquainted with biorisks;
- Personnel in most facilities are eager to receive more training;
- Public health and veterinary facilities personnel often do not consider the possibility that their work could be of relevance to a biological weapons program or otherwise misused to cause harm to people, animals, plants, or to render critical resources unusable.
- Also, the laboratories in rural areas are in poor condition.

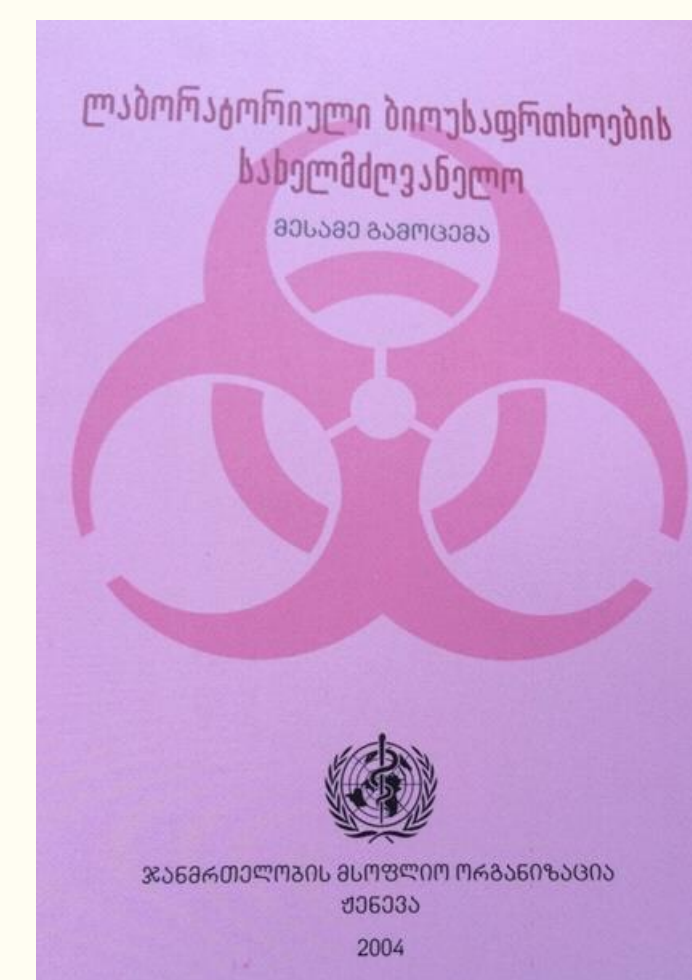


Figure 1: Georgian translation of the W.H.O. Laboratory Biosafety Manual 3rd ed. that was distributed by GeBSA staff.

Level of Awareness on Biorisks in Georgian Institutions

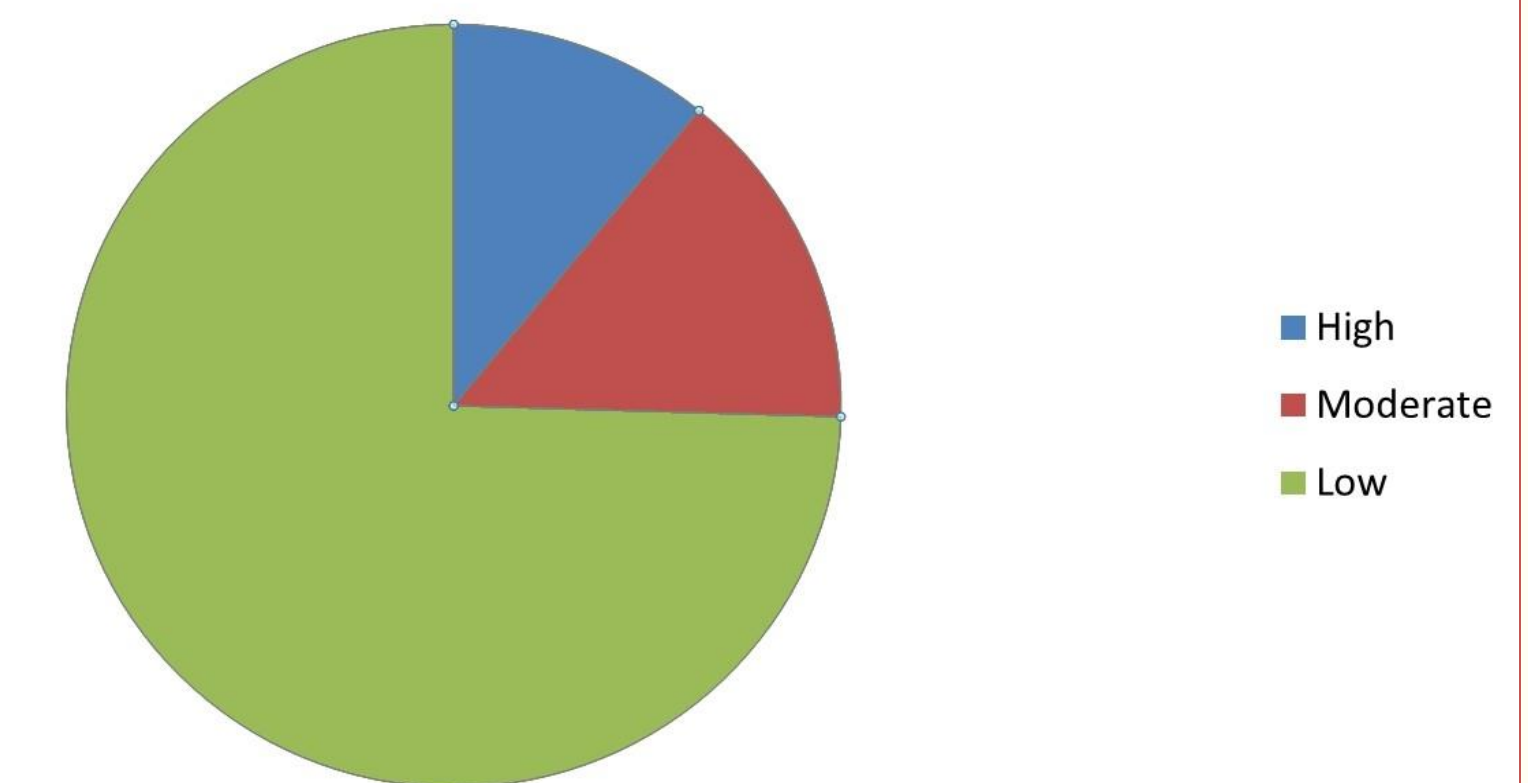


Figure 2: Levels of biorisk awareness in various Georgian institutions (n=55) as determined through biorisk questionnaires.

Conclusions

Campaigns to raise biorisk management awareness are of paramount importance to medical and veterinary workers and should be created. These trainings should incorporate trainings in routine biosafety techniques. We submit, that involving civilian society, particularly professional organizations (e.g., biosafety associations) in the development of a national strategy for biosafety/biosecurity management and biorisk assessment would be beneficial for Georgia.

According to the survey results, the development of a national strategy for biosafety/biosecurity management and biorisk assessment is a critical tool for improving public health, animal health, and state defense authorities. GeBSA staff prepared materials for distribution among health care and veterinary personnel and a series of trainings based on these materials are being planned. Additionally, a biorisk management conference for all the institutions involved in the study is being planned.

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