# SATISFACTION SURVEY ON THE APPLICATION OF THE CWA 15793 IN LABORATORIES OF MOHAMMED 5 HOSPITAL – RABAT, MOROCCO

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## Introduction

The laboratory biorisk management CWA is a standard system approach developed and published by CEN Workshop 31 and adopted by the International Organization for Standardization (ISO).
The CWA enables an organization to effectively identify, monitor and control the laboratory biosafety and biosecurity aspects of its activities (systems for quality, environmental, occupational health and safety management) by using the concept of continual improvement through the PDCA (Plan-Do-Check-Act) principle.

The implementation of the CWA recommendations in the Military Training Hospital Mohammed 5 of Rabat-Morocco has been carried out gradually over the last 5 years.

The objective of this study was to evaluate the progress of the program by determining the level of satisfaction of the specialized staff to the implementation of CWA. Secondly, this study identified key areas requiring improvement for better engagement of managers and workers in CWA recommendations.

## Methodology

As part of an effective system approach and for continuous improvement, we have planned a process review to determine the actions to be taken. For this, we opted for a preliminary determination of the degree of satisfaction of the competent workers of our CWA implementation project and the level of achievement of the objectives.

We evaluate the level of satisfaction on the application of the CWA-section “Work programme, planning and capacity” and the section "Work practices, decontamination and personal protection".
We have chosen these two sections because of their importance in the day-to-day work of the technicians and because they affect both operational technical procedures and the availability of adequate equipment.

We prepared a questionnary with 28 questions about 5 categories:
**Work programme, planning and capacity – Section 4.4.4.3 page 27**
**Good microbiological technique – Section 4.4.4.5.1 page 28**
**Inactivation of biological agents and toxins – Section 4.4.4.5.2 page 29**
**Waste Management – Section 4.4.4.5.3 page 30**
**Clothing and Personal Protective Equipment (PPE) – Section 4.4.4.5.4 page 31**

During the first week of February 2019, the questionnary has been given to specialized workers in biosafety level 2 or 3 laboratories in the Hospital. The responses were in the form of a checkbox and included the following choices "perfectly satisfied", "moderately satisfied" and "Unsatisfied".
For each subject, a supplementary question about all the items in the section was asked to determine whether the staff was overall satisfied or not.

## Results

Thirty participants responded to the questionnaire. Their field of activity is distributed as follows:

| Filed of activity | Clinical Bacteriology | Clinical Virology | Clinical Parasitology | Microbiological Research | Total |
|---|---|---|---|---|---|
| Number of participants | 10 | 9 | 7 | 4 | **30** |

For most of respondents, the written procedures SOPs show the largest imperfection (n = 7, 23%) mainly because they feel that redaction, validation and change management are insufficient (n = 12, 40%)(Fig. 1)

The participants are generally satisfied with the results of the implementation of elements of the section "Good microbiological technique" (n = 24, 80%). They are very satisfied with the pipetting tools (n = 28, 93%) but indicate a slight or no satisfaction in the use of biosafety cabinets (n = 16, 53.3%)(Fig. 2)

Regarding the section "Inactivation of biological agents and toxins", more than two thirds of respondents (n = 21, 70%) are either unsatisfied or moderately satisfied with the procedures for dealing with a contaminated person and only one-third of respondents are satisfied with all the items in this section (n=10, 33.3%)(Fig. 3).

According to the participants, this section shows a lot of imperfections since about half are not satisfied with the programme in place to minimize the waste production (n =16, 53.3%) and the packaging material used to contain the waste (n=13, 43.3%)(Fig. 4)

The most positive point in our survey concerns the "Clothing and Personal Protective Equipment (PPE)" section. In fact, 93% of the individuals surveyed are generally satisfied even though many of them would like corrective measures concerning the SOPs of donning and doffing, decontamination and safe storage of used PPE.

## References

*1 – European Committee For Standardization (2011), CEN Workshop Agreement, CWA 15793:2011 D/E/F, September 2011*
*2 - World Health Organization (2006), Biorisk management, Laboratory biosecurity guidance, WHO/CDS/EPR/2006.6*
*3 - Reynolds M. Salerno, Jennifer Gaudioso (2015), Laboratory Biorisk Management: Biosafety and Biosecurity, CRC Press, Published May 8, 2015, ISBN 9781466593640,*
*4 - Abad X (2014) CWA 15793: When the Biorisk Management is the Core of a Facility. Biosafety 3: 119. doi:10.4172/2167-0331.1000119*
*5 - Sundqvist B, Bengtsson UA, Wisselink HJ, et al. Harmonization of European laboratory response networks by implementing CWA 15793: use of a gap analysis and an “insider” exercise as tools. Biosecur Bioterror 2013;11(Suppl 1):S36-S44*

## Discussion

The administration of our hospital has made considerable efforts to implement the CWA standard in anticipation of its application as an ISO standard. These efforts concern both Biorisk management policy, budgets, planning and training. All this, in a well-established administrative framework understood by all stakeholders and in a strategy that is evolutionary and forceful.

Despite all this desire to do well, there are still gaps that require corrective action to be taken. The involvement of the various stakeholders was only possible after the training sessions on the importance of the CWA standards.

According to the results of this study, the measures to be undertaken in the short term are the following:
- Improvement of the work program and its submission to a formal change management process,
- Training on the use of biological safety cabinets,
- Training on the use of disinfectants, spill control, decontamination, hand washing and showers,
- Review and correction of gaps in the waste management process,
- Revision and correction of imperfections in the technique of decontamination and storage of used PPE.

## Conclusion

This study made it possible to have all the staff join the CWA implantation program in our hospital. It also allowed us to evaluate the quality of our procedures and facilities.

Overall implementation follows a favorable evolution according to schedule but efforts still need to be made to better align our process with CWA 15793 standards.

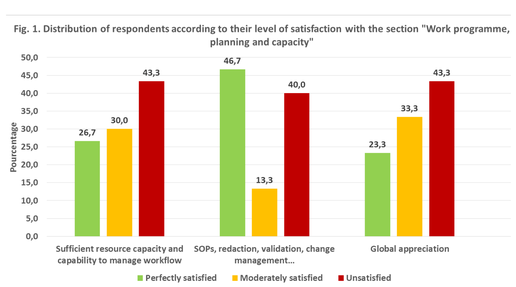

Fig. 1. Distribution of respondents according to their level of satisfaction with the section "Work programme, planning and capacity"

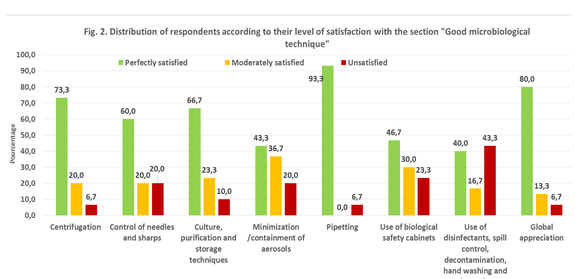

Fig. 2. Distribution of respondents according to their level of satisfaction with the section "Good microbiological technique"

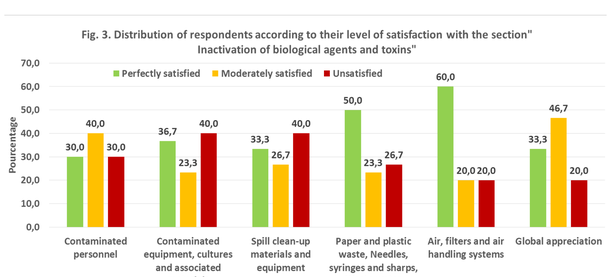

Fig. 3. Distribution of respondents according to their level of satisfaction with the section" Inactivation of biological agents and toxins"

Fig. 4. Distribution of respondents according to their level of satisfaction with the section"Waste Management"

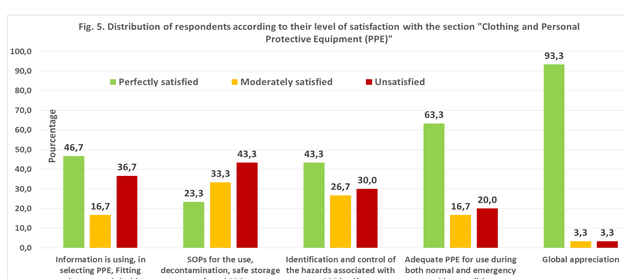

Fig. 5. Distribution of respondents according to their level of satisfaction with the section "Clothing and Personal Protective Equipment (PPE)"