

Complex Synergy and Training in The Biological Risk of Operators in the Migration Phenomeno

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INTRODUCTION

The training of non-healthcare workers in the Sicily Region began in 2014, coinciding with the onset of the **Ebola virus epidemic in Sierra Leone**. At the same time, on the coasts of the region

there were already numerous landings of non-EU people coming from endemic areas through the naval assets of the two missions called "Mare Nostrum" and "Triton".

METHOD

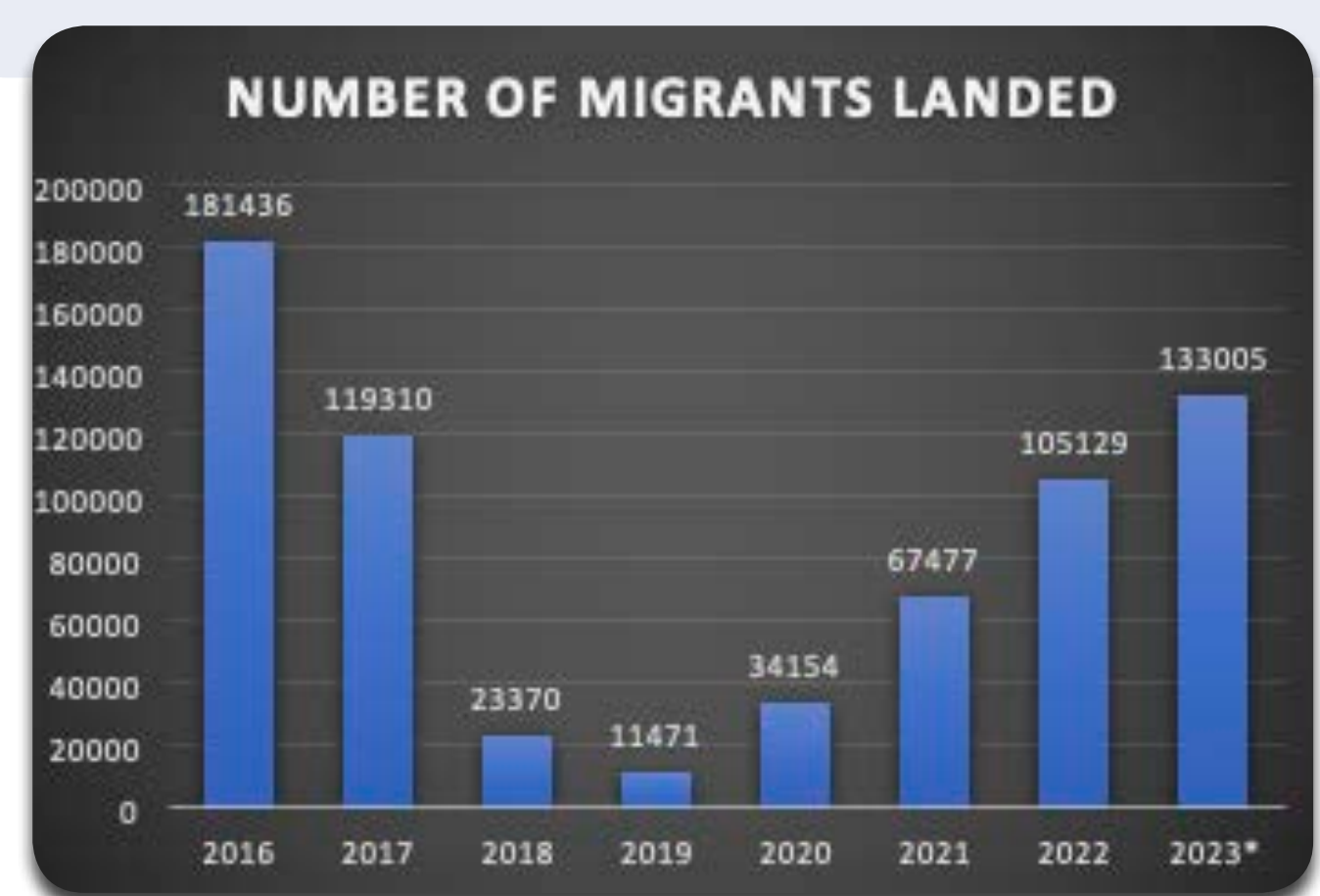
To deal with the public health emergency, the Regional Health Department of the Sicily Region, through the coordination of Dr. Francesco Bongiorno, together with the European Office of the WHO and the Ministry of Health - General Directorate of Prevention, Office 3 Technical Coordination of the Maritime, Air and Border Health Offices and of the Territorial Health Assistance Services for Seafarers (USMAF-SASN), issued the first **"Regional Migrant Health Contingency Plan - operational methods for the coordination of public health aspects in Sicily 2014"**, published in the Official Journal of the Sicilian Region (GURS) n. 42 of 3/10/2014.

The Plan, in addition to defining the processes and procedures to be adopted during all reception phases, has included a vast section dedicated to the description of infectious/diffusive diseases (scabies, antibiotic resistant TB, multi-drug-resistant meningitis etc.) as well as haemorrhagic fevers.

Continuing the state of emergency related to migratory flows, in 2017 procedures were updated with the second draft of a new Contingency Plan. For the first time in Sicily, the concept of biocontainment was introduced, through a regional law, defined in all its aspects, describing in detail the relevant legislation, the ministerial circulars for transport in MEDEVAC. The Contingency Plan is still in effect.

In 2018 the Plan was also adopted by Frontex (European Border and Coast Guard Agency) as the only good health practice on an European level, consequently issuing the **"Frontex OSH Regional Migrant Healthcare Contingency Plan"**.

This has allowed the health management of **OVER 750,000 MIGRANTS** arriving in the ports of the Sicily region, from 2014 to nowadays, with a specific focus on the island of **LAMPEDUSA**. Below are the reports from the Ministry of the Interior on the progress of landings.



* data updated as of September 25, 2023
Source: Public Security Department Italian Interior Ministry



Following the experience acquired in the field of biocontainment, in 2018 with a National Health Plan project, the Health Department of the Sicilian Region, through the Provincial Health Authority of Ragusa and the Order of Doctors and Dentists of the Province of Palermo (OMCeOPA), in close collaboration with the Ministry of Health - General Directorate of Prevention, Office 3 and in synergy with the Institute of Aerospace Medicine of the Italian Air Force, has created a **FORMAT** that defines the training of healthcare personnel and layperson who, in various capacities, is involved in the management of patients with potential infectious/diffusive disease as established by the **2005 WHO RSI**.

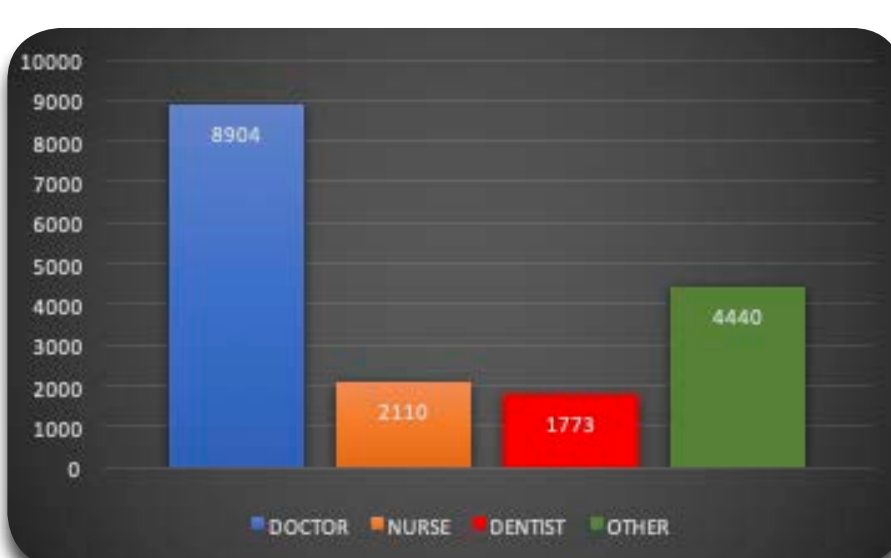
The focus of the format was the creation of an **EDUCATIONAL VIDEO** on the procedures for donning and doffing biohazard PPE. It was preferred to use a communication model that contained not only the video, but also audio

tracks that help the learner in understanding the actions carried out by the trainer.

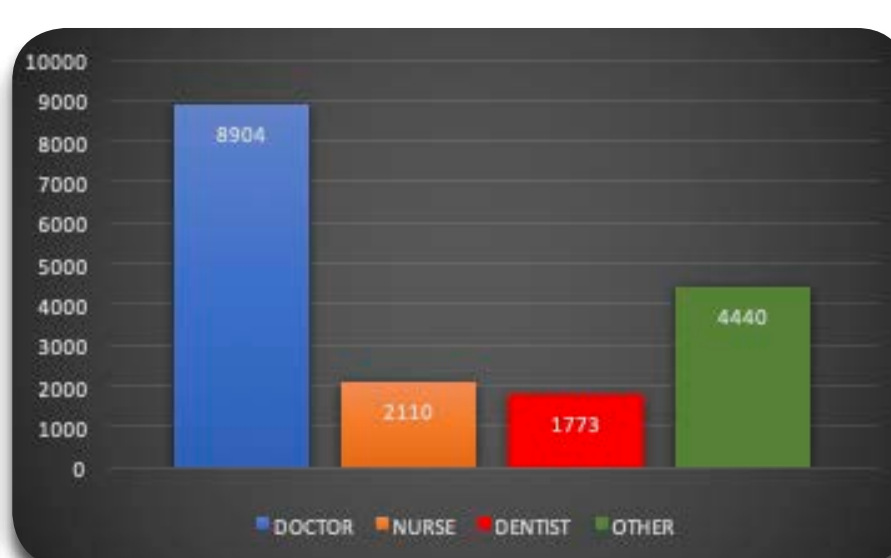
The educational was created by **Dr. FRANCESCO BONGIORNO, (Biohazard Manager OMCeOPA), Dott. ULRICO ANGELONI, (Medical Director General Secretariat of the Ministry of Health), and with the supervision of Col. MARCO LASTILLA (health service logistics command head of technical coordination office supervisor Sisad Italian Air Force) and the coordination of Dr. ANGELO ALIQUÒ, (General Director of the Ragusa Healthcare Company 2018/22).**

In order to widely expand the diffusion of the educational material, the latter has been made available at a national level and free of charge, through the OMCeOPA e-learning platform since **January 2020, the date before the start of the Sars-Cov2 pandemic.**

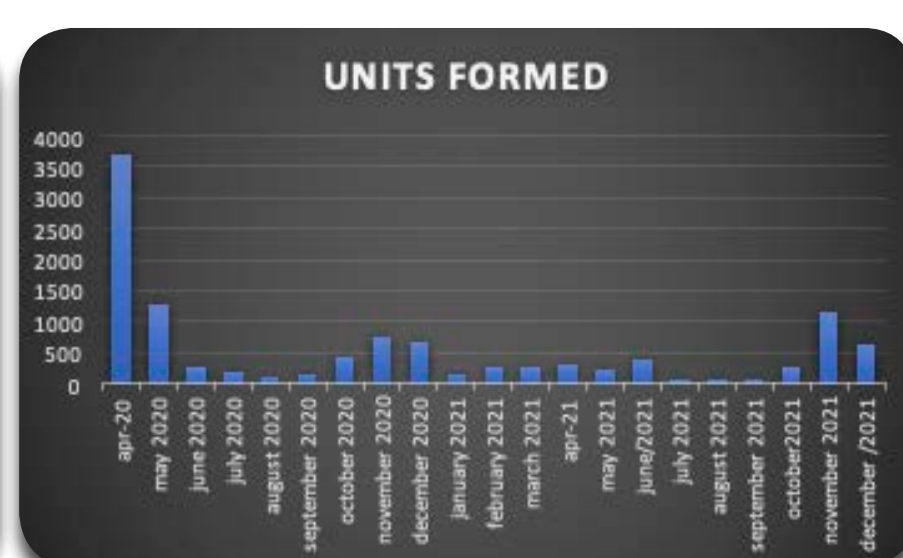
Below is the analysis of the performances achieved by the educational program.



Units trained in e-learning in 2020-2021 (monthly data)



Specialists of the units trained in e-learning in 2020-2021



Specialists of the units trained in e-learning from 20 March 2020 to 20 September 2023

The educational and format have evolved and focused on the training of non-healthcare personnel as well, creating **GLOBAL BIOHAZARD MANAGEMENT (GBM)**, already EN ISO 9001:2015 certified.



GBM represents a training model in which the simulation truly reflects the needs of the operator, the available assets, the learning style, the knowledge and the targets of each learner. It is also the result of continuous training aimed at lay staff through realistic simulations which imply, according to predictive models, a synergistic response to a biological health emergency.



GBM constantly analyses the rapid translation of scientific knowledge into practical solutions is essential to address emerging and evolving biohazard threats.

GBM uses a multi-sectoral approach, recognizing the transversality of biohazard management and involves various stakeholders, including government agencies, public health institutions, healthcare professionals, scientific communities, private sectors and non-governmental organizations. Collaboration between different sectors improves the overall response and ensures a holistic approach.

Furthermore, within GBM, the **GLOBAL BIOHAZARD MANAGEMENT APP (GBM APP)** has been developed.

It is an application that can be installed on all mo-

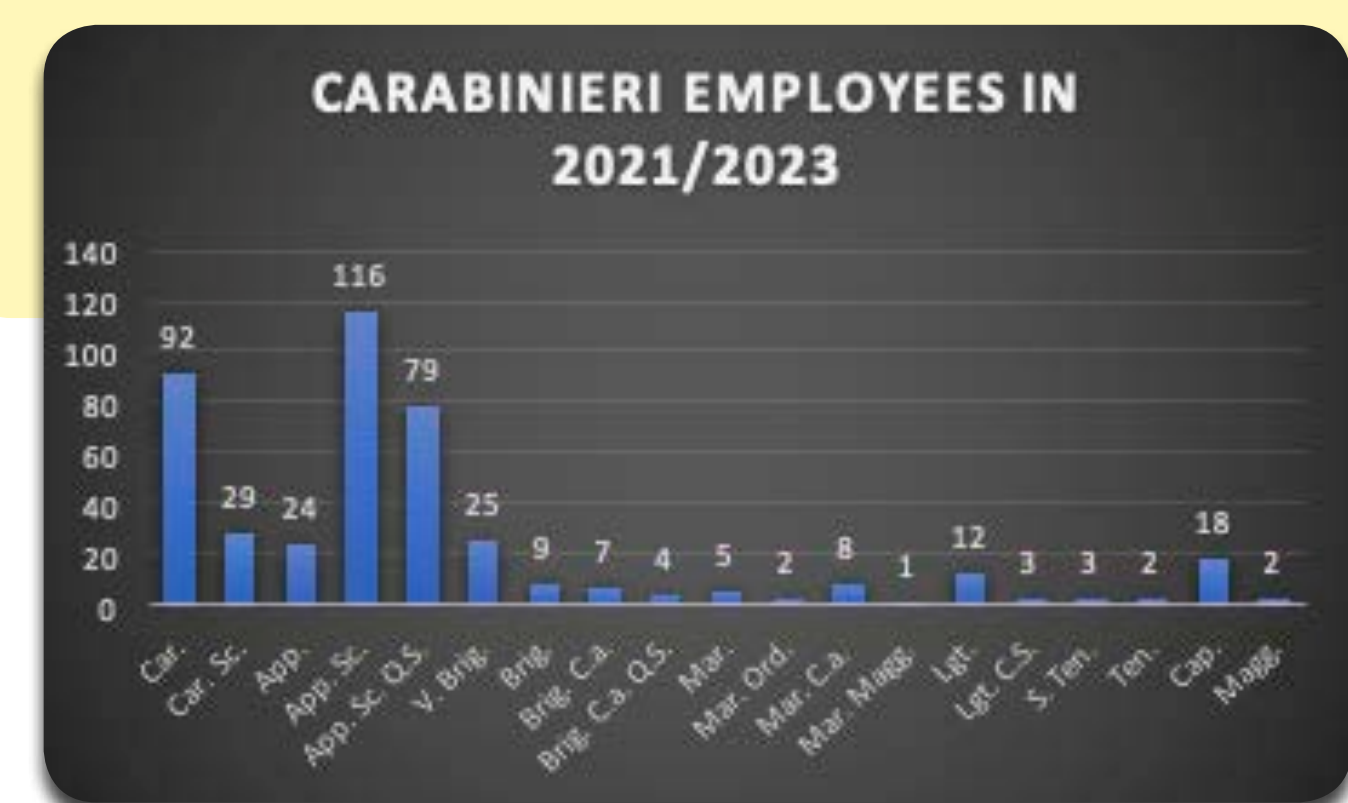
bile devices on the market, which use both IOS and ANDROID. It contains all the processes and procedures in schematic forms regarding biological risk, biocontainment and maxi emergencies including airports and ports, divided by areas. It allows to see a tutorial to facilitate the validated and standardized dressing and undressing phases. Furthermore, for operators employed in high-risk foreign scenarios, it allows the type of biological threat, the location of the outbreak and any evacuation routes to be notified on the device.

During the training sessions, practical evaluation tests were carried out regarding the donning and doffing procedures of personal protective equipment for biological risk.

Below are the results obtained:



GBM has allowed, until today, the residential training of over **400 UNITS** belonging to Carabinieri and over **135 UNITS** to Police. Specifically, in relation to Carabinieri:



Specifically, in relation to Carabinieri:
Coordination: Col. Gianpaolo Zanchi; Col. Andrea Desideri 12 Carabinieri Regiment "Sicily"
Scientific coordination: Section Chief Ten. Col. Giuseppe Giordano "Sicily" Carabinieri Legion Command - Palermo Doctors of the Health Section;

Furthermore, within GBM, **THE GLOBAL BIOHAZARD MANAGEMENT APP (GBM APP)** has been developed.

It is an application that can be installed on all mobile devices on the market, which use both IOS and ANDROID. It contains all the processes and procedures in schematic forms regarding biological risk, biocontainment and maxi emergencies including airports and ports, divided by areas. It allows to see a tutorial to facilitate the validated and standardized dressing and undressing phases. Furthermore, for operators employed in high-risk foreign scenarios, it allows the type of biological threat, the location of the outbreak and any evacuation routes to be notified on the device.



CONCLUSIONS

In the future, the Italian Air Force together with the other Defense components (Italian Army, Italian Navy, Carabinieri competing on land and sea) will be inclined to carry out even more training activities and exercises regarding the rescue and transport service aeromedical in high biocontainment.

The Ministry of Health and the excellent hospitalization institutes for infectious disease patients IRCS Lazzaro SPALLANZANI and Istitut Luigi SACCO, ENAC etc. will be crucial to be the in-

terface with the civil world, essential in multiple transports throughout the national territory.

In particular, the experience with the Sicily region and with the OMCeOPA will represent references for the continuation of training activities. Furthermore, the involvement of cross-border countries bordering the Mediterranean, in various capacities, are involved in the dynamics of the management of irregular migratory flows.

