Search and Rescue Activities in the Mediterranean Sea

THE PERSPECTIVE OF A YOUNG EMERGENCY PHYSICIAN

MIGRATION TODAY

Source: UNHCR Data
MIGRATION TODAY

Most common nationalities of Mediterranean sea and land arrivals from January 2018

<table>
<thead>
<tr>
<th>Country of origin</th>
<th>Source</th>
<th>Data date</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Syrian Arab Rep.</td>
<td></td>
<td>3 Sep 2018</td>
<td>13.2% 7,049</td>
</tr>
<tr>
<td>Others</td>
<td></td>
<td>31 Aug 2018</td>
<td>10.7% 5,696</td>
</tr>
<tr>
<td>Iraq</td>
<td></td>
<td>31 Aug 2018</td>
<td>8.6% 4,600</td>
</tr>
<tr>
<td>Guinea</td>
<td></td>
<td>31 Aug 2018</td>
<td>7.3% 3,890</td>
</tr>
<tr>
<td>Tunisia</td>
<td></td>
<td>31 Aug 2018</td>
<td>7.0% 3,729</td>
</tr>
<tr>
<td>Mali</td>
<td></td>
<td>31 Aug 2018</td>
<td>5.8% 3,116</td>
</tr>
<tr>
<td>Eritrea</td>
<td></td>
<td>31 Aug 2018</td>
<td>5.7% 3,027</td>
</tr>
<tr>
<td>Morocco</td>
<td></td>
<td>31 Aug 2018</td>
<td>5.5% 2,916</td>
</tr>
<tr>
<td>Other (Sub-Saharan Africa)</td>
<td></td>
<td>30 Jun 2018</td>
<td>4.8% 2,569</td>
</tr>
<tr>
<td>Afghanistan</td>
<td></td>
<td>31 Jul 2018</td>
<td>4.6% 2,444</td>
</tr>
</tbody>
</table>

Source: UNHCR Data

THE NEED OF A SAR OPERATION

Sea and land arrivals monthly

Source: UNHCR Data
THE NEED OF A SAR OPERATION

Dead and missing in 2018 (estimate)

<table>
<thead>
<tr>
<th>Previous years</th>
<th>Sea arrivals</th>
<th>Dead and missing</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>172,301</td>
<td>3,139</td>
</tr>
<tr>
<td>2016</td>
<td>362,753</td>
<td>5,096</td>
</tr>
<tr>
<td>2015</td>
<td>1,015,078</td>
<td>3,771</td>
</tr>
<tr>
<td>2014</td>
<td>216,054</td>
<td>3,538</td>
</tr>
</tbody>
</table>

Source: UNHCR Data

Death rate

2,18%

1,82%

1,40%

0,37%

1,63%

A CROWDED SEA

ASSETTS INVOLVED

Italian Coast Guard
Maltese Coast Guard
Libyan Coast Guard
Operation Mare Nostrum (IT) 2013
FRONTEX Triton (EU) 2014 -> Themis (EU) 2018
Operation EuNavMedFor – Sophia (dal 2015)
Merchant vessels
NGO's vessels

SEARCH AND RESCUE AREA

Italy
Malta
Lybia
Tunisia

Photo: Vesselfinder.com
Total arrivals by sea: 112,737 migrants
Total SAR events: 1,116 missions
Total MEDEVACs: 58 missions for 169 migrants

Source: UNHCR Data, Italian Coast Guard

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MAY 2017
Number of Search and Rescue operations coordinated by the Italian Maritime Rescue Coordination Centre (I.M.R.C.C.):
196
Number of persons rescued under the coordination of the I.M.R.C.C.:
22,698

<table>
<thead>
<tr>
<th>Source</th>
<th>ITALIAN COAST GUARD</th>
<th>ITALIAN NAVY</th>
<th>FRONTEX - Triton Operation</th>
<th>MERCHANT VESSELS</th>
<th>COMMERCIAL NGOs</th>
<th>FOREIGN MILITARY SHIPS</th>
<th>EUNAVFOR MED - Sophia Operation</th>
<th>GUARDIA DI FINANZA</th>
<th>CARABINIERI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Person</td>
<td>3,948</td>
<td>970</td>
<td>4,674</td>
<td>3,181</td>
<td>9,299</td>
<td>12</td>
<td>1,465</td>
<td>42</td>
<td>7</td>
</tr>
<tr>
<td>TOTAL</td>
<td>22,698</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Italian Coast Guard

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YEAR 2017

JUNE 2017
Number of Search and Rescue operations coordinated by the Italian Maritime Rescue Coordination Centre (I.M.R.C.C.):
202
Number of persons rescued under the coordination of the I.M.R.C.C.:
24,149

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<th>CARABINIERI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Person</td>
<td>2,937</td>
<td>1,031</td>
<td>3,710</td>
<td>1,385</td>
<td>12,112</td>
<td>759</td>
<td>2,096</td>
<td>117</td>
<td>2</td>
</tr>
<tr>
<td>TOTAL</td>
<td>24,149</td>
<td></td>
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Source: Italian Coast Guard
GET ON BOARD

MSF - VOS Prudence

• An almost 3000 tons offshore support vessel, built in 2013
• Ruled by VROON crew, rented by Médecins Sans Frontières on 2017 for SAR purpose
• Customized by MSF with a small hospital and a structure adapted to cover up to 700 rescued migrants
• 2 RHIBs (Rigid Hull Inflatable Boat) for early support and rescues

MSF CREW

• 1 head of mission, 4 logistics (1 Wat-San), 2 RHIB pilots
• 1 psychologist, 1 humanitarian officer, 4 to 6 cultural mediators
• 1 doctor, 2 nurses, 1 midwife

HUMANITARIAN MEDIC

Humanitarian Medic is an innovative training program, designed and coordinated by CRIMEDIM in collaboration with Médecins Sans Frontières (Doctor Without Borders, Italian section).

The program is restricted to medical doctors in their final years of training or residency program in Anaesthesia and Critical Care Medicine, Emergency Medicine and Paediatrics, from any university all over the world.

The aim of the training program is to provide residents with the necessary knowledge, skills and attitudes to proficiently participate to international disaster responses and humanitarian health programs.

Humanitarian Medic has three specific consequential phases: distance learning through an e-learning platform, followed by a Residential course in Novara and a final Apprenticeship in the field with Médecins Sans Frontières.
RESCUE

RHIB DEPARTURE
INTERCEPTION
APPROACH

RESCUE

PULLING CLOSE
RECOVERY
RESCUE
**RESCUE**

A: rescue  D: distribution  
B: security check  E: sitting  
C: medical triage

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**MEDICAL ASSISTANCE**

Medical triage  
Performed by the Nurse and the Doctor based on START algorithm. If needed Doctor can follow a critical case into the hospital, the Nurse keep going alone.

First Assistance on the deck  
People not able to walk, with injuries or wide burns or with evident needs stops aside the hospital, where the Nurse can check their vital signs and temperature, do first medications and cover them.

Emergencies on boats  
If real emergency occurs on a boat, doctor or nurse can get down on the boat and stabilize the patients before evacuate him with the help of logistics.
MEDICAL ASSISTANCE

Medical Emergency
Real emergencies are carried directly the Emergency Room inside the hospital, where Doctor and Nurse can treat the patient following the needs.

Burns
Chemical burns with gasoline and salt water were particularly diffused among migrants. Those burns were immediately washed in a special area after boarding, then clothes were removed and wounds treated.

Contingency plan – mass casualty
In case of a mass casualty event (i.e. a boat capsizing) a special contingency plan was elaborated and tested during the journey to the operation zone.

HOSPITAL

Emergency Room
A complete Emergency Room with two positions on stretchers was set up. Those were fully equipped with monitors, oxygen concentrator and a chart with all common used drugs in emergency.

Fluids, IV lines, IO equipment, trauma equipment and even a ventilator were available in the ER.

All the equipment was stored in plastic boxes with clear indications, blocked with ropes to avoid them from falling during the trip.

Emergency protocols were printed and pointed on the walls, in order to facilitate the clinicians to take decisions in stressful situations.

A 24/24h shift was planned to cover the ER if patients were recovered.
HOSPITAL

Outpatient department
The OPD was a large room contiguous to the emergency room, where doctor and nurse care about secondary treatment, medication or wound care or just medical consultation during the trip back to Italy. The service was open only on daytime.

Gynaecological/Obstetric room
A dedicated room to visit the pregnant (or suspected so) women was set up aside the OPD. The room permitted the Midwife to check about the health conditions of those girls and of the new-borns. A special set for delivery was always ready in case of need.

Isolation room
In case of suspected infective disease, a special isolation room was set up to protect and isolate them and avoid the spread of potentially severe illness.

OTHERS MEDICAL ASSETS

Round tour on the deck
Twice a day the nurse took a round tour on the deck to check general medical conditions, to invite people who could need to consultations and to be sure everyone had accesso to medical care.

Vulnerable container
Two containers was prepared to receive and protect families with young children, pregnant women and other vulnerable people, while other migrants should sleep on the deck.

Medical container
Injured, wounded, reduced mobility or burned people were permitted to stay in a third dedicated container on the deck, a nurse check their condition twice a day during his round tour.
MEDEVAC

Request
In case of time‐depending emergencies, a MEDEVAC could be requested to the Italian Coast Guard Coordination Centre. Before to authorize the MEDEVAC and to decide the means of evacuation, the case has to been discussed with a Medical Doctor on duty 24/24h in the coordination centre.

By helicopter
For real time‐depending emergencies, Authorities could allow the evacuation with helicopter. With no space to land, evacuation are made by hovering and winch.

By boat
For less urgent evacuation, a Coast Guard fast boat could approach the vessel and transfer the patient in few hours to an hospital on the shore.

DATA

1 rescue as example: SAR event 24-25/05/2017
N° of rescues: 13 boats (11 rubber boat + 2 wood boat)
N° of people: 1520 (1268 M + 207 W + 45 C)
Dead bodies: 2

Pregnant women: 20 confirmed
Medical consultations: 86
Medico-legal certificates: 8
MEDEVAC: 4 patients
Urgent referral to hospital after disembarkation: 36 patients
Scabies cases identified: 37
DATA

1 rescue as example: SAR event 24-25/05/2017

4 MEDEVACs (all by boat):
• suspected femur fracture, complicated leg infection, respiratory arrest in inhalation, epileptic seizure

36 URGENT REFERRAL
• 4 suspected TB
• 4 bloody diarrhoea
• 3 traumatic injury
• 5 burns
• 20 pregnant (2 suspected abortion)

DATA

1 rescue as example: SAR event 24-25/05/2017

CONSULTATIONS
• Gynaecology/Obstetrics: 30%
• Cutaneous disease: 11%
• Burns: 8%
• Urinary infections: 6%
• Ancient trauma: 6%
• Trauma: 5%
• Others: 34% (fever, diarrhoea, head hake, stomach hake, motion sickness)
VULNERABLES

- Pregnant women
- Children
- Unaccompanied minor
- Elderly
- Sick and injured
- Psychological disease
- Sexual Violence and tortured

were identified and protected during the trip, than referred to dedicated Authorities once on shore.

Medico Legal Certificate were released for sexual violence and signs of torture, if agreed by the patient.

DEAD BODY MANAGEMENT

- Death certification
- Collection of the body
- Collection and storage of personal items
- Photos
- Body bag with ID tag
- Ice cell
- Identification of possible family member on board
- Communication with Authorities before landing
- Police and Health Authority authorisation for desembarkation
CONCLUSIONS

• Strong commitment and motivation
• Incredible responsibility
• Stressful work
• Huge workload
• Management of different emergencies than usual
• Difficult human experience
• Good ER asset
• Particular environment
• Teamwork is, as usual, the key

QUESTIONS?

THANK YOU FOR YOUR ATTENTION

Alessandro Jachetti, MD
alessandro.jachetti@policlinico.mi.it