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# The Role Of The Pulmonologist In Humanitarian Missions: Framework, Practices, And Ethics

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***Abstract***
*In humanitarian settings, respiratory diseases represent a major source of morbidity and require expertise adapted to fragile environments (limited resources, complex logistics). The pulmonologist contributes clinically and within the health system/operational sphere, with emphasis on local capacity strengthening and sustainability of interventions.*
*- This article outlines a detailed framework for missions, required competencies, and ethical considerations to guide pulmonologists and multidisciplinary teams involved in humanitarian work.*

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## I. Context And Justification For Involving A Pulmonologist In Humanitarian Aid

Humanitarian contexts expose populations to multiple exposures: overcrowding, indoor air pollution, and barriers to care. This situation fosters acute respiratory infections and chronic respiratory diseases, creating growing needs for screening and context-appropriate management. [1,2,3]

The pulmonologist brings targeted clinical and data-driven expertise for respiratory conditions and guides technical/organizational choices specific to fragile settings (e.g., oxygen therapy, inhaled therapies, and non-invasive ventilation strategies when available). [4]

## II. Roles And Missions Of The Pulmonologist On Humanitarian Missions

Direct clinical care

The pulmonologist diagnoses and manages acute respiratory infections and chronic respiratory diseases, adapting inhaled therapies and following vulnerable patients (children, elderly, immunocompromised). Management of tuberculosis and, where feasible, drug-resistant TB is a key component when local health systems and resources allow. [5]

He/she can implement simplified triage, referral, and management protocols for bronchopulmonary exacerbations in low-resource environments. [6]

Public health and prevention

Beyond individual care, the pulmonologist contributes to the prevention of respiratory infections and to promoting healthy indoor environments (reducing exposure to household smoke and dust). He/she supports vaccination programs and assists epidemiological surveillance of respiratory illnesses, aligned with local health system capacity. [7]

Capacity strengthening of local teams

Effective missions rely on training local caregivers (nurses, non-specialist physicians, community health workers) and on developing locally adapted protocols. The pulmonologist can create training materials, practical guides, and simple algorithms for respiratory care and TB control. Skills transfer may include, when feasible, introducing simple tools such as oxygen therapy and non-invasive ventilation techniques. [8]

Logistics and coordination

Logistics involve assessing needs for oxygen, inhalation devices, and portable diagnostic tools, and integrating respiratory activities into local health plans and referral networks. Multidisciplinary teamwork and coordination with health authorities and humanitarian partners are essential for sustainability. [9]

Operational research and ethics

Data collection on respiratory morbidity and evaluation of interventions help guide future missions. Ethical considerations include equity in resource allocation, informed consent, and continuity of care after departure of field teams. [10]

## III. Core Competencies And Practical Approaches

The pulmonologist should master context-appropriate clinical skills: diagnosing respiratory infections and exacerbations of chronic diseases (asthma, COPD), and managing inhaled therapies despite logistical constraints. Portable tools (pulse oximetry, basic near-patient diagnostics) and, when feasible, non-invasive ventilation and oxygenation procedures should be used judiciously. [11]

In terms of public health and limited-context diagnostics, it is crucial to implement simple TB screening, triage, and promotion of respiratory hygiene, with training of local teams for community follow-up. [12]

Training and knowledge transfer are central: develop educational materials, practical fiches, and context-adapted checklists to support local teams after departure. [13]

Finally, an interdisciplinary approach and ongoing adaptation to logistical constraints (inventory, cold chain, power supply, safety) are essential. [14]

## IV. Typical Contexts And Example Situations

- Refugee and displacement camps
- Higher burden of respiratory infections and exposure to household smoke; challenges in TB screening and long-term treatment in unstable environments. [15]
- Post-conflict areas or low-resource settings
- Need for simple, robust diagnostic and therapeutic tools, with progressive introduction of oxygen therapy and infection prevention measures. [16]

## V. Operational Processes And Practical Guidance

- Before the mission
- Develop context-appropriate respiratory assessment protocols and plan initial training for local teams. [17]
- During the mission
- Establish clear triage and community-level referral pathways to ensure follow-up. Prioritize high-impact interventions (TB control, oxygen therapy) when available. [18]
- After the mission
- Transfer responsibilities and support sustainability, documenting lessons learned and providing remote training if possible. [19]

## VI. Resources And Recommended Training

- World Health Organization (WHO) – Tuberculosis and respiratory diseases: frameworks, data, and fact sheets. [20]
- WHO – Chronic respiratory diseases and prevention in humanitarian settings. [21]
- Médecins Sans Frontières (MSF) – Field Guide: tools and protocols for medical care in crisis settings. [22]
- International Committee of the Red Cross (ICRC) – Health care in danger: principles and risks for health services. [23]
- UNICEF – Refugees and migrants health: policy and programmatic guidance. [24]

## VII. Conclusion:

- The pulmonologist in humanitarian missions assumes both clinical and operational responsibilities, with emphasis on prevention, local capacity strengthening, and intervention sustainability. [25]
- Practices should be adapted to available resources while upholding ethics, patient safety, and collaboration with local partners. [26]
- Success depends on close coordination with local teams and humanitarian partners, ongoing training, and documentation of lessons learned to guide future interventions. [27]

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