

Cross Sectional Study of “Oropharyngeal carriage of *Neisseria meningitidis* among individuals aged 10 to 21 years in Tripoli, Libya”

Project Information

- ◆ Department: Public Health Programs
- ◆ Unit Disease Control and Prevention

OBJECTIVES

The project aims to increase the understanding of the meningococcal disease epidemiology in Libya. Hence, assess the need for vaccination of high-risk groups.

BENEFICIARIES

The Ministry of Health, the National Centre for Disease Control and Central Public Health Laboratory. The indirect beneficiaries are adolescents and young adults in educational facilities with higher risks for *Neisseria meningitidis*.

PROJECT DESCRIPTION

GHD|EMPHNET will collaborate with Libya Ministry of Health (MOH)/National Center for Disease Control (NCDC) to assess the capacity of the study laboratory and identify the additional capacities necessary to reach project objectives. The capacity for *Neisseria meningitidis* detection including existing workforce, equipment, infrastructure, waste management and availability of different diagnostic tools and methods as well as biosafety and biosecurity aspects will be assessed. GHD|EMPHNET will provide needed kits and reagents, and data collection tools. Additionally, the study team members will be recruited and trained on data and specimen collection. The laboratory technicians will be trained on (Polymerase Chain Reaction) PCR diagnostic testing. Monitoring will be conducted to ensure diagnostic assay techniques and processes in the laboratory are standardized and the Standard Operating Procedures (SOPs) for the PCR are followed. Upon completion of the data and specimen collection at study targeted sites, GHD|EMPHNET will perform data analysis and development of study report with findings that will be presented to stakeholders.

REGIONS OF WORK

The cross-sectional survey will be conducted at academic institutions in Tripoli, Libya.

PROJECT PHASES

This project involves three phases, as following:

Phase I – Preparations: Assess the capacity of designated laboratories and enhance the diagnostic and logistical capacities. Form and train study central and field team.

Phase II – Implementation and Monitoring: Collect data and specimens from 18 schools and one university in Tripoli. Conduct follow up visits and monitoring of the laboratory quality results.

Phase III – Analysis and Reporting: Perform data analysis and develop the study report with findings and disseminate to key stakeholders.

Project Start and End Date	April 1 st , 2020 – June 30 th , 2021
Funded by	SANOFI PASTEUR S. A.
Collaborators	National Centre for Disease Control and Central Public Health Laboratory



Currently . . .

The meningococcal disease is an illness often severe and can be deadly causing infection of the lining of the brain, spinal cord and blood stream with a bacteria called *Neisseria meningitidis*. This disease spread by respiratory secretion and tends to spread among infants, adolescents, and young adults, wherever large groups of people gather like schools and campuses.

The proximity of Libya to the “Meningitis Belt” of Sub-Saharan African with the highest incidence of the disease, the lack of capacities in surveillance to determine the burden of meningococcal disease, and the lack of understanding of strain-specific epidemiology compromise the ability to assess the required strategies to reduce the impact of the disease in the future, not only for Libya but also for surrounding countries and the region.

What’s Next . . .

Building surveillance, epidemic investigations as well as national lab capacities in Libya, will assist Libyan NCD to:

- Determine the prevalence of meningococcal carriage rate among different age group included in the study
- Define the serogroup distribution of *Neisseria meningitidis* by age, gender, and patient characteristics
- Identify the risk factors related to the carriage of *Neisseria meningitidis*

GHD|EMPHNET considers this project a capacity-building partnership that will contribute to making epidemiological information available on the meningococcal disease burden and assist in informing vaccination strategies to prevent the incidence of the disease.

Four laboratory
technicians will be
trained on laboratory
molecular diagnostics
PCR technique

1200 samples will
be collected from
18 primary and
secondary schools
and one university

Report will be produced
with findings and results
to understand the
meningococcal disease
epidemiology in Libya

GHD and EMPHNET: Working together for better health

Global Health Development (GHD) is a regional initiative created to support countries in the Eastern Mediterranean Region strengthen their health systems in response to public health challenges and threats. GHD was initiated to advance the work of the Eastern Mediterranean Public Health Network (EMPHNET) by building coordination mechanisms with Ministries of Health, International Organizations, and other institutions to improve population health outcomes. As an implementing arm to EMPHNET, GHD aligns its strategies with national policies and directions, while serving as a collaborative platform dedicated to support national efforts in promoting public health policies, strategic planning, sustainable financing, resource mobilization, public health programs, and other related services.

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