Currently diphtheria is widely transmitted in Yemen and Bangladesh, particularly amongst the refugees in the IDPs camps. From 3 November 2017 through 12 December 2017, a total of 804 suspected diphtheria cases including 15 deaths were reported among the displaced Rohingya population in Cox’s Bazar, Bangladesh. In Yemen, from 13 August through 21 December 2017, a total of 333 suspected cases including 35 deaths (case fatality ratio = 10.5%) have been reported from 20 governorates.

According to the data recorded by the Ministry of Health, Republic of Indonesia, in 2017, there were 954 cases of diphtheria in 170 districts/cities in 30 provinces with 44 fatalities, bringing the Case Fatality Rate (CFR) to 4.6%. This CFR is lower than the global diphtheria CFR recorded by the WHO, which is 5%-10%. 
Diphtheria complications could lead to death. The disease is caused by *Corynebacterium diphtheria* which produces a toxin that can harm or destroy human body tissues and organs, damaging heart muscles and causing inflammation. The inflammation of the nerves may result in paralysis and cause difficulty in breathing.

A person with diphtheria bacteria inside her/his body could show no or mild symptoms. Diphtheria symptoms come gradually, normally start 2 – 5 days after exposure and range from mild to severe. It could begin with sore throat and high fever up to more than 38°C, greyish white/blackish membrane at the back of the throat, and swollen (bull) neck. Some people could carry the bacteria without showing symptoms while still able to transmit the disease.
Anybody at any age and any social-economy status are at risk of being infected by diphtheria, hence regardless of age, we should protect ourselves and our family from the diphtheria by getting complete immunization.

While the epidemiological surveillance data in Indonesia shows that the majority of cases are at the age of 5 to 9 years old, diphtheria cases are found in people over 14 years old. In order to develop herd (community) immunity, immunization should be given to anybody, at any age, once every ten years (for boosters). Immunization should achieve high coverage at all levels.
Transmission occurs through droplets and close physical contact. Diphtheria spreads easily among people by direct contact or through droplets, like from coughing or sneezing. Open wound could be the entry point of the bacteria.

Once you or a person around you shows any diphtheria symptoms, it is best to immediately seek medical help. Treatment must immediately be given, and laboratory examination is necessary for case confirmation.

Once a person is clinically identified as having diphtheria, all people having physical contact with the infected person should be identified, reported and given proper prophylaxis. Patient with diphtheria symptoms will get Anti-diphtheria serum, and based on medical examination, may be given antibiotics.
MOST IMPORTANTLY, HOW DO WE PREVENT DIPHTHERIA TRANSMISSION?

Keeping hygiene, washing hands with running water and soap, and adopting healthy lifestyle are the common way to protect ourselves from any disease, including diphtheria. It has been clinically and scientifically proven that vaccination is the most effective and cost-effective way to create immunity, preventing a person and community from getting diphtheria. Implementing proper cough etiquette and wearing mask may also minimize the risk of getting the disease.

In Indonesia, an outbreak status is applied when one person is identified as having diphtheria. Following diphtheria outbreaks in districts/cities in 2017, the Government of Indonesia has started an Outbreak Response Immunization (ORI) in December 2017.
There is a significant relevance between the increasing numbers of identified diphtheria cases with the immunization coverage. Diphtheria could be controlled when immunization coverage is high, without leaving any pocket areas in the entire parts of the country.

When children do not have complete immunization, they are at risk of getting vaccine preventable diseases, including diphtheria. It is important for children in Indonesia to complete their basic immunization as a part of routine health programme.

People without complete immunization have the possibility to transmit diphtheria to others. Complete immunization is not only protecting individuals and families but also community. With minimum of 95% of children having complete immunization, herd immunity will be developed, minimizing the probability of the diphtheria bacteria to transmit.
In Indonesia, the complete diphtheria immunization means having 7 diphtheria vaccinations by the time a child reaches the fifth grade, with the following schedules:

- 3 doses of basic immunization (DPT-HB-Hib/Diphtheria, Pertusis, Tetanus, Hepatitis B and Haemophilus Influenza Type B), at the age of 2, 3 and 4 months old
- 1 dose of DPT-HB-Hib at the age of 18 months old
- 1 dose of DT (Diphtheria-Tetanus) at the age of 6-7 years old or at 1st grade of elementary school/level
- 1 dose Td (Tetanus-Diptheria) at the age of 7-8 years old or at 2nd grade of elementary school/level
- 1 dose Td at the age of 10-11 years old or at 5th grade of elementary school/level

Immunity against diphtheria immunity wanes over time, hence WHO recommends diphtheria vaccination booster every 10 years.
Indonesia implements a basic immunization programme for children from age 0 to 1 year old, which are free of charge in government health facilities such as community health centres (Puskesmas) and integrated community post (Posyandu). Additional immunizations and boosters, including ORI, are given to school-age children also at schools.

Vaccination is given to healthy individuals. Should you have health concerns or high fever, please consult your doctor prior to getting the vaccination. They will advise as to when you could get your diphtheria shots.
WHAT IS ORI?

Diphtheria ORI 2017-2018 in Indonesia

Outbreak Response Immunization, shortened as ORI, is a catch up campaign conducted in response to an outbreak. The targets of ORI are decided based on an epidemiology investigation, based on the cases’ age and geographical distribution, people’s mobility, and population density in the areas over the last few years.

ORI must be given three times/doses, within the following period of time:
1 month between the first round/dose and the second round/dose, and
6 months between the second round/dose and the third round/dose

The vaccines given during ORI are as follows:
- Age 1 - < 5 years old using DPT-HB-Hib vaccines,
- Age 5 - <7 years old using DT vaccine,
- Age≥ 7 years old using Td vaccine

Responding to the diphtheria outbreak last year, ORI was started on 11 December 2017 in 12 districts/cities in 3 provinces. In order to improve effective control over diphtheria transmission, ORI has been expanded to other 68 high risk districts/cities in 11 provinces. Based on the epidemiological considerations, ORI targets children of age 1 year old until below 19 years old.
Immediate medical examination and treatment for people showing diphtheria symptoms prevents the disease from further transmission.

Every person having close proximity and physical contacts to the person with diphtheria has high risk of getting infected, too. They also need to get medical examination. Health care workers will give medicine to these contacts, as a preventive measure.

After the outbreak is controlled, improvement on coverage and routine immunization quality should take place, particularly for newborns, children under two years old, and all elementary school students or the children within the same age group. The coverage of diphtheria routine immunization should be maintained at the same rate of 95%.
Get diphtheria vaccination. If you have children, give them the complete diphtheria immunization. Share information about diphtheria to your family, friends, colleagues, relatives, and community. Give them information about diphtheria prevention, along with the importance of getting complete vaccination and the risk of not getting anybody immunized.
Disease prevention is an investment and a very economically effective measure to ensure people's welfare, which in return could potentially save the budget of local governments. Government needs to prioritise, provide necessary supports, and improve all activities related to the prevention of diphtheria outbreak, through immunization, epidemiological surveillance, implementation of healthy lifestyle, and more.

Specific to immunization programme, government must ensure that every child gets complete immunization at the recommended ages. In order to reach the targeted coverage, central and local governments needs to work in harmony to ensure the infrastructure for the storage and transportation of vaccines, provision of necessary logistics up to the required specifications and quality, implementation of immunization programme which are in accordance to the standards, and that every health worker has required capacity, to reach all targets.

**WHAT COULD PEOPLE’S REPRESENTATIVE DO TO PREVENT THE WIDE TRANSMISSION OF DIPHTHERIA AND OTHER VACCINE PREVENTABLE DISEASES?**

People’s representatives (members of parliament) should ensure that local governments have sufficient resources to undertake all activities to prevent diphtheria and other vaccine preventable diseases from transmitting widely. There are various activities to conduct which among others are epidemiological surveillance, immunization programmes, sanitation and hygiene programme.

The people’s representative could engage community and religious leaders to support the preventive activities, which include increasing community awareness about immunization, as well as taking contributing actions to prevent the rising of anti-vaccination individuals and groups (anti-vax).
Embassies and consulates should ensure that their staff and the staff’s families get complete diphtheria vaccination. They could also provide health advice to people traveling to Indonesia about diphtheria vaccination.

Nowadays, disease outbreaks, including diphtheria, could transmit widely and rapidly around the globe along with the high rate of people’s mobility. Supports given to prevent a disease outbreak in one country could benefit other countries. International community may play role in preventing global diphtheria outbreak by supporting immunization programmes in countries and globally.
One person’s health depends on a variety of factors, namely the person’s environment, education, economy, supporting infrastructure, and social relations. Understanding the vast range of contributing factors, all government institutions and multisectoral organizations must support and contribute to immunization programme. Community education and mobilization by all sectors at national and subnational levels are imperative.

School principals and teachers are the key to school based immunization program helping the screening of immunization status of the children, advising the completion of student’s vaccinations, and ensure that students get their immunization in accordance with their ages. Schools could conduct education to teachers, parents and students on immunization and the importance of it as well as the recommended immunization schedule.