

HEALTH PROGRAM

CHAP 5
BY MENA

Unit 5 Blindness control program

□ **Definition Cataract, trachoma, glaucoma and childhood blindness**

Trachoma

An infection caused by *Chlamydia trachomatis* leading to inflammation and scarring of the cornea and conjunctiva;

A common cause of blindness in underdeveloped countries

Cataract

A cataract is an opacity (cloudiness) of the lens.

Causes of cataract include disease, injury, chemicals, and exposure to physical forces, especially the ultraviolet radiation in sunlight.

The cataracts that frequently appear with age may result from **exposure to environmental factors** in combination with degeneration attributable to aging.

Glaucoma

Glaucoma is an abnormal increase in pressure within the eyeball.

It occurs **when more aqueous humor is produced than can be drained away from the eye.**

There is pressure on blood vessels in the eye and on the optic nerve, leading to blindness.

There are many causes of glaucoma, and screening for glaucoma should be a part of every routine eye examination.



Fetal infection with German measles (rubella) early in pregnancy can cause glaucoma, as well as cataracts and hearing impairment.

Glaucoma is usually treated with medication to reduce pressure in the eye and occasionally is treated with surgery.

Childhood blindness

Vitamin A deficiency is the most preventable cause of corneal ulceration and blindness in developing countries.

The prevalence of subclinical vitamin A deficiency in children **under five years of age in Ethiopia is 27%.**

The prevalence of **Bitot's spots**, **corneal xerosis** and **ulceration and corneal scar** in the hyper endemic areas of Bale and Arsi are **5.0%**, **0.8%** and **0.5%**

5.1 TRACHOMA EPIDEMIOLOGY IN THE WORLD

Epidemiology Trachoma—a sequela of ocular disease in developing countries—continues to be a leading cause of preventable infectious blindness worldwide.

The WHO estimates that ~6 million people have been blinded by trachoma and that ~1.3 million people in developing countries still

The trachoma- hyperendemic areas of the world are in **northern and sub-Saharan Africa, the Middle East, drier regions of the Indian subcontinent, and Southeast Asia.**

In hyperendemic areas, the prevalence of trachoma is essentially 100% by the second or third year of life.

Active disease is most common among young children, who are the reservoir for trachoma.

By adulthood, **active infection is infrequent but sequelae result in blindness.**

- Trachoma **is transmitted through contact with discharges from the eyes of infected patients.**
- Transmission **is most common under poor hygienic conditions and most often takes place between family members or between families with shared facilities.**
- Flies can also transfer the **mucopurulent ocular discharges**, carrying the organisms on their legs from one person to another.

➤ **5.2 Trachoma Epidemiology in Ethiopia**

In Ethiopia, the prevalence of blindness and low vision **are one of the highest in Sub-Saharan Africa**

➤ Ethiopia, **with over 3% of the global blindness** burden carries disproportionately high burden of blindness and low vision.

According to the EFY 2005/6 National Survey on Blindness, **Low Vision and Trachoma, the prevalence of blindness was 1.6% and low vision 3.7% respectively**, which represents one of the highest prevalence rates in the world.

However, it is estimated that about **90% of the blindness in Ethiopia is avoidable.**

The main causes of *blindness* in Ethiopia show that cataract is responsible for 49.9% of the blindness, Trachoma (11.5%), other Corneal Opacities (7.8%), Refractive Errors (7.8%) and Glaucoma (5.2%).

Similarly, **the major causes of low vision were: cataract (42.3%), Refractive Errors 33.4% and Trachoma 7.7%.**

Subsequently, there are about 638,720 blind people and an additional **1,252,080 people with low vision due to cataract; 147,200 blind people due to trachoma, more than 50,000 are blind due to glaucoma and**



Ethiopia was among the first countries in Sub Saharan Africa **to have developed a national VISION 2020 Plan and to have established a National Committee for Prevention of Blindness (NCPB),** which is **led by the Ministry of Health and includes all relevant stakeholders working in the eye health sector in the country.**

Ethiopia has one of the highest prevalence of **active trachoma** which remains one of the major health problems, and **a leading cause of blindness**, in the country.

The trachoma survey carried out by the Global Trachoma Mapping Project (GTMP) in 2013 revealed that trachoma is **endemic in 604 rural woreda with 73,164,159 people being at risk of infection.**

The risk of blinding trachoma is greater in **women than in men and impedes daily activities even when they do not have significant visual impairment or blindness.**

Ethiopia is implementing the SAFE strategy recommended by WHO and the annual TT surgery is steadily increasing from 15,000 in 2001 to over 140,000 surgeries per year in 2012 and 2013 respectively.

5.3 Epidemiology and burden of disease:

Ethiopia has the highest burden and prevalence of active trachoma globally (**30% of the subSaharan trachoma burden is estimated to occur in Ethiopia**).

The disease remains a major health problems and a leading cause of infectious blindness in



Trachoma mapping surveys were conducted under the auspices of the Global Trachoma Mapping Project (GTMP) in 2013/2014.

These data, combined with impact surveys following trachoma control interventions in Amhara region revealed **that 657 woredas are endemic for trachoma** as defined as a prevalence of **trachomatous follicular (TF) $\geq 5\%$ among children 1-9 years of age.**



An estimated 74,995,468 people are at risk of infection.

The national average prevalence of active trachoma (TF) is 25.4%, ranging from 0.2% to 73.4% Likewise, the prevalence of **blinding trachoma – trachomatous trichiasis (TT)**, stands at 4% nationally, and varies from 0.2% to 12% among people aged 15 years and over across the country.



The findings indicate that the country prevalence for both indicators is much higher than the WHO thresholds for treatment (TF<5% and TT<1 per 1000 population, respectively).

Mapping remains to be completed in 20 districts of Somali Regional States.

The completion of this will ensure that no one is left behind in ending the scourge of trachoma.

5.4 Status of programme implementation:

Ethiopia has been implementing the WHO recommended SAFE strategy for more than decade to control trachoma.

Geographical coverage of SAFE intervention has been increased from **3 woredas in 2003 to 358 woredas in 2015** as a result of **massive effort in the nationwide mapping 2013/14.**

TT surgery is steadily increasing - from **15.000 to over 140.000 surgeries per year**

In areas where interventions are underway, periodic impact evaluations were made.

Amhara is the region where complete geographic and population coverage has been achieved even before the nationwide trachoma mapping.

In Amhara, where the intervention existed previously, impact surveys carried out during 2013/14 revealed a marked drop in TF prevalence from 62.6% (at baseline) to 26.3% while TT decreased from 5.2% (at baseline) to 4%

A decreased prevalence is observed in many of the woredas, **9 woredas achieved the elimination target of TF prevalence below 5%.**

This indicates the importance of the SAFE strategy while it also advocating for more robust, coordinated, and multi-sectorial action to address the components for realizing Ethiopia's commitment towards the global goal of eliminating blinding trachoma by 2020 (GET2020).

A noteworthy achievement is the nationwide trachoma mapping surveys conducted in

This mapping supports the evidenced-based trachoma action plan at both the national and regional levels.

Despite **efforts in decreasing the TT surgery backlog and improving the access and quality of trichiasis surgery** services, there are still an estimated **650,845 people that require urgent eyelid surgery for trichiasis.**

This huge TT backlog needs to be cleared to achieve the national target of the elimination of blinding trachoma by 2020 as well as to prevent blindness and to ensure improved



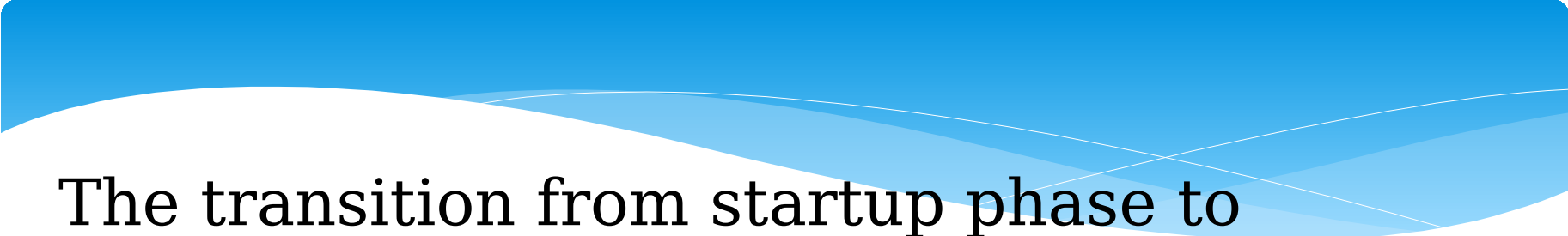
In support of the existing efforts the Honorable Minister of Health initiated an ambitious campaign to clear the TT backlog in endemic woredas nationally within 18months.

The FMOH is committed to setting an example both for the country and the global trachoma community by clearing the trachoma backlog which accounts **for 30% of the sub-Saharan trachoma burden.**

The initiative was officially launched in February 2015.

Four zones were designated to be included in the startup phase; **one each from the four regions with the highest TT backlog.**

The pilot sites were **Tigray Region-Central zone, Amhara Region-East Gojam Zone, Oromia Region-Jimma Zone and SNNP Region-Gurage Zone**



The transition from startup phase to national scale up took place in October and November 2015 with ensuring the clearing of the TT backlog by the end of 2016 a national priority for trachoma control program.

While the water, sanitation, and hygiene (WASH) sector was not previously well integrated to trachoma control activities; the country has been making huge efforts in improving the WASH sector

The 2014 Mini-DHS survey revealed that household (HH) **latrine coverage with improved (pit latrine with slab) and non-improved (pit latrine without slab) latrines to be 2.5% and 54.7% respectively.**

water from improved and unimproved sources was 54.5 and 44.7% respectively.

The absence of standard dicators for measuring facial cleanliness of children remains a challenge. Furthermore, much effort is required to ensure collaboration