**Trachoma Prevention Toolkit for Face Washing and Environmental Improvement (F&E)**

**Trachoma Global Overview**

Trachoma, an infection of the eye caused by *Chlamydia trachomatis*, ranks worldwide as the most common preventable cause of blindness and the second most common cause of blindness after cataract. It has been estimated to cause 15% of the world's blindness. The disease is endemic in 48 countries in Latin America, Africa, the Middle East, Asia, and Australasia and is most prevalent in poor, rural communities with lower standards of hygiene and sanitation.

In 2003, the WHO estimated that 84 million people were suffering from active trachoma, and 7.6 million were severely visually impaired or blind as a result of trachoma. When visual impairment occurs during the productive years of life, it results in economic hardship for families and communities: it has been estimated that in countries ranked with a low Human Development Index (http://hdr.undp.org/en/data) the morbidity arising from trachoma is estimated to cost US $2.9 billion per year in lost workforce productivity.

The world's leading cause of preventable blindness, trachoma spreads easily from person to person. Of the people at risk for trachoma, most are children. Women are almost twice as likely as men to develop the advanced stage of the disease, which can lead to painful disability or blindness.

Trachoma is prevalent in poor, rural communities that lack the tools for basic hygiene, clean water, and adequate sanitation. Infections are spread via contact with dirty clothes, hands, and flies that are attracted to people's eyes. In the advanced stage of the disease, called trichiasis, a person's eyelashes turn inward, scraping the cornea with every excruciating blink, causing scarring, diminished vision, and, eventually, blindness.

In 1997, the WHO organized the Alliance for Global Elimination of Trachoma by 2020 (GET 2020) and recommended the 'SAFE' strategy as a basic framework for dealing with trachoma. This strategy involves the use of Surgery to treat advanced stages of disease, Antibiotic treatment with azithromycin, and the promotion of Facial cleanliness and Environmental change.

**Trachoma Global Statistics**

Globally, 1.2 billion people live in endemic areas, 40.6 million people are suffering from active trachoma, and 8.2 million have trichiasis; 48.5% of the global burden of active trachoma is concentrated in five countries: Ethiopia, India, Nigeria, Sudan and Guinea. On the other hand, 50% of the global burden of trichiasis is concentrated in only three countries: China, Ethiopia and Sudan.
Overall, Africa is the most affected continent; 27.8 million cases of active trachoma (68.5% of all) and 3.8 million cases of trichiasis (46.6% of all) are located in 28 of the 46 countries in the WHO African Region, with an estimated population of 279 million living in endemic areas. The disease is still prevalent in some countries or areas of countries of four other WHO regions: the Eastern-Mediterranean (12 countries, population in endemic areas 144 million), the Western Pacific (11 countries, population in endemic areas 400 million), South-East Asia (three countries, population in endemic areas 362 million) and the Americas (three countries, population in endemic areas 58 million). The European region is the only WHO region to be free of trachoma. According to these estimates, the ultimate intervention goals require antibiotic treatment for some 340 million people and trichiasis surgeries for 8.2. Trichiasis, however, continues to occur in adults exposed to trachoma in the past: the UIG for trichiasis surgery determined in this paper does not make projections on the incident cases and is therefore an underestimate.

**Trachoma: Situation and Trends**

Blinding trachoma is hyper endemic in many of the poorest and most remote rural areas in 57 countries of Africa, Asia, Central and South America, Australia and the Middle-East. Roughly half of the global burden of active trachoma is concentrated in 5 countries (Ethiopia, India, Nigeria, Uganda and Sudan), and that of trichiasis in 4 countries (China, Ethiopia, Nigeria and Uganda). Overall, Africa is the most affected continent: 27.8 million cases of active trachoma (68.5% of all cases globally) and 3.8 million cases of trichiasis (46.6% of all) occur in 28/46 countries in the African Region. The highest prevalence of active trachoma have been reported from Ethiopia and Sudan, where the infection often occurs in more than 50% of children younger than 10 years; trichiasis is found in up to 19% of adults. Implementation of the SAFE strategy will lead to the elimination of blinding trachoma by 2020. In 2008, about 60% of the population in need received preventive chemotherapy using antibiotics and about 45% received surgical care. Ghana, the Islamic Republic of Iran, Morocco and Oman have reported reaching their elimination targets.

**Government of Uganda Resources**

Within the Government of Uganda Resources section, one can access information on Trachoma surveys carried out in various districts of Uganda including: Jinja, Iganga, Nakapiripirit, Mayuge, Kotido, Moroto and Bugiri. Other resources include an overview of water sanitation and hygiene in Uganda.

**Resources:**

- **Overview of Water, Sanitation and Hygiene in Uganda**

  Sanitation is a process where people demand, develop, sustain a hygiene and health environment, promotion of skills and practices which enable communities to...

  Dispose of human excreta (faeces& urine), dispose of solid and liquid waste, (rubbish, garbage, animal waste, dirty water) safely, keep drinking water safe from source to the point of use; (safe water chain) adopt and practice high levels of personal, domestic and public & food hygiene, control of insects, vectors & rodents which spread diseases (flies, rats & mosquitoes).

- **Trachoma Survey Reports - Uganda**
In its 5 year Health Sector Strategic Plan (HSSP II), MOH earmarked Trachoma for elimination from the 24 affected districts. The government is implementing the SAFE strategy using a multi-pronged approach at national and district levels. One of the activities is mass distribution of antibiotics in seven districts with TF prevalence of 10% and above. The are several survey reports included in this document.

Trachoma Prevalence studies in these districts were conducted under the guidance of a National Trachoma Task Force which was mandated by the National Prevention of Blindness Committee (NPBC) of MoH. Funds were availed by the NTD Programme through RTI.

The surveys were conducted using the WHO standardized protocol. The research teams comprised of Ophthalmologists and Ophthalmic Clinical Officers, most of whom had prior survey experience. The aim was to estimate the prevalence of trachoma and its risk factors in these districts. We intend to use the results to guide trachoma control activities and as a baseline for assessing the impact of the control programme in these districts.

Basing on the Trachoma survey findings in these districts, there is urgent need to initiate Trachoma Control activities and integrate them in the existing PHC services in the districts.

**Partner Resources**

The Partner Resources section provides a wide range of educational and informative pieces from across the globe covering various components of the WHO recommended SAFE strategy. Toolkit users can access an overview of Trachoma as well as a resource focused on how communities can prevent and control Trachoma using various interventions like face washing, environmental improvement, mass drug administration and surgery.

Program managers will particularly find the resources useful as they plan interventions for Trachoma prevention and control.

**Resources:**

- **Trachoma: Poverty affects eye health**

It would be hard to find a better example of the link between vision and development than that of trachoma. Simply put, trachoma is a disease of poverty. This infectious eye disease is endemic in many of the poorest communities in the developing world, with more than 300 million people living in 53 different countries at risk. Unsurprisingly, Africa is the continent most affected, with Ethiopia carrying the largest burden.

LIGHT FOR THE WORLD is a European confederation of national development NGOs committed to saving eyesight, improving the quality of life and advocating for the rights of persons with disabilities in underprivileged regions of our world.

LIGHT FOR THE WORLD has joined the global coalition to eliminate blinding trachoma by the year 2020. We are also directly scaling up our trachoma work in our partner countries of Ethiopia, South Sudan and Mozambique and we are committed to the WHO-endorsed SAFE strategy.

Trachoma must be tackled as a wider poverty-related development issue rather than simply an eye health issue in order to be effective. In endemic areas the prevalence of trachoma can easily serve as an indicator of the success of poverty eradication programmes.
As the article on Water, Sanitation and Hygiene (WASH) in this issue rightly points out, inclusive, community-driven approaches are essential to removing the environmental, attitudinal and institutional barriers that prevent community members from executing their right to health and other basic human rights.

In this way, the work on trachoma aligns very well with LIGHT FOR THE WORLD’s strategic aim of an inclusive society, where all persons can participate equally in their social, political, economic and cultural environment.

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- **WASH and the Neglected Tropical Diseases: A Global Manual for WASH Implementers**

This NTD manual is intended to enable WASH practitioners who work at the country level to contribute to the reduction of WASH-preventable NTDs. To achieve this, the manual is designed to:

- Deepen WASH practitioners’ understanding of how WASH services can prevent the five mentioned WASH-preventable NTDs.
- Promote targeting of WASH-sector activities in NTD-endemic areas to facilitate deliberate and sustainable WASH programs for health gains.
- Promote collaborative measurement and evaluation of NTD-specific health outcomes by
WASH sector implementers (governmental and NGOs) and health professionals (governmental and NGOs).

- Drive funding to integrated WASH and health programming by providing key strategies and messages for advocacy and policy development.

To help achieve these objectives, this manual includes: A background discussion on WASH and the NTDs., disease-specific chapters that describe how WASH services can alleviate the disease burden of five WASH-preventable NTDs: Soil-transmitted helminthiasis, Trachoma, Schistosomiasis, Lymphatic filariasis, and Guinea worm.

This manual also provides further resources and links for learning more about WASH and the NTDs. By making connections with NTD control programs, WASH sector implementers may discover opportunities to share existing human and capital resources with NTD control programs to maximize the efficiency of these programs.

• **Eliminating Blindness from Trachoma Infection - Lessons learned from the Conrad N. Hilton Foundation**

This document focuses on the work done by Conrad N Hilton Foundation in the elimination of blindness from Trachoma Infection. The Hilton Foundation has:

1. **Played a critical role in the trachoma elimination effort**, contributing directly to elimination in a number of countries, including Ghana, which met almost all elimination targets for trachoma in 2010, and Mali and Niger, which are poised to eliminate trachoma by 2015.

2. **Contributed formatively to development of the SAFE strategy**, with particular support to development of the F and E components in the early years of the GET 2020 campaign.

3. **Built capacity at national and international levels for the continuing effort to eliminate blinding trachoma by 2020** by shaping leadership patterns in the field with its initial and ongoing support to The Carter Center and Helen Keller International.

4. **Continued to contribute to knowledge generation** in the field in a variety of ways, including recent grants for trichiasis surgery improvement, past grants for trachoma curriculum development, support to international partnerships, and annual progress meetings hosted by The Carter Center.

The Foundation has made critical contributions to trachoma control and prevention, but the goal of elimination is not yet met. Strategic and practical tools exist for continued success.

• **How Communities can Control Trachoma**

The key to trachoma prevention is not complex infrastructure, but rather individual and household behaviour that prioritizes and acts to ensure that faces are clean, that all household members dispose of their faeces in a safe way, and that households are free of material that attracts flies.

Facial cleanliness, hygiene promotion, and access to water and sanitation should be thought of as the cornerstones of trachoma prevention. The importance of the F component is two-fold: first, washing children’s faces ensures that infectious eye and nose discharge that can be spread to others is washed away. Secondly, removing mucus, traces of food, and other material from children’s faces decreases their attractiveness to eye-seeking flies that can carry the trachoma causing bacteria from one child’s face to another.
Water Sanitation & Hygiene (WASH) : THE SILENT WEAPON AGAINST NTDS

Working together to achieve prevention, control and elimination
Water, sanitation and hygiene (WASH) are a crucial but all too often underplayed part of the prevention and control of Neglected Tropical Diseases (NTDs). Diseases including Trachoma, Soil-Transmitted Helminthes (STH) and Schistosomiasis all demand practical WASH interventions so that their prevention, treatment and ultimately their elimination can be achieved by the international community as soon as possible. This document focuses on the link between WASH and NTDs.

Materials from Village Health Project Iganga (Uganda)

The Village Health Project in Iganga (Uganda) implements the WASH program which is based on the Participatory Hygiene and Sanitation Transformation (PHAST). This approach has the objectives of improving hygiene behaviors to reduce diarrheal disease and encouraging effective community management of water and sanitation services.

The PHAST approach is based on the principle that the participation of communities in their own projects will empower the community and improve its decision making about the services it needs and wants to maintain. As communities gain awareness of their water, sanitation and hygiene situation through participatory activities, they are empowered to develop and carry out their own plans to improve this situation.

PHAST is based on seven steps using participatory tools, from problem identification and analysis to planning and selection of appropriate solutions. These solutions may include both construction and management of new physical facilities as well as adoption of safer individual and collective behavior change.

The Village Health Project (VHP) works hand in hand with the local leaders, sub county officials, the VHTs and the community. They hold education sessions in the village and then start up a sanitation campaign in that village.

During the campaign, VHP works with the community to put up Tippy Taps, Garbage pits, Plate stands, Latrines and Bathroom and the VHTs monitor the people to see that they are actually putting up these facilities.

VHP also combines PHAST with another approach called CLTS (Community Total Led Sanitation) as one of its goals for these campaigns is to discourage open defecation.

VHP uses visual aids which are made locally by either the VHTs or by our Volunteers at work.
Sightsavers is part of a coalition of organisations that has pledged to eliminate trachoma by the year 2020. Find out more about the International Coalition for Trachoma Control here. This sounds ambitious, but elimination is possible - by following the World Health Organization's SAFE strategy for tackling trachoma. (Surgery, Antibiotics, Facial cleanliness and Environmental hygiene). Find out more about our plans for eliminating trachoma.

**Trachoma Global Elimination**

**2020 Target:** Global elimination

**Clinical Background:** Trachoma is a bacterial infection of the eye that, upon repeated infection, causes the eyelids to scar and ultimately turn inward (known as trichiasis or blinding trachoma stage). Blinding trachoma, the leading infectious cause of blindness in the world, accounts for approximately 3% of the world's blindness. Small children are the reservoir of infections, leading to high infection rates among children and their overwhelmingly female caretakers. It is transmitted through contact with eye and nose secretions from infected people, but also through flies.

**Sanitation, the other half of MDG7**

In a letter to editors of The Lancet, a group of NGO leaders in the trachoma community say that the whole of the SAFE strategy is greater than the sum of its parts. A coordinated effort to implement all elements of SAFE will bring about the elimination of blinding trachoma. Other diseases should adopt a similar, integrated approach.

**Trachoma - The World's Leading Cause of Preventable Blindness**

Trachoma is an infectious eye disease caused by the bacterium *Chlamydia trachomatis*, which spreads by contact with an infected person's hands or clothing. It is the world's leading cause of preventable blindness, and is one of the oldest diseases known to man.

Today, about 41 million people, mostly women and children, have active trachoma and need treatment. An estimated 8.2 million people have an advanced stage of the disease in which the eyelashes turn inward and scrape the cornea, a condition called trichiasis. These people face the risk of visual impairment or blindness unless treated with a simple surgical procedure.

The poorest of the poor suffer most from trachoma, especially in areas that have limited access to water and sanitation. Africa is the most affected continent. Trachoma is believed to be endemic in 57 countries. Globally, 1.2 billion people live in trachoma-endemic areas, primarily in the poorest communities in the developing world.
Elimination of Blinding Trachoma - 10 year Strategic Plan

The global efforts to eliminate blindness due to trachoma have been on-going and with just about 10 years to reach the global deadline, the International Coalition for Trachoma Control 5 (ICTC), of which Sightsavers is a member, has developed a plan to increase the efforts being made to ensure that the goal of GET2020 is met.

A document, 2020 INSight has therefore been written by the partners of this great coalition to guide members and endemic countries as to the overall global need, how to address this need and the resources needed to reach our goal. Sightsavers has responded to this call through this Fast Track Initiative and has taken up the challenge to catalyze, support and fast track the elimination of blinding trachoma in 24 countries; 22 in Africa (including Chad and Central African Republic through partnership with the Organisation pour la Prévention de la Cécité ? OPC) and in 2 countries in Asia, India and Pakistan.

This document has benefited from the technical expertise and well thought through inputs from many people. Dr. Silvio Mariotti, (World Health Organization), Dr Danny Haddad, (Director, International Trachoma Initiative) and Dr. Awad Hasan Ahmed (Trachoma Programme Coordinator Republic of Sudan) made very useful contributions to this document.

Dr. Agatha Aboe would also like to make special mention of Dr. Hannah Faal for her immense contribution in reading the document thoroughly and providing very useful guidance in the writing of this document.

Sincere thanks go to Caroline Harper, Chief Executive Officer of Sightsavers for conceiving the idea of a fast track initiative to eliminate blindness due to trachoma and actually ensuring that it is birthed and nurtured and for encouraging us to think more broadly and include as many countries as needed in this fast track initiative.

Preventing and Treating Trachoma in rural Kenya

This project has been effective in dramatically reducing the prevalence of trachoma in Samburu district.

Highlights from the project include...

- More than 80% of the population in Samburu and Kaijado were prevented from trachoma and those affected were treated, relieving them from the burden of discomfort and eventual blindness as a consequence of trachoma infection.
- Hygiene practices among school children has dramatically improved through the hygiene promotion activities, latrine construction and access to water.
- Training of teachers enabled them to spread knowledge among their pupils on the importance of clean faces and good hygiene. The pupils replicated the good practice at their homes, thereby expanding learning to the larger community.
- IEC materials distributed targeted over 850,000 people, helping to raise awareness on trachoma.

Due to the fact that women and girls are primarily responsible for water collection, face washing and cleaning latrines, the improved infrastructures have had the greatest, positive effect on these groups, helping to reduce trachoma and improve their quality of life.

A Hand Washing Behavior Change Journey for the Caretakers in Vietnam

The Vietnam Handwashing Initiative (HWI) was launched in January 2006 by the Ministry of Health (MoH) with funds from the Danish Embassy in Vietnam and technical assistance from the Water and Sanitation Program (WSP). The initial phase consisted of a nine-month multi-channel campaign utilizing mass media, direct consumer contact, and interpersonal communications targeting mothers of
children younger than age five in 40 communes1 throughout Vietnam.

Discussions with mothers, and results from pre-testing hand washing stations, revealed that although knowledge of hand washing with soap after using the toilet is high, they will forget if there is not a physical reminder right outside the latrine. Formative research also indicated availability of water and soap in the majority of households, although they were not always available together at a convenient place for hand washing. Having a hand washing station would help caretakers to access soap and water at the right place and time and provide a physical reminder to help reinforce the behavior.

- **Trachoma Control Program**

  The world's leading cause of preventable blindness, trachoma spreads easily from person to person. Of the 320 million people at risk for trachoma, most are children. Women are almost twice as likely as men to develop the advanced stage of the disease, which can lead to painful disability or blindness.

  Trachoma is prevalent in poor, rural communities that lack the tools for basic hygiene, clean water, and adequate sanitation. Infections are spread via contact with dirty clothes, hands, and flies that are attracted to people's eyes. In the advanced stage of the disease, called trichiasis, a person's eyelashes turn inward, scraping the cornea with every excruciating blink, causing scarring, diminished vision, and, eventually, blindness.

- **Correcting Myths about Eliminating Trachoma**

  There are many misconceptions about trachoma and its control, the same questions crop up again and again - its time the myths were dispelled. The attached document attempts to shed light on some of the myths and misconceptions about Trachoma control.

- **Azithromycin (Zithromax) in the elimination of Blinding Trachoma - A program Managers' Guide**

  This guide provides a range of practical advice and useful information, from the basics of how to make and use dosing sticks to creating a drug delivery strategy and forming a Community-Directed Distribution Team, from clarifying requirements of the annual application process to highlighting best practices of receiving, storing, and tracking the distribution of donated Zithromax.® In addition, ITI have included updated forms related to each stage of the work.

- **Prevention and Management of Trachoma**

  The leading cause of blindness in poor communities, trachoma is entirely preventable. These lecture notes provide a
•   Avoidable Blindness? development and Implementation of Surveillance System for Trachoma in Post Endemic Countries

Trachoma is still the 2nd common cause of preventable blindness in the world with 8.2 severely impaired or blind and around 41 million cases of active disease in need of treatment. A suitable strategy referred to as the SAFE strategy has been defined and is being increasingly implemented in endemic countries. The impressive progress in attaining elimination of blinding trachoma made by several endemic countries showed the need to set up the surveillance system in order to monitor and control coverage achievements avoiding dispersal of skills, competencies and support

•   Formative and Baseline Survey on Handwashing with Soap

Purpose of the Formative Research

The main purpose of this research was to provide insights to the design of an effective communication programme to promote hand washing with soap. The specific objectives were to;

1. Document current hand washing practices and their context

2. Establish factors that drive and facilitate hand washing in communities

3. Identify target audiences for the campaign

4. Determine the current channels of communication used in the community.

Current handwashing practices

1. Although 84% of the adults recognized the need to wash hands with soap after using the toilet, only 14% were observed to do so. Overall 57% washed their hands in some way.

2. Of the caregivers observed, 19% washed hands with soap after cleaning a baby’s bottom. Overall 35% washed their hands in some way.

3. Although more caregivers washed their hands before eating, (60% all together), only 8% used soap.

4. From the school observations, 54% of the pupils washed their hands after using the toilet. Only 5% used soap.

5. Handwashing is low priority for the use of soap, below laundry, washing dishes and
· bathing.
6. Overall 95% of the households have used soap
7. Most people know that it is important to HWWS, but few people practice it.

**Trachoma Overview**

Trachoma is the most common infectious cause of blindness worldwide. It afflicts some of the poorest regions of the globe, predominantly in Africa and Asia. The disease is initiated in early childhood by repeated infection of the ocular surface by Chlamydia trachomatis. This triggers recurrent chronic inflammatory episodes, leading to the development of conjunctival scarring. This scar tissue contracts, distorting the eyelids (entropion) causing contact between the eyelashes and the surface of the eye (trichiasis).

This compromises the cornea and blinding opacification often ensues. The World Health Organization is leading a global effort to eliminate Blinding Trachoma, through the implementation of the SAFE strategy. This involves surgery for trichiasis, antibiotics for infection, facial cleanliness (hygiene promotion) and environmental improvements to reduce transmission of the organism. Where this programme has been fully implemented, it has met with some success. However, there are significant gaps in the evidence base and optimal management remains uncertain.

**Guidelines for the public health management of Trachoma in Australia**

This document was prepared by Dr Donna Mak in consultation with the Trachoma Steering Committee of the Communicable Disease Network Australia (CDNA). Details of the membership of the Trachoma Steering Committee are provided at Appendix 3. The opinions of experts and feedback from consultations were also used to develop the guidelines. The development of these guidelines has been jointly funded by the Population Health Division and the Office for Aboriginal and Torres Strait Islander Health of the Australian Government Department of Health and Ageing.

Guidelines for the Public Health Management of Trachoma in Australia provides recommendations to ensure consistent trachoma screening, control measures and data collection in Australia. Data collected by the Australian Government Department of Health and Ageing from state and territory public health units were used in the development of these guidelines. Current WHO and Australian guidelines, international literature, the opinions of experts and feedback from consultations were also used to inform the guidelines. These guidelines establish a minimum best-practice approach for the public health management of trachoma.

**A Toolbox of Interventions for Promoting Facial Cleanliness and Environmental Improvement**

The purpose of this manual is to provide program managers and planners with guidance for designing interventions for facial cleanliness (F) and environmental improvement (E) in trachoma control programs. This manual shows how to learn about risk practices, identify appropriate F and E interventions, and identify target groups for interventions.

It offers a toolbox of F and E interventions with specific examples and case studies. It explains how to communicate about a trachoma control program through the media and provides steps for evaluating a trachoma control program.
SAFE Strategy to Eliminate Trachoma - Will it Work?

WHO has recently launched a programme (GET 2020) for the elimination of trachoma, the leading cause of preventable blindness. GET 2020 has adopted the SAFE strategy, a comprehensive set of control measures (Surgery for entropion/trichiasis; Antibiotics for infectious trachoma; Facial cleanliness to reduce transmission; Environmental improvements such as control of disease-spreading flies and access to clean water). The present article reviews the strengths and weaknesses of each component of the strategy. Although significant hurdles remain to be overcome there is every reason to hope that GET 2020 will be successful.

- Preventing Trachoma - A guide for Environmental Sanitation and Improved Hygiene

Personal and Environmental Hygiene has been identified as critical factors in the preventing the spread of Trachoma. In Communities and Countries where significant improvements in personal hygiene, proper disposal of human and animal excreta, water supply have occurred, Trachoma has ceased to be a public health problem.

As Trachoma prevention needs to address both personal hygiene and Environmental Sanitation, it is important that there is intersectoral cooperation between the water, education and health sector. Such collaboration is very essential for the global elimination of Trachoma by 2020.

This document is part of the comprehensive SAFE strategy developed for controlling Trachoma through a combination of interventions including Surgery, MDA of Antibiotics, Facial Cleanliness and Environmental Sanitation.

This document addresses the F & E components of Trachoma Prevention.

- Preventing Trachoma through Environmental Sanitation? A review of the evidence base

This review of 19 studies selected from the 39 conducted in different parts of the world shows that there is clear evidence to support the recommendation of facial cleanliness and environmental improvements (i.e. F & E components of the SAFE strategy) to prevent Trachoma. Person-to-Person contact and flies appear to constitute the major transmission pathways. Improvement of personal and community hygiene has great potential for a sustainable reduction in trachoma transmission.

Several studies have suggested that reducing fly densities and hygiene education decrease transmission of trachoma.

- A Manual on School Sanitation and Hygiene
This manual on school sanitation and hygiene is to support country school programmes. Children are agents of change. By focusing on school-aged children today and by giving them the proper tools and knowledge to adopt healthy and safe behaviours, future generations will be better prepared to take care of their families and communities. This is the 5th in a series of handbooks developed by UNICEF in partnership with both implementing and donor governments worldwide.

**TRACHOMA: A Women's Health Issue**

This paper examines trachoma and women's health by reviewing and addressing the trachoma literature from a women's health perspective; the burden of disease associated with trachoma, the social and economic implications of blindness for women; the relative importance of trachoma in women's health; and the various interventions for controlling trachoma and how they might link programmatically with programs and services in the trachoma-endemic world.

Although few women's health advocates are familiar with this painful, disfiguring and ultimately blinding disease, and most women's health advocates do not think of trachoma as a women's health issue, the epidemiological data are compelling.

**Trachoma History**

Trachoma has been causing blindness for several millennia. As scientists have only gained a thorough understanding of the disease within the last several decades, the history of trachoma cannot be pinpointed precisely. However, the history of ophthalmias, eye diseases with visible symptoms, is frequently documented. Through these records and a modern understanding of trachoma, the history of this ancient disease can be constructed. The most probable geographic origins of trachoma can be established by analyzing the prevalence rates among different racial groups. After looking at the distribution of trachoma among different races, researcher Taborisky determined that Central Asia is most likely the place where trachoma originated. Although trachoma appears to have originated in Central Asia, one of the oldest possible signs of trachoma has been found in skeletons in Australia. In addition to the conclusions drawn from these modern observations, there are many written records of trachoma dating back several thousand years. Enjoy reading about the history of Trachoma...

**Trachoma Control - A guide for Program Managers**

Trachoma is an infectious eye disease that causes blindness; it is prevalent in many poor rural communities. The World Health Organization has set the year 2020 as the target for global elimination of trachoma as a public health problem. To reach this target, the SAFE strategy (Surgery for trichiasis, Antibiotics to treat Chlamydia trachomatis infection, and Facial cleanliness and Environmental improvement to reduce transmission of C. trachomatis from one person to another) is recommended for districts and communities with endemic disease.

This guide has been written for managers of national and district trachoma control programmes. It sets out, step-by-step, what is needed to assess the magnitude and extent of the trachoma problem in the area and how to plan, implement, monitor and evaluate a programme to control, and ultimately eliminate, trachoma. Throughout this guide, the term 'community' is used to refer to the minimum number of persons for whom mass trachoma control is to be implemented (for example, a defined group of households, one village or a group of neighbouring villages). The term 'district' is defined as the usual administrative unit for health care management, and the term 'region' is used to indicate the administrative unit one level.
Global Trachoma Campaigns

Within the Global Trachoma Campaigns section, one will find interventions that primarily focus on preventive measures for control and elimination of Trachoma. These include experiences from Ethiopia, Mali, Australia and Uganda.

Resources:

- **Preventive actions to eliminate trachoma in Ethiopia**

  Keeping a clean face helps to reduce a person's risk of getting blinding trachoma, an infectious eye disease. Facial cleanliness is key and an effective way to decrease the risk of getting trachoma.

- **Community Involvement in Mali for Prevention of Trachoma and Blindness**

  CCP provided assistance to Mali's National Blindness Control Program (PNLC) to develop and implement the two-year behavior change communication program (2002-2004) in the Malian regions of Kayes and Koulikoro. The program objectives included increasing knowledge of trachoma transmission, prevention and treatment among men and women with children under 12; The program included interventions to improve access to trachoma prevention and treatment services. Program staff developed an interpersonal communication and counseling curriculum on trachoma prevention and treatment to improve community health workers' skills. The program also worked to increase demand for trachoma prevention, treatment information, and services as well as increase trachoma preventive and treatment behaviors. The results demonstrate that the program successfully raised awareness about trachoma, perceived seriousness of the disease, and increased knowledge of the means to prevent and treat it.

- **Health Promotion For Trachoma Control**

  Although progress has been made in refining the surgical and antibiotic components of the SAFE strategy, without effective health promotion it will be difficult to eliminate blinding trachoma by 2020. Health promotion is a cornerstone of each of the four components of the SAFE strategy. It includes:

  - explaining the disease process and the need for trichiasis surgery to an often reluctant population (S)
  - encouraging acceptance of mass antibiotic distribution (A)
• promoting facial cleanliness/hygiene (F)
• bringing about environmental changes, such as building and using latrines (E).

Hand Washing Campaign

Hand Washing Campaign Materials

Hand Washing Campaign Materials Uganda

Hand washing Campaign materials designed by Scan Ad - Uganda

Training

This section on training provides a useful guide for program managers to design training on Trachoma in schools focusing on school children who are agents of change.

It also provides guidelines and tools for rapid assessment of blinding Trachoma. Additional resources on training will be added on to help program managers design training manuals and guides for their programs.

Resources:

• Handbook for Integrated Vector Management (IVM)

Integrated vector management (IVM) is a rational decision-making process to optimize the use of resources for vector control. The aim of the IVM approach is to contribute to achievement of the global targets set for vector-borne disease control, by making vector control more efficient, cost effective, ecologically sound and sustainable. Use of IVM helps vector control programmes to find and use more local evidence, to integrate interventions where appropriate and to collaborate within the health sector and with other sectors, as well as with households and communities. By re-orientating to IVM, vector control programmes will be better able to meet the growing challenges in the control of malaria, dengue and other vector-borne diseases in the face of dwindling public sector human and financial resources.

The intention of this handbook on integrated vector management (IVM) is to provide guidance to the managers of vector-borne disease control programmes, including comparable officials in health and other sectors involved in vector-borne disease control.

The target audience is managers and officials at central, district and lower administrative levels. The handbook provides background information to complement the Core structure for training curricula on integrated vector management and associated training materials.

Guidelines for management of Trachoma

The Guidelines for Management of Trachoma in the Northern Territory, 2008 are based on the Communicable Disease Network Australia (CDNA), Guidelines for the public health management of trachoma in Australia 2006.1 The CDNA guidelines provide a minimum best practice framework
for the management of trachoma. The Northern Territory trachoma working party adapted the national
guidelines to reflect the unique needs of the Northern Territory.
The CDNA Guidelines for the public health management of trachoma in Australia recommend that all
health professionals involved in trachoma control receive ongoing training in the diagnosis and
management of trachoma.
CDC conducts training in all aspects of trachoma control.
This includes: community consultation and engagement, recognition of trachoma grading, eyelid
eversion, obtaining consent, organizing a treatment program, health promotion activities.

- **Trachoma prevention through school health curriculum development**

  Investing in the health and well being of school-aged children is an investment in not
only the individual child but also in the family, community, and country as a whole.
Promoting the health of children now is laying the foundation for their health as adults
and for the health of their children, the next generation. Schools offer a mechanism, an
entry point for reaching a large part of the population directly (schoolchildren) and
indirectly (their families and community members).

  Improved health among children will improve their attendance, their learning potential
and, as a result, their educational achievement. This is particularly important among
girls, as the level of education attained by a woman is a critical determinant of her
family's health.

  This guide describes a step-by-step methodology to develop a primary school
curriculum to teach children about trachoma and what they can do to prevent the
disease. The knowledge and skills are those that are essential to control trachoma among
school children, their families and their communities

- **Trachoma for Primary Schools**

  This book aims at helping school teachers understand various trachoma concepts so that they can use
their wisdom to make sure that relevant trachoma issues are put across to pupils during normal lessons
in classroom and enrich school children with life skills. This book is divided in four chapters...
1. Introduction to Trachoma as a public health problem
2. Focuses on reasons for Trachoma interventions
3. Introduction to communication
4. Face washing and environmental hygiene

- **Guidelines for Rapid Assessment of Blinding Trachoma**

  These guidelines for rapid assessment of blinding trachoma is very useful for program managers as this document introduces
the concept and methodology of rapid assessment for those seeking to control and eliminate Trachoma related problems
through cost effective interventions.
This document will enable program managers to collect data that will help them to develop an action plan based on community needs. It also provides a checklist of information needed by program managers to collect data and develop a plan of action.

- **Achieving Community Support for Trachoma Control - A guide for district health workers**

**IEC and Mass Media Tools**

In the IEC and Mass Media Tools section, there are Trachoma health education materials including flipcharts, leaflets, manuals & technical resources, posters, school-based materials and storybooks developed by the Carter Center and health education materials and brochures from the University of Melbourne.

The latest addition to this section in April 2014, are the materials and tools developed for prevention and control of Trachoma by JHUCCP Trachoma project in Uganda with support from the MOH Uganda, Sightsavers (UK & Uganda) and Communication for Development Foundation Uganda - CDFU. The materials include, Charts, VHT cards, Teacher's guide, and User's guide for all materials, Information sheet and logos. These materials are meant for use in communities that are at high risk of Trachoma

**Resources:**

- **Trachoma Prevention and Control F & E tools developed by the JHUCCP Trachoma Project in Uganda**

Sightsavers, under its PPA agreement with DFID, developed an innovation fund to address areas of health and social development that have been found to be challenging to the wider health and development sector. One of these areas is addressing the behavioral component of the WHO SAFE strategy, with special attention to the face washing (F) and environmental sanitation (E) components to treat and prevent blinding trachoma. Under this agreement, Sightsavers approached JHUCCP to work as a partner to address the social and behavior change factors within the affected populations to improve normative behaviors around face washing and environmental sanitation.

Towards achieving this objective, JHUCCP carried out a formative research in 2013. This formative research was conducted in selected communities in Moroto and Iganga Districts of Karamoja and Busoga Regions of Uganda respectively, to identify and understand the contextual and behavioral factors that influenced the transmission and prevention of Trachoma infection.

Based on the formative research findings, JHUCCP have developed materials and tools that will address the gaps in knowledge attitudes and practices within these communities and will help the communities that are at risk of trachoma infection to adopt healthy behaviours and practices.

The materials and tools developed and uploaded include, Charts, VHT Cards, Information Sheet, Trachoma Logo, Teacher's Guide, User's Guide and radio spots. We have also included the detailed pre-test report for the materials developed as well as the radio design document that outlines the various programs that will help
address behavioral issues for prevention and control of Trachoma in Uganda
The Charts, VHT cards and radio spots are available for access in English, Lusoga and Ngkarimajong languages
JHUCCP would like to acknowledge, the support and guidance received from the Ministry of Health in Uganda
specifically the NTD department, the Health Education and Promotion Department and the DHO?s, as well as
DHE?s from Iganga, Moroto and Napak Districts in the development of these tools and materials.
In addition we would like to acknowledge various organizations whose input was very valuable in the
finalization of these tools and materials. These include Sight Savers UK, Sight Savers, Uganda and
Communication for Development Foundation Uganda ? CDFU

The Trachoma Story KIT

Trachoma is caused by infection and re-infection with the bacteria *Chlamydia trachomatis* and is the leading cause of
infectious blindness in 59 of the world?s poorest countries.

Australia is the only developed country in the world to still have active trachoma in remote Indigenous communities.
Trachoma is most often found in small children but scarring and in turned eye lashes are found in older people throughout
the country. Trachoma persists in areas with poor personal and community hygiene.

Since being launched in August 2010 around 700 Trachoma Story Kits are being used in a concerted effort to eliminate
trachoma in Australia. They are being used in clinics, schools and community workplaces in the Northern Territory, South
Australia, Western Australia, Queensland and New South Wales to provide clear and consistent messages about trachoma,
how it is spread and how everyone can help to eliminate it.

This Trachoma Story Kit is a One Stop Shop and a Collection of Flip Charts, work books and Posters for Clinics, Schools
and Communities.

Hope you find this a useful guide in developing effective programs and campaigns for Trachoma

Ce que vous pouvez faire pour contribuer à éliminer le trachome au Mali (What you can do to help eradicate trachoma from Mali)

This fact sheet offers suggestions for concrete actions that various categories of people can take to contribute to the effort to eradicate trachoma from Mali:
- Political authorities
- Journalists
- Musicians, story tellers, entertainers of all kinds
- Religious leaders
- Health workers
- Traditional healers
- Parents
- School principals and teachers
- Community leaders
- Development partners

Pourquoi une stratégie de communication? (Why have a communication strategy?)
Using a Problem ? Solution format, this fact sheet seeks to demonstrate the importance of having a national communication strategy for combating trachoma in Mali. Problems that strategic communication can address include:

1. Opinion leaders not sufficiently engaged
2. Trachoma not seen as an important health problem in Mali
3. Low level of knowledge of means of transmission, prevention and treatment
4. Very few mothers wash their children? faces to prevent trachoma
5. Low use of available health services
6. In rural areas, at least a third of the population seeks the services of traditional healers, partly due to a lack of confidence in the public health services
7. Health workers not adequately fulfilling their role as health educators
8. Most health communication activities target women, ignoring men.

**Le Trachome en Bref (Trachoma in Brief)**

This short fact sheet gives brief answers to four questions:

- What is trachoma?
- What should you do if confronted with a case of trachoma?
- How can trachoma be prevented?
- What is the epidemiological situation of trachoma in Mali?

The answer to the last question includes two maps: Prevalence of active trachoma by region among children 0 to 10 and Prevalence of trachomatous trichiasis by region among women over 14.

**Trachoma Health Education Materials Library**

Trachoma Health Education related materials including Flipcharts, Leaflets, Manuals & Technical Resources, Posters, School-Based Materials, Storybooks, T-Shirts and Hats

**Indigenous Tools of Capturing Knowledge: Trachoma Bead System**

This paper presents the experience from Kajiado District in Kenya, where the application of the communities? innovative and appropriate indigenous knowledge has contributed to the reduction in prevalence of Trachoma. The reduction in the prevalence of trachoma facilitates mainly economic productivity; a key factor in the contribution towards eradication of poverty, and ensuring environmental sustainability, both of which are Millennium Development Goals. It is therefore the premise of this paper to serve as an example of advocacy for consequent application and strengthening of Indigenous Knowledge approaches in the development process in Africa. The paper also seeks to contribute to the conference theme on *Development Environment and History* by demonstrating the positive effects of listening to the community; through which locally available resources are utilized to ensure sustainability of interventions even after project phase out.
Community participation is key for effective and sustainable intervention. The Use of appropriate and relevant technologies such as coloured beads for household trachoma surveillance improves monitoring and evaluation

**Strategic Design**

**Resources:**

- **Guidelines and Tips on IEC Material Production and Distribution for Maximum Impact**

Health promotion and health education activities rely on a variety of well designed and effective IEC materials to help ensure success and create the desired impact. From experience, certain fundamentals pertaining to the development and distribution of IEC materials are obvious. Every brochure, poster, job aid, flier, radio spot, TV advert or any other piece of IEC material is the product of a decision, supported by research, to deal with a specific health concern, and to be well received and persuasive among a specific audience. The success and impact of IEC materials depends largely on the understanding of the target audience. This document provides guidelines on IEC material distribution for maximum impact

- **Designing a Trachoma Communications Strategy**

Everyday, communications strategies and communication messages unfold all around us. Though we may not realize it, the billboards, radio spots, jingles, sms, advertisements all over the internet, daily newspapers, television, are all striving to distinguish one item or idea from another. In this age of unparalleled choice, communications is committed above all to changing behaviors and attitudes.

Designing an effective communications strategy requires a two-way dialogue, where we listen (what does our audience want?), design and implement audience-informed strategies and gather feedback to assess the impact of the strategy. This document focuses on the important elements that have to be considered for designing an effective communication strategy

**Peer-reviewed Publications**

The Peer-Reviewed Publications section includes articles on the importance of Face washing and Environmental improvement in the prevention of Trachoma. Some of the articles are listed below

- A resource focused on community risk factors for ocular Chlamydia infections
- A study on face washing and environmental improvement in a high risk group in Oman
- A publication on the impact of face washing on Trachoma in Tanzania
- An article that highlights the criticalness of facial cleanliness and environment improvement in the prevention and elimination efforts of Trachoma
Resources:

Understanding Individual and Contextual Factors for Development of a Behavior Change Communication Campaign for Trachoma Prevention In Busoga and Karamoja Regions, Uganda

This research report focused on two Regions in Uganda with high Trachoma prevalence, specifically, Busoga and Karamoja, to take full advantage of Trachoma-related experiences in different geographical and environmental terrains. Research was carried out in two districts ? Iganga in the Busoga region and Moroto in the Karamoja region.

Formative research was conducted in selected communities in Moroto and Iganga Districts of Karamoja and Busoga Regions respectively, to identify and understand the contextual and behavioral factors that influenced the transmission and prevention of Trachoma infection. The study also characterized the factors influencing community members? ability to implement the Facial Cleanliness (?F?) and Environmental Change (?E?) components of the WHO SAFE strategy for preventing Trachoma. The study was conducted to provide information about Trachoma that was contextually relevant to the lived experiences of the target population, and that also would support the development of a behavior change communication campaign for preventing Trachoma.

Overall, the study results showed limited knowledge about the cause of Trachoma and the strategies to prevent it. There also were specific cultural-, community, household and individual-level factors that increased perception of risk of Trachoma and decreased self-efficacy to prevent infection with Trachoma. The main themes derived from the study are consistent with the key water, sanitation and hygiene (WASH) activities to prevent Trachoma that are outlined in the Global Manual for WASH implementers (2013). In addition, new understandings underlying attitudes and behaviors of local populations that increased risk of Trachoma were identified and provided deeper insights into antecedents to behavior change. These new findings also demonstrated how different levels of influence factors in the environment intersect to influence the use and non-use of water and the behaviors related to sanitation that are deemed critical to the successful elimination of Trachoma.

Face washing promotion for reducing active trachoma

Trachoma is an infectious eye disease. Active infection usually begins in childhood and is characterized by eye discharge, redness and irritation. Poor facial hygiene can lead to the disease spreading from person to person through eye-seeking flies or contaminated fingers. Face washing is promoted as part of the World Health Organization ‘SAFE’ strategy to eliminate blindness around the world. The review authors identified two randomized controlled trials with a total of 2560 participants set in Australia and Tanzania. One trial had face washing in combination with tetracycline as the intervention and tetracycline ointment alone as the control. The second trial compared eye washing to no treatment or to topical tetracycline alone or to a combination of eye washing and tetracycline drops in children with follicular trachoma. Both trials reported on active trachoma as an outcome measure but only one trial reported on severe trachoma and percentage of clean faces. The trials included in this review evaluated the effect of face washing over a three to 12 month period. There is some evidence that face washing combined with topical tetracycline can be effective in reducing severe trachoma and in increasing the prevalence of clean faces.
Community Risk Factors for Ocular Chlamydia Infection

Trachoma is one of the most important neglected tropical diseases and is the leading cause of blindness in the world. There are about 1.3 million persons blind from the disease and many more at risk of blindness in the future. It is caused by the common bacterium *Chlamydia trachomatis*. It was found that discharge from the nose, presence of flies on the face, and the number of years of education completed by the head of the household were risk factors for infection in 48 different communities. We hope to use this information about risk factors of infection to help guide future studies for trachoma and also to help with the WHO goal of eliminating the disease worldwide by the year 2020.

Short-sightedness in sight-saving: half a strategy will not eliminate blinding trachoma

Few diseases are more closely linked to the environment than trachoma - the leading global cause of preventable blindness. The Alliance for the Global Elimination of Blinding Trachoma by the year 2020 (GET 2020), an effort led by the World Health Organization, includes environmental measures in its SAFE approach (Surgery for trichiasis cases, Antibiotics to treat the community pool of infection, and Facial cleanliness/Environmental improvement to reduce transmission). However, recent country progress reports show that surgery and antibiotic interventions were jointly implemented and monitored in 61% (23/38) of countries while only 34% (13/38) of national programmes included either face washing or environmental components.

However, circumstantial evidence shows that sanitation and face-washing are needed to eliminate trachoma. In the 19th century, trachoma was common in the United States of America and Europe, but was eliminated before the advent of antibiotics by improved water, sanitation and hygiene. More recently, the first three countries (Mexico, Morocco and Oman) to eliminate trachoma in the GET 2020 campaign included environmental prevention and human development in their national strategies.

Association between Active Trachoma and Community Intervention with Antibiotics, Facial Cleanliness, and Environmental Improvement A,F & E

Surgery, Antibiotics, Facial cleanliness and Environmental improvement (SAFE) are advocated by the World Health Organization (WHO) for trachoma control. However, few studies have evaluated the complete SAFE strategy, and of these, none have investigated the associations of Antibiotics, Facial cleanliness, and Environmental improvement (A,F,E) interventions and active trachoma.

Analysis of associations between the A,F,E components of the SAFE strategy and active trachoma showed independent protective effects against active trachoma of mass systemic azithromycin treatment, facial cleanliness, face washing, and use of pit latrines in the household. This strongly argues for continued use of all the components of the SAFE strategy together.
Review of Face Washing Promotion for Prevention of Active Trachoma

The objective of this review was to assess the effects of face washing on the prevalence of active trachoma in endemic communities. This review included two trials with data from a total of 2560 participants. The trials included in this review evaluated the effect of face washing over a three to 12 month period. There is some evidence that face washing combined with topical tetracycline can be effective in reducing severe trachoma and in increasing the prevalence of clean faces.

The ?ngisipet? and trachoma prevention: solving the latrine problem in nomadic tribes

There is a global commitment to eliminate trachoma by 2020. Many different governmental and non-governmental agencies, in conjunction with industry, are working hard to achieve this aim. It relies on implementing the whole SAFE strategy: surgical treatment for trichiasis (S), widespread distribution of antibiotics (A), face-washing with other hygiene measures (F), and environmental improvement (E).

A clean, reliable water supply is vital to this process. Equally important is changing the defecation habits of many tribal people, as this will decrease the number of flies that carry the disease. It is thought that the principal carrier of trachoma, Musca sorbens, lays its eggs mostly on human faeces lying exposed on soil and not on excreta of other species or on human faeces in latrines.

The World Health Organization recommendation is to use either latrines or what is referred to as ?ventilation-improved pits?. However, for nomadic tribes, these present various disadvantages... Please read the complete article form Community Eye Health Journal. 2007 December; 20(64): 70.

Controlling Blinding Trachoma in the Egyptian Delta

Trachoma is hyper endemic in rural Egypt, where more than 75% of children show signs of having had at least one episode of infectious trachoma during the first year of life. Earlier anthropological and epidemiological observations suggested that trachoma prevalence would decrease if children had their faces washed with soap and water at least once each day.

A community-based intervention to increase face washing in order to control trachoma was implemented. This paper describes the overall design of this intervention trial and discusses how anthropological methods and ethnographic data were integrated into the design of this successful multi-disciplinary, cross-cultural project to prevent trachoma.

Active trachoma, face washing (F) and environmental improvement (E) in a high-risk population in Oman
ABSTRACT

Oman aims to eliminate blinding trachoma by 2010. As a part of a study to review the health institution approach of trachoma surveillance, ?F? (facial cleanliness) and ?E? (environmental improvement) components of the SAFE trachoma control strategy were assessed in a high-risk population in Nizwa wilayat. Thus 50 households with 1 member treated for active trachoma in the last 6 months were evaluated for active trachoma and for water and sanitation facilities. In all, 229 children under 15 years of age were clinically examined; the rate of active trachoma was 3.5% in the children. Clean face was found in 97.8% of the children and 70% of houses had piped water or water supplied by tankers. The status of ?F? and ?E? in the study area was generally high.

Personal Hygiene Behaviour ? Fact Sheet

This WELL website is a focal point for providing access to information about water, sanitation and environmental health and related issues in developing and transitional countries. The WELL website offers Publications and Information Products: Follow the link to the WELL Publications Listing where you will find downloadable WELL Documents including Factsheets, Briefing Notes, Studies, and Consultancy summaries. These are categorized according to:

- Water Supply
- Sanitation and Hygiene
- Sector Monitoring
- Cross Cutting Issues

A number of diseases can be prevented by personal hygiene. This fact sheet first defines personal hygiene. It then explores which diseases can be prevented through improved personal hygiene as well as the hygiene behaviour itself. It intends to be supportive to hygiene promoters by looking into some issues of behavioral change and promotional aspects. Last but not least it takes a look at what USAID calls the Hygiene Improvement Framework and its implications for practicing hygiene behaviour.

Trachoma Seminar

Trachoma, an infection of the eye caused by Chlamydia trachomatis, ranks worldwide as the most common preventable cause of blindness and the second most common cause of blindness after cataract. It has been estimated to cause 15% of the world's blindness. The disease is endemic in 48 countries in Latin America, Africa, the Middle East, Asia, and Australasia and is most prevalent in poor, rural communities with lower standards of hygiene and sanitation. The WHO currently estimates that 6 million people are blind due to trachoma, and that an additional 146 million people have active forms of the disease. Furthermore, morbidity arising from trachoma is estimated to cost US $2.9 billion per year in lost workforce productivity.

In 1997, the WHO organized the Alliance for Global Elimination of Trachoma by 2020 (GET 2020) and recommended the 'SAFE' strategy as a basic framework for dealing with trachoma. This strategy involves the use of Surgery to treat advanced stages of disease, Antibiotic treatment with azithromycin, and the promotion of Facial cleanliness and Environmental change. Early evaluations of ten national trachoma elimination campaigns already show promising results for the first two interventions, namely eyelid surgery and administration of antibiotic treatment. Improving facial hygiene and encouraging environmental change, however, has proven more difficult to implement and assess, yet they are equally important components of the SAFE strategy and vital to the success of any campaign to eliminate blinding trachoma.

Can we Eliminate Trachoma???
Trachoma is the leading cause of preventable blindness worldwide. Although it disappeared long ago from Western Europe and the United States, trachoma is still as endemic as ever in parts of Africa, the Middle East, Australia, and South East Asia. Ocular strains of *Chlamydia trachomatis* cause repeated episodes of conjunctivitis in children.

The WHO’s GET 2020 programme (global elimination of trachoma by the year 2020) has adopted a comprehensive set of control measures for trachoma endemic areas summarized as the SAFE strategy (Surgery for entropion/trichiasis, Antibiotics for infectious trachoma, Facial cleanliness to reduce transmission, and Environmental improvements such as access to clean water and control of disease-spreading flies)

There are many reasons to think that the current elimination efforts will be successful.

### Risk Factors for Trachoma: 6-Year Follow-up of Children Aged 1 and 2 Years

The authors investigated the long-term stability of risk factors in predicting the presence of active trachoma and severe inflammatory trachoma in 176 children in Kongwa, Tanzania, who were aged 1 and 2 years in 1989 and were available for follow-up in 1995.

Familial cattle ownership, living more than 2 hours away from a water source, and facial cleanliness at both time points were associated with the presence of active trachoma at both time points.

An association of familial cattle ownership with facial cleanliness and water accessibility was observed. Having a clean face at both time points was associated with lower odds of active trachoma at both time points for children in non-cattle-herding families.

Living more than 2 hours away from a water source at both time points increased the odds of active trachoma at both time points in children of cattle-herding families. The results suggest that risk factor reduction could diminish persistent disease.

### Trachoma and Water

Improvements in water supply logically should reduce the transmission of trachoma. However, how the water is used in a community determines whether it will help to control trachoma.

The total amount of water people use gives only a crude indication of their hygiene. For example, a study in The Gambia found that the total quantity of water used by a household had no effect on the prevalence of active trachoma, but that trachoma-free households used more water for washing children than households with trachoma cases.

### Impact of face-washing on trachoma in Kongwa, Tanzania

Abstract

Observational studies have suggested that the prevalence of trachoma is lower in children with clean faces than in those
with ocular or nasal discharge or flies on the face. We carried out a community-based randomised trial in three pairs of villages to assess the impact on trachoma of a face-washing intervention programme following a mass topical antibiotic treatment campaign. Six villages in Kongwa, Tanzania, were randomly assigned mass treatment plus the face-washing programme or treatment only. 1417 children aged 1-7 years in these villages were randomly selected and followed up for trachoma status and observations of facial cleanliness at baseline and 2, 6, and 12 months. At 12 months, children in the intervention villages were 60% more likely to have had clean faces at two or more follow-up visits than children in the control villages. The odds of having severe trachoma in the intervention villages were 0.62 (95% CI 0.40-0.97) compared with control villages. A clean face at two or more follow-up visits was protective for any trachoma (odds ratio 0.58 [0.47-0.72]) and severe trachoma (0.35 [0.21-0.59]). This community-based participatory approach to face-washing intervention had variable penetration rates in the villages and was labour intensive. However, we found that, combined with topical treatment, community-based strategies for improving hygiene in children in trachoma-endemic villages can reduce the prevalence of trachoma.

Water availability and Trachoma

Trachoma, as a disease was long held to be associated with lack of water; indeed, hyperendemic areas are often dusty, dry regions with insufficient water. However, before simply promoting increased water supplies as an effective method for the prevention of trachoma, it is important to understand the epidemiology of the disease as it relates to water. There are very few rigorous, scientific data on the relationship between trachoma and water availability.

An increasing prevalence of active trachoma in children has been reported with increasing distance from the house to the water source. The assumption is that less water is used for hygiene purposes as the distance to source increases; this assumption is not entirely borne out by the results of another study, which suggested that, at least for distances up to one kilometer (30 minutes), the volume of water used remained constant. Also, a study in Morocco indicated that distance to water was not associated with the amounts of water used per capita.

The purpose of the current study was to investigate the impact of distance to water and water availability on the prevalence of trachoma and on water use habits. These findings suggest that while access to water may be associated with trachoma, increased risk of the disease is probably not a simple, direct function of water availability. Simply providing each village with a functioning water supply will not reduce the prevalence of inflammatory trachoma in children in these villages. Further investigations are needed to determine how water is used by families with and without trachoma, what determines the priorities set by the mother for allocating water within the home, and how to work within these constraints on water use to effect change in personal hygiene behaviour.

Improve WATSAN and eliminate blinding trachoma
This paper brings together key information and lessons to-date on trachoma, its transmission routes, prevention measures and impacts. It aims to encourage a greater awareness in the practitioners working in the water, hygiene and sanitation sectors of the potential impacts of their work on preventing this devastating, but preventable disease. With minor shifts in WATSAN program emphasis, programs could increase the benefits for the communities they are working with, whilst at the same time helping to assure success of the elimination of the world?s leading cause of preventable blindness.

Journalist & Media Resources

Resources:

- **Unilever in Hand washing campaign**

  Unilever Uganda, through its brand Lifebuoy has launched the ?School of Five Programme,? a national sanitation and hygiene campaign to promote hand washing with soap in schools through behavioural change.

  ?In this programme, we are going to train two teachers and one student across the country for 21 days so that they impart the skills they receive to others,? George Inholo, the country manager of Unilever Uganda, said.

- **Unilever enrols 100,000 schoolchildren in handwashing drive - Nairobi (Kenya)**

  Unilever through its Lifebuoy soap brand has reached 100,000 students in over 80 schools across Nairobi County its hand washing campaign. The ?School of Five? campaign aims to get over one million people across Kenya to pledge to the habit of washing their hands with soap on five occasion throughout the day with the help of trained school children and teachers. The campaign is being jointly implemented by Lifebuoy Kenya and Water and Sanitation for the Urban Poor (WSUP).

- **NIGERIA: Installing toilets to reduce blindness**

  Lack of access to clean toilets or an adequate water supply, living in close proximity to animals, and poor public health awareness have helped put 2.3 million people in northern Nigeria?s Borno State at risk of contracting trachoma, a bacterial infection causing blindness. Read full article....
Trachoma Community

Within the Trachoma Community section, one will find contact information for programs around the world that are working to eliminate trachoma.

Sightsavers

International Trachoma Initiative

Hellen Keller International

http://www.cartercenter.org/index.html

Source URL: https://www.k4health.org/toolkits/trachoma-prevention