

Working with communities to improve their eye health



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As an eye health worker you will be aware of various community interventions for improving eye health. These can involve **encouraging people to take better care of their eyes** (e.g. specific behaviour change programmes such as encouraging hand and face washing and improving infant feeding practices) and projects that **increase the number of people who make use of available services** (e.g. encouraging older people to come for cataract surgery, conducting outreach programmes, providing services in the community, or mass drug distribution programmes).

The key message of this issue is that improving eye health in the community can only be done in partnership with the community itself. There is no 'one size fits all'! A service or intervention that has been successful in one community may very easily fail in another.

This is because each community is different, and there may be specific beliefs and traditions which will affect community members' willingness to change their habits or behaviour. There may also be particular barriers, unique to a particular community, that may limit the uptake of different services. It is therefore essential to first understand the community and then to involve them in the planning of interventions and services that suit their needs.

In some communities, a lack of knowledge, or risky behaviour that is considered socially acceptable, may increase people's risk of vision loss and blindness. This includes the behaviour of individuals (e.g. working in hazardous environments without eye protection) or the community as a whole (e.g. socially acceptable feeding practices that may lead to higher risk of vitamin A



Islay Mactaggart

Community awareness raising session on available rehabilitation services. BANGLADESH

deficiency). It is important to fully understand these underlying issues before trying to make any changes and to work together with the community to challenge risky behaviour and promote good eye health behaviour.

A second key way that you can improve eye health at the community level is to understand the potential barriers to uptake of services. There are many reasons why communities may not use eye health services, even when they are available. The barriers will vary from community to community (see the panel on page 63) and will require different solutions, depending on circumstances and what resources you have available.

Ways of overcoming these barriers, and improving the community's eye

health, should be found in partnership with the local community.

Showing respect for the community and involving them in both the design and the implementation of services is crucial to any programme's success. This issue discusses how to involve all members of the community – including women and people with disabilities – in order to make sure that everyone's voice is heard. We will look at simple, effective ways in which you can empower the community to improve their eye health and work alongside them to deliver services that adequately meet their needs and that everyone is comfortable and confident using.

The first step will always be to understand

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the community, which is explored in detail in the article 'How to empower communities to take action on improving eye health' (page 64).

The article 'Techniques to encourage people to take better care of their eye health' (page 67) then gives specific examples of techniques you can use, depending on the type of services that you are hoping to provide.

For example, if you are planning a mobile eye health clinic that will visit each village once a month then you might want to consider the 'facilitating access' section on how to make sure that there are no barriers to accessing the mobile clinic.

One potential barrier might be that people with mobility impairments may not be able to walk to the mobile clinic. Working together with the community, you might be able to come up with a solution, such as a list of people who need to be visited in their homes.

Another example might be that you wish to begin a mass drug distribution programme. Through discussion with the community, you may become aware of a general fear or mistrust in drugs, and it may be important to consider providing additional information on what the drug is and how it works to ensure uptake.

The issue also looks at ways in which you can measure the success, or impact, of the services that you provide (page 64) and make sure that they are meeting the needs of communities themselves.

This process does not involve a huge amount of work or resources, but helps you in terms of planning, in learning what works and what doesn't work, and in recording the actions that you have taken.

By the end of this issue, you will hopefully be better informed about the reasons why empow-

ering communities and working with them to improve their eye health is so important, and about practical ways in which you can do this.

Including community approaches in your work has the potential to make sure that every community receives the best eye care possible, in a way that is tailored to their specific needs and situation.

Knowing what you, as a provider of eye care, should do, is of course important – as is providing high quality services. But to really improve eye health for everyone in the community, it is crucial to listen to communities, ask the right questions, understand their health-seeking behaviour and their knowledge about eye health, and work together with them on solutions.

'We look at simple, effective ways in which you can empower the community.'



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Barriers to the uptake of eye care services

- **Poor marketing of eye care services**, including poor information about treatment costs. Patients will need to know about any related costs too, such as transport and accommodation.
- **Insufficient counselling of patients.** Incomplete information about causes and/or treatment options can lead to poor uptake of treatment. Information alone is not enough – patients need to be given time and support to help them make decisions (see page 69).
- **Traditional beliefs and stigma** about the causes of and treatments for particular eye conditions. These beliefs may contradict clinical explanations, and may even be dangerous if they lead to unhelpful or even harmful practices.
- **Decision making in the household.** If the household head makes the decisions on expenditure and time use for all members of the family, then women, the disabled or elderly household members may not be able to access the care they need.
- **Social barriers.** Stigma against particular ethnic minority groups, people with disabilities or people living with HIV/AIDS may discourage these groups from using available services for fear of abuse or non-acceptance by health care staff and other service users.
- **Not seeing the need.** Some people may not see the need for sight restoration or improvement.
- **Convenience and competing priorities.** Families with limited time or finances may feel that it is easier to visit a local (and potentially less costly) traditional healer easier than traveling for clinical services.
- **Inaccessibility.** Service centres may not be physically accessible for people with mobility impairments, and information may not be provided in an accessible way for people with hearing or visual impairments
- **Prior experiences.** Whether personal experience, or the experience of other members of their community, if someone has previously sought treatment from a service provider and had a bad experience, this can prevent others from coming forward.



FROM THE FIELD

Working with the community in Cameroon

Okwen Marvice is the resident ophthalmologist at Mbingo Baptist Hospital, a large NGO-funded hospital in the North-West of Cameroon. Patients come from across the country, and even from neighbouring countries Nigeria and Gabon, for treatment. The eye department conducts almost 15,000 eye consultations a year and provides in- and out-patient services, community outreach and school screening.

It is our duty to educate the community about common eye conditions. We attend village meetings and church services, collaborate with traditional rulers and local clinics to raise awareness, and give talks on community radio to educate the community about primary eye care and eye health. We focus on the following key messages, which are aimed at all community members:

- Have an eye check-up once a year, even if the eye is not painful (glaucoma is common in the area).
- Have regular check-ups if you have previously diagnosed with eye diseases; attend immediately if a problem with the eyes occurs.
- Avoid using traditional medicines or self-medication if you have an eye problem or a painful eye.
- Ensure children do not play with sticks or sharp objects.

We offer free eye check-ups at least once a year, train school teachers in visual acuity testing and in the identification and referral of children with eye problems. We also screen motorcycle riders for eye problems.

Our outreach services are organised with the help of field workers and volun-

teers and are sponsored by several international NGOs, including CBM and the International Response to Improve Sight (IRIS). Activities include performances during Glaucoma Week and World Sight Day, and community discussions in the local language, often led by former patients who tell the communities about their own experience attending the eye clinic. We believe that working in close collaboration with local health centres (who provide space for screening), community leaders, and social and religious groups, ensures that community members actively take part. This makes them more likely to change their behaviour.

Since the launch of the programme to reach out into the local communities and to educate them about eye care and where to access our services, the hospital has seen greater attendance for asymptomatic conditions, more people coming for annual screening, higher referral rates from teachers of children with eye conditions, and increased local knowledge about eye health.

For further information about the work of Mbingo Baptist Hospital, visit www.cbchealthservices.org/html/Mbingo.html



Volunteers spread awareness about glaucoma. CAMEROON

Mbingo Baptist Hospital



How to empower communities to take action on improving eye health

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As discussed earlier in this issue, we cannot assume, once appropriate services are established or useful information has been shared, that community eye health will automatically improve.

There are many reasons why communities may not adopt new, healthier habits or make use of recommended eye health services. These reasons are specific to each context but can be grouped into two very broad categories:

- Reasons relating to each person's beliefs and their social environment
- Practical reasons relating to access and logistics.

Working with communities can help you as an eye care provider to identify both types of barriers and to find solutions to overcome them. Indeed, while you may know **what** needs to be done from the point of view of eye health or public health, the community will help you to work out **how** this can be done in their particular context. In this way, you can empower the community to take action to improve their eye health by listening to their views and putting them in the driving seat.

For example, early attempts to provide community-directed treatment with ivermectin in Nigeria achieved lower coverage at first, because local health workers had organised the ivermectin distribution at a time of day when the majority of working-aged adults were busy at their farms. By simply asking the community when they were more likely to be available, and changing the time of distribution accordingly, uptake improved.¹

This article provides practical suggestions for working collaboratively with communities to improve eye health, and also briefly covers how to measure the success, or impact, of your intervention.



Henry Nkumbwe

Two community eye health workers hand a local chief a poster to increase awareness about eye health. MADAGASCAR

Identifying barriers to behaviour change with the help of the community

Any attempt to change community behaviour must begin with discussions with representatives of the community that you are targeting. This applies whether you are trying to improve uptake of services, organise mass drug distribution, or encourage a specific behaviour change such as improved sanitation to minimise risk of trachoma infection.

Whatever your objective is, you will stand a much better

chance of achieving it if you are aware of how the community feels about eye care and eye health, and of any barriers or knowledge gaps that may prevent them from adopting new behaviours in this area.

Respect the community

Establish appropriate channels of communication (e.g. meeting with village or religious leaders first, before you meet with the general community) and respect local customs regarding gatherings (e.g. a need for separate meetings for men and women in some communities).

Include community members in your team

If the team encouraging behaviour change has no ties to or similarities with the local community/communities, this can create a divide that may prevent community members from being open about their attitudes, beliefs and practices. In the long run, this will hamper your efforts.

Conversely, involving people from the wider community as part of the team will increase the community's trust and build relationships between you and the community. Involving community members in service delivery also reduces barriers to the acceptance of new behaviours in that community. Community health workers, elder-club staff, or teachers can be involved.

If you do not speak the local language, it will also be essential from the outset to enlist the help of a reliable translator who understands what you are trying to do.

Communicate with the community

Once you have spoken directly with leaders and gained their permission and acceptance, contact other members of the community. This can be done in many ways, such as meetings with parents, mothers, workers or through the community leaders themselves.

It is important to ask people what their needs and preoccupations are rather than simply telling them what you think they

‘Whatever your objective is, you will stand a much better chance of achieving it if you are aware of how the community feels about eye care and eye health’

need to know. You should listen carefully and leave plenty of room for them to ask questions. Consider talking with people in groups and also at their home, as some individuals may not be comfortable expressing their concerns in public.

Be inclusive

You will only be truly successful if all members of the community are given the relevant information and are empowered to improve their eye health. It is important to ensure that women, minority groups and people with disabilities (who may be socially excluded or face other barriers) are able to participate. People with visual impairment, in particular, should be included.

Things to think about

- Accessible transport
- Accessible buildings
- Accessible interpersonal communication (signing, braille, audio, etc.)
- Accessible printed information ('Easy read', large print, use of pictures instead of words, etc.)
- Accessible non-printed information for those who are illiterate, such as using puppet shows or plays
- An inclusive attitude. Ask yourself: is anyone or any group missing here? How could we include them?

Understand the community and identify barriers to change

It is imperative to understand **what** the community believes in relation to eye health, and **why** they believe it. Ask them what, in their opinion, would prevent them from adopting a new behaviour for improved eye health or accessing a specific service.

It is also important to seek a wider understanding of the community. While you naturally think that your health message is important, community members may have far more pressing concerns requiring their attention, or may have to deal with constraints (social, practical, etc.) that you had not anticipated.

Listening to the community, and gaining a deeper understanding of it, will improve your chances of identifying barriers that may make it difficult for the community to adopt new behaviour to improve their eye health. The panel on this page lists some questions you may want to investigate.

Consult the community about solutions to overcome barriers

Some of the barriers may become clear as the result of discussions with community members. Others will emerge from your own understanding of the community or from a pre-tested

intervention that you are planning to roll out. In both instances, the community may provide you with valuable insights on how to overcome barriers in their local context.

Put community members in charge as much as possible, as they know best what might work in their particular circumstances. Empower them to find solutions, identify individuals with leadership skills and form groups that feel positively about the proposed changes in health behaviour (or about the benefits of cataract surgery, for example); they can then influence others in the community. These groups are sometimes known as 'coalitions of the willing'.

At the end of this process of two-way communication, you will have a much better idea of what to do to overcome barriers to behaviour change. For example, a recent project in Bangladesh provided free surgical services to children with visual and other impairments but reported that very few children came. When asked, a number of mothers expressed fear of negative surgical outcome and of traveling alone with their child into the capital city. After group

Understanding the community

You may want to learn more about the following:

- **What** do the community believe in relation to the behaviour you are trying to change?
- **What** are the underlying reasons for these beliefs?
- **What** are community members' major concerns when it comes to eye health and general health?
- **Who** (e.g. traditional healers, religious leaders) communicates information (and sometimes misinformation) about eye health?
- **Who** in the community would make decisions relevant to the change you want to encourage (e.g. who would need to decide or be consulted regarding the building of latrines)?
- **Whose** endorsement would encourage uptake by others (e.g. village elders)?
- **What** are the daily routines of the community as a group and of individual households (e.g. when do family members work in the fields)?
- **Who** makes decisions in households (e.g. financial decisions, or decisions about what food the children eat)?

transport was organised (allowing people to travel together to the health facility) and mothers were told what would happen during and after surgery, surgery uptake increased. Mothers felt more confident and were able to support one another.²

Techniques to empower communities to take action to improve eye health

Having formed all the appropriate relationships with the community and identified (along with community representatives) what barriers exist, you need to decide how you will empower communities to improve their eye health.

The article *Techniques to encourage people to take better care of their eye health* on page 67 lists a number of specific techniques you can use to encourage behaviour change to improve eye health. It should provide a basis from which to select activities that are relevant to what you are trying to achieve. Many of the techniques listed can be used together. Indeed, it seems that the most successful programmes use 3 or 4 techniques at the same time.³ Each of them should be adapted to fit your context.

When deciding on the most appropriate plan of action, make sure that the techniques you select are not all of the same kind (e.g. do not rely on visual messages alone, whether via posters or videos). It is also important to choose at least one technique that allows active participation from community members.

In all cases, when creating health messages, you should:

- Use simple and practical language, be brief and avoid technical details.
- Break down information into 'digestible' bits that can easily be put into practice by your audience in their context. Too many recommendations given out at once will confuse, overwhelm or discourage community members.
- If needed, adapt your health message to your context. For example, state how a change of behaviour will benefit this particular community.
- Always use language that is familiar and compatible with local culture and norms, and avoid judgmental or prescriptive statements.
- Pre-test your message on a few community members or on a small community and make any adjustments needed before circulating it more widely. When collecting feedback, consider home visits alongside group discussions, as mentioned earlier.
- Although your health messages should be simple, you should provide specialists

Continues overleaf ➤

to answer more technical follow-up questions when needed (e.g. on radio phone-in shows, on a technical phone support line, etc.) This ensures that more complicated queries are adequately and appropriately addressed.

Conclusion

Improving eye health is a complex task that depends greatly on not just your objectives, but on your own understanding of the way the community

behaves. Participatory approaches – that first try to learn about the community before offering solutions – are the most successful and the most likely to improve community eye health.

Further reading

Briscoe C and Aboud F. Behaviour change communication targeting four health behaviours in developing countries: a review of change techniques. *Social Science & Medicine*. 2012. 75(4), 612–621.

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Assessing your impact on behaviour change to improve eye health

It is important that you document all your activities and that you monitor and evaluate your interventions in the community.

Monitoring and evaluation must be integrated at the start of any intervention aimed at changing behaviour. Monitoring is the systematic collection of data to show how programme activities are being implemented. Evaluation is an attempt to determine how effective activities are and to assess their impact in relation to their original objectives.¹

Monitoring and evaluating behaviour change:

- will enable you to assess whether your intervention is having an impact
- will allow you to learn what does and does not work well, and to improve over time
- will motivate your team by

demonstrating progress

- will enable clear reporting.

The specifics of monitoring and evaluating behaviour change fall beyond the scope of this article, but a number of very good resources are available on this topic.¹

A monitoring and evaluating worksheet is presented in Table 1, using improving the uptake of cataract surgery services as an example.

The action plan is split into two activities for the purposes of simplification (in reality you would conduct more than two activities). The first activity aims to understand community perceptions and potential barriers. The second activity is an example of an appropriate intervention based on the community's understanding of eye health. The middle column

(‘Questions’) shows the questions you may need to ask about the effectiveness of your activities, and the right-hand column (‘Indicators’) gives examples of the kind of data that you can collect (called indicators) that will allow you to answer these questions over time.

Do not expect immediate changes – communities often need time to consider new knowledge and information. Allow enough time before evaluating so that it will be possible to see any behaviour changes in action.

Further reading

1. Agrawal P, Aruldas K, and JKhan ME. Training Manual on Basic Monitoring and Evaluation of Social and Behaviour Change Communication Health Programs. 2014, Population Council: New Delhi, India. It can be downloaded from www.popcouncil.org/uploads/pdfs/2014RH_BCCTrainingManual.pdf

Table 1. Example of a community-level activity monitoring and evaluation (M&E) worksheet

Community-level activity monitoring and evaluation (M&E) worksheet		
Objective: By end of project, there will be an X percent increase in the number people who are aware of the benefits of cataract surgery		
Activities	Questions	Indicators
Activity 1 Hold discussions in 3 communities to understand community knowledge about cataract surgery	Monitoring questions <ul style="list-style-type: none"> • How many meetings were held? • How many people participated? 	Monitoring indicators <ul style="list-style-type: none"> • Number & demographics of attendees • Length of meetings
	Evaluation questions <ul style="list-style-type: none"> • What knowledge gaps, beliefs, practices and attitudes to cataract surgery were identified? • Were all members of the community represented? 	Evaluation indicators <ul style="list-style-type: none"> • Number of areas of intervention identified(e.g. ‘incorrect knowledge about cost of surgery’) • Representation of different groups (e.g. women or people with disabilities) in meetings
Activity 2 (based on outcomes of activity 1) Conduct 3 role-play events in 3 communities to explain what happens at the hospital, and the costs and benefits of cataract surgery	Monitoring questions <ul style="list-style-type: none"> • How many role-play events were held? • How many people attended? 	Monitoring indicators <ul style="list-style-type: none"> • Baseline awareness of the benefits of cataract surgery, and new knowledge level after role play (this can easily be conducted through an ‘exit poll’). E.g., more people stating that they would allow a member of their family to undergo cataract surgery • Number of cataract operations performed in local clinic per month
	Evaluation questions <ul style="list-style-type: none"> • Did the level of fear about eye surgery reduce in the community? Did the community improve their knowledge of the costs and benefits of cataract surgery? 	Evaluation indicators <ul style="list-style-type: none"> • Percentage of community members aware of the benefits of cataract surgery compared with baseline • Number of cataract operations performed in local clinic per month compared to baseline



Techniques to encourage people to take better care of their eye health



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Earlier in this issue, the article 'How to empower communities to take action on improving eye health' (page 64) provided the background, rationale and overall approach to empowering communities to improve their eye health. This article provides more information about specific techniques that you might use within your overall strategy, including examples of each technique and when to consider using it.

As mentioned earlier in this issue, it is important that the technique you choose is inclusive, meaning that it is possible for people with different types of disabilities and levels of literacy to benefit. For example, people who are deaf or hearing impaired may need written materials or sign language interpreters. Verbal techniques including plays and puppet shows may be better than written information in illiterate communities. 'Easy read'¹ materials (which use short, simple sentences that are clearly presented and supported with helpful images) may help children, people with learning difficulties and those who have lower literacy. Venues should always be accessible for

people who use wheelchairs or need support with moving around (e.g. there should be ramps or elevators, not just stairs).

Information sharing

Information sharing refers to sharing specific messages with the community that can improve their eye health. Depending on the knowledge gaps in the community, the type of information shared may be about what services are available (including where they are, how much they cost, what exact procedures they entail, and what support is available in accessing them) or about specific diseases or infections common in the community (and how they can be identified and treated).

As explained in 'How to empower communities to take action on improving eye health', there are many reasons why communities may not be aware of the best practices to improve their eye health, and may not have accurate information about how they can do this and what services are available to support them. Ensuring that the community are aware of these key messages is extremely important.

How can information be shared?

There are a number of different ways that information can be shared, using different channels of communications and different techniques.

1 Oral presentations explaining where/ what services are available or how communities can improve their eye health.

For example, giving a talk at a church congregation or village meeting on the availability of new cataract services, or giving a health talk in a hospital waiting room (see article on page 76). This is a simple and straightforward approach to communicating information to group gatherings.

2 Distribution of printed information

This is relevant if your audience is literate, or if you are sure that families can find a literate person to read to them. A leaflet that summarises important information about glaucoma treatment, for example, will give opportunities for follow-up discussion and provide contact details if further information or clarification is needed.

3 Using mass media (print, radio or TV)

This is useful to reach a large number of people, as long as you use a medium that is relevant to the community (e.g. newsprint is not appropriate if the majority of the community is not literate). Regular radio or TV messages may be most appropriate to encourage particular strategies (e.g. for trachoma) or to repeat key messages about upcoming screening services. You should make sure your message is broadcast at a time when your target audience is likely to be listening or watching. You could also consider participating in a phone-in radio show where local listeners can ask questions.

4 Giving a performance that delivers a health message

Performance techniques such as street theatre, puppetry or showing a short video can be designed in which the story line, and the characters involved, tell a story about improving eye health. This can make the message more easier to relate to than if the message were delivered on its own. Performance techniques can also provide space for question and answer sessions to ensure that the community has the opportunity to query key points in a relaxed setting.

5 SMS (text message) reminders

SMS reminders sent at timely intervals will reach all members of the community with a cellphone (mobile phone),

Continues overleaf ►

Jonathan Pons



A nurse explains the clinic procedure to the waiting patients and then gives a short talk about a public health topic, such as multiple drug-resistant TB. Before she started to speak, everyone sang a hymn together. Singing is a strong tradition in many African countries and builds a sense of community and connection between the patients and the nurse – all of which supports communication. SWAZILAND

which is helpful as so many people have cellphones. This can be particularly useful to remind the community when particular services/consultations are available nearby.

Participatory approaches

A participatory approach is one that allows the community to participate in activities that encourage good eye health behaviour and to actively decide how they will improve their eye health. It aims to foster a sense of shared ownership, which can be more effective than a one-way delivery of information or services (from you to the community).

The community's increased sense of ownership can help to encourage long-term commitment to any behaviour change.

What type of participatory approaches can be used?

1 Demonstrating the effects and symptoms of a particular health condition

Demonstrating to a group of community members the effects and symptoms of an eye condition such as glaucoma (i.e., using custom spectacles to demonstrate tunnel vision), will help them to spot symptoms in themselves and others. If they can experience the effects of an eye disease, they may also have an increased appreciation of the importance of seeking eye health services before an irreversible loss of vision occurs.

2 Demonstrating a health behaviour.

People are more likely to remember something if they have practiced doing it themselves. Going through the steps – of good hand-washing, for example – with a community group will enable you to deal with any questions on the correct way to do it, and it will help to clear up any confusion.

3 Role-playing a situation. Certain behavioural changes that you may wish to encourage may cause anxiety or fear in communities. For example, many people can be fearful of operations, e.g. cataract operations, which stops them from seeking treatment. By demonstrating what will happen before, during and after cataract surgery, with a community member playing the role of patient, people can voice their fears about the process in an informal setting when nothing is at

stake. This in turn can lead to reduced anxiety about the procedure and better uptake of services.

4 Involving community members who have already endorsed the intervention/adopted the behaviour/used the service

Generally, people trust other members of their community and may relate to them more than strangers who seek to encourage behaviour change. For example, you can ask people who have had successful cataract surgery or successful treatment for glaucoma to talk through their experience, explain the benefits and answer questions from others in the community.

5 Providing support to community volunteers or community-based workers

Community volunteers or paid community workers can provide an ongoing two-way link with the community. Teachers, other local authority staff (eg pre-school workers, elders club staff), and community-based health workers may appreciate training to enable them to assist their local population in improving eye health, for example in organising children or adults' vision screening.

'The community's increased sense of ownership can help foster long term commitment to any behaviour change'

Facilitating access

Facilitating access means making it easier for people to get the services they need. This is done by addressing the barriers that prevent communities from accessing services, e.g. cost, distance, language, physical barriers (e.g. stairs), and so on.

What methods can be used to facilitate access?

There are a number of ways in which access to available services can be facilitated:

1 Distributing materials that can improve eye health. For example, providing soap for hand-washing, or spectacles to correct refractive error.

2 Offering free transport to services Organising free group transport to a particular service (such as screening or surgery) lessens the cost burden and can also provide mutual support for community members who may feel less anxious attending services as a group.

3 Offering free or partially subsidised services. Subsidising or removing the cost of services can be extremely beneficial in improving eye health

when communities do not have much disposable income or have many other competing priorities.

4 Offering services in the community

Organising local screening for cataract or other eye conditions is a very effective way of encouraging good eye health. It is important, however, to make sure that screening activities are linked to the necessary follow-up interventions. This requires a functioning referral network to refer patients on to, as well as coordination and sufficient resources. Alternatively, it may be possible to offer treatment as part of outreach services, e.g. organising cataract surgery at a local clinic when enough patients have been identified.

Rewarding behaviour change

Rewarding behaviour change means providing incentives to the community to change their eye health behaviour or attend an information session intended to improve their eye health.

A perceived lack of need is often given as a reason why communities do not attend eye services. Rewards may improve uptake. However, you should be aware that this strategy is less sustainable and, if using it is necessary, it may indicate that there remains a lack of clear understanding in the community, or that the service is not really meeting their needs. Consider addressing this before providing incentives.

What methods can be used to reward behaviour change?

The rewards can be staple foods, soap, etc. or concurrent services that the community feels a stronger need for. You should always avoid providing monetary incentives for people to attend a session or change their behaviour as this is not considered ethical.

Conclusion

This article has introduced a range of techniques that you can use to encourage people to take better care of their eye health in the community. There is no 'one size fits all', and in many cases it may be appropriate to combine more than one technique. Always remember to spend time understanding the community's knowledge gaps and practices before attempting to encourage any changes in behaviour – see 'How to empower communities to take action on improving eye health' on page 64.

Further reading

1. Easy Read: How to create documents that are easy to read. <http://www.accessibleinfo.co.uk/pdfs/Making-Myself-Clear.pdf>

Adapted motivational interviewing to improve the uptake of treatment for glaucoma in Nigeria: study protocol for a randomised controlled trial

Mohammed M Abdull, Clare Gilbert, Jim McCambridge and Jennifer Evans
Trials 2014, 15:149 doi:10.1186/1745-6215-15-149

Background

Glaucoma is a chronic eye disease associated with irreversible visual loss. In Africa, glaucoma patients often present late, with very advanced disease. One-off procedures, such as laser or surgery, are recommended in Africa because of lack of or poor adherence to medical treatment. However, acceptance of surgery is usually extremely low. To prevent blindness, adherence to treatment needs to improve, using acceptable, replicable and cost-effective interventions. After reviewing the literature and interviewing patients in Bauchi (Nigeria) motivational interviewing (MI) was selected as the intervention for this trial, with adaptation for glaucoma (MIG). MI is designed to strengthen personal motivation for, and commitment to a specific goal by eliciting

and exploring a person's reasons for change within an atmosphere of acceptance and compassion. The aim of this study is to assess whether MIG increases the uptake of laser or surgery amongst glaucoma patients where this is the recommended treatment. The hypothesis is that MIG increases the uptake of treatment. This will be the first trial of MI in Africa.

Methods

This is a hospital-based, single-centre, randomised controlled trial of MIG plus an information sheet on glaucoma and its treatment (the latter being 'standard care') compared with standard care alone for glaucoma patients where the treatment recommended is surgery or laser.

Those eligible for the trial are adults aged 17 years and above who live within 200 km of Bauchi with advanced glaucoma where the examining ophthalmologist recommends surgery or laser.

After obtaining written informed consent, participants will be randomly allocated to MIG plus standard care, or standard care alone. Motivational interviewing will be delivered in Hausa or English by one of two MIG trained personnel. One hundred and fifty participants will be recruited to each arm. The primary outcome is the proportion of participants undergoing laser or surgery within two months of the date given to re attend for the procedure. MIG quality will be assessed using the validated MI treatment integrity scale.

Discussion

Motivational interviewing may be an important tool to increase the acceptance of treatment for glaucoma. The approach is potentially scalable and may be useful for other chronic conditions in Africa.

Note: To read more about motivational interviewing, visit <http://motivationalinterviewing.net/clinical/index.html>

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Commonwealth Eye Health Consortium



COMMONWEALTH EYE HEALTH CONSORTIUM

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The Commonwealth Eye Health Consortium, funded by The Queen Elizabeth Diamond Jubilee Trust, is currently offering both Masters Scholarships and Clinical Fellowships.

Masters Scholarships

The Consortium offers scholarships to study Masters (MSc) in Public Health for Eye Care at the University of Cape Town, South Africa and at the London School of Hygiene & Tropical Medicine, United Kingdom. The MSc helps to equip ophthalmologists and eye care managers with the skills and knowledge they need to implement



effective, sustainable strategies to prevent and treat blindness across the Commonwealth. Apply here:

<http://cehc.lshtm.ac.uk/msc-scholars/>

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The Consortium's clinical fellowships programme is offering both long-term (one-year) fellowships and short-term (three-month) attachments. These are available to ophthalmologists from low- and middle-income




Commonwealth countries. Thanks to the enhancement of their sub-specialty knowledge and skills, which will enable them to deliver high quality eye care, Commonwealth fellows will be able to more effectively relieve the burden of blindness in their own countries. Apply here:

<http://cehc.lshtm.ac.uk/clinical-fellows/>



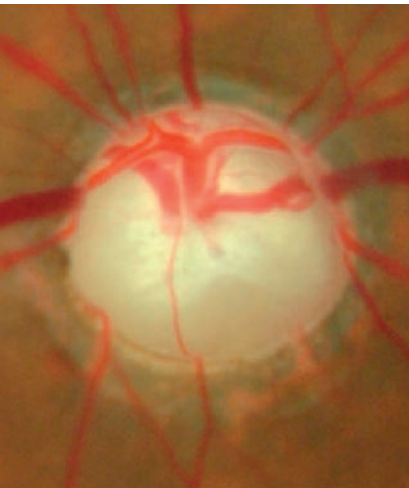
THE QUEEN ELIZABETH
DIAMOND JUBILEE TRUST

Diseases at the back of the eye

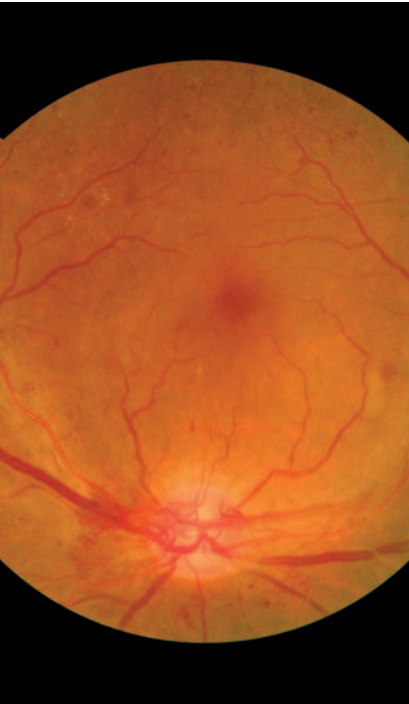
HISTORY	Age-related macular degeneration (AMD)		Open-angle glaucoma	Diabetic retinopathy (DR)	
	<p>Exudative AMD. Distortion, rapid loss of central and reading vision</p> <p>Atrophic AMD. Gradual loss of central vision</p>	<p>Initially no symptoms, then gradual loss of the peripheral field of vision which can lead to loss of central vision</p>	<p>Initially no symptoms, then: Maculopathy. Gradual loss of central vision</p> <p>Proliferative DR. Sudden or gradual loss of vision</p>		
EXAMINATION	<p>Exudative AMD. Blood, or exudate, or scarring at macula</p> <p>Atrophic AMD. Atrophy of choroid and retinal pigment at macula</p>	<p>Pale and cupped disc, constricted visual fields, may have elevated intraocular pressure (IOP)</p>	<p>Maculopathy. Exudates near macula</p> <p>Proliferative DR. New vessels or vitreous haemorrhage</p>		
					
Exudative AMD		Early cupping		Diabetic maculopathy	



Early atrophic AMD



Cupped disc



Diabetic new vessels (proliferative DR)

MANAGEMENT

Exudative AMD. Refer for intravitreal injections (if available) if:

- Symptoms are present for less than three months
- Vision is better than counting fingers (CF)

Atrophic AMD. No treatment is available, but patients may benefit from low vision aids

Treatment cannot improve sight, so refer only if the patient still has useful vision

Aim to reduce IOP using:

- Daily eye drops
- Surgery
- Laser

Maculopathy. Refer for laser or intravitreal injections if vision is 6/60 or better

Proliferative DR. Refer for laser if any new vessels or vitreous haemorrhage. May need vitrectomy if there is vitreous haemorrhage and/or poor vision

INFORMATION FOR PATIENTS

All three conditions are chronic, and cannot be completely cured. We expect anti-VEGF injections to improve vision in exudative AMD and diabetic maculopathy in most – but not all – patients. In glaucoma and proliferative DR, treatment will only prevent the condition getting worse. In order to manage these chronic and incurable disorders effectively, patients must attend the clinic regularly for the rest of their lives

Exudative AMD. If suitable for treatment, patients will require three injections over three months. They are likely to need more injections after the initial three. Even if no further treatment is needed, they will need to attend the clinic every two months

The sight will not be improved by treatment, which aims to prevent further loss of vision.

Eye drops must be used every day, and continued indefinitely.

Surgery or laser may lower the IOP permanently but will require frequent examinations for the first three months

Maculopathy. The injection treatment is the same as for exudative AMD. Laser may lead to a more permanent cure, but still requires examination every 3-4 months

Proliferative DR. After laser, examine the patient every three months for the first year

Improving quality by improving safety



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Protecting patients from harm is one of the most important things health professionals can do for their patients. However, an estimated 1 in 10 patients are harmed while receiving hospital care in high-income countries,¹ and studies suggest that the rates of harm are higher in low- and middle-income countries.² The World Health Organization (WHO) describes safety as a key dimension of quality health care.³

Patient safety means 'the absence of preventable harm to a patient during the process of health care.'¹ It includes issues such as the prevention of hospital-acquired infections, surgical safety, medication errors, falls and accidents in hospital.

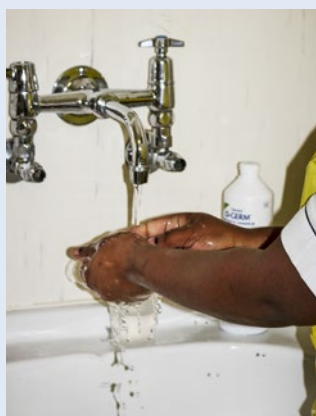
Keeping patients safe in theatres

Keeping patients safe before, during and after operations is vital. Simple, cheap interventions can be implemented to prevent harm in theatres. The WHO has developed a surgical safety checklist⁴ to be used for each operation; use of the checklist can reduce the rate of post-operative deaths and complications by more than one third. Evidence suggests that this tool may be particularly effective in low-income settings.⁵ A surgical safety checklist is simple, quick and can be adapted to suit local needs. For example, a specific checklist for cataract surgery has been developed in the UK.⁶

What you can do:

- Develop a local surgical safety checklist, using the WHO tool as a model, which you can use on every surgical patient to prevent errors in theatre.
- Ensure surgeons perform a 'double check' (see panel) on every patient to check they have the correct patient, correct eye and correct equipment; this will highlight any errors before the operation takes place.

Eimien Wolkvaardt Ellison



Hand hygiene measures can reduce health care associated infections by 50%

The theatre 'double check'

Before each operation, the surgeon must do the following checks.

- **Correct patient.** Check the patient's name and date of birth with them, and check you have the correct notes.
- **Correct eye.** Check with the patient which eye you are operating on and check this in the patient's notes.
- **Correct IOL.** Check with the theatre assistant, and in the patient notes, to ensure that you have the correct intra-ocular lens (IOL).

Protecting patients from infection

Infections acquired in hospital are a major global problem. In low-income countries, an estimated 15.5 out of every 100 patients treated will develop an infection as a result of their contact with the health service. Clean hands are an important step in preventing transmission of infections. Hand hygiene measures can reduce the frequency of health care associated infections by more than 50%.¹

Eye infection can spread in hospitals where infection control measures are inadequate. In eye units, inadequate access to working sinks, hand towels, and alcohol hand rubs can make effective hand hygiene difficult.

What you can do:

- Always clean your hands between each patient, either with soap and water or using alcohol hand rub.
- Make hospital management aware if hand hygiene facilities need to be improved. It should be easy for you to wash your hands anywhere that you are seeing patients.

Learn from mistakes

Accidents and 'near misses' (potential accidents that have been prevented just in time) happen in every health system in the world, and evidence shows that the majority of errors in health care are preventable. It is vital that we learn from mistakes and near misses so that they are not repeated. It is also important to ask patients about their

experiences in hospital in order to identify areas that could be improved. For example, when discharging a patient it is important that they know how to care for themselves at home; however, this is often not explained well. You can assess how well patients have understood by asking the patient to tell you how they need to care for their eye at home.

What you can do:

- When mistakes happen, report them, find the cause of the mistake and take steps to prevent a similar situation in the future.
- Ask patients about their experiences in hospital and act on the information they tell you.

Keeping patients safe is a vital component of providing a high quality service. There are very simple, inexpensive steps that can be taken to dramatically improve safety in your hospital. Eye care cannot be considered high quality without taking these basic measures to keep patients safe.

Case study: Ruharo Eye Centre

In 2013 Ruharo Eye Centre in Uganda participated in a study of hospital quality. As a result of the study the hospital conducted several continuous medical education sessions for its staff; the sessions re-emphasised a culture of hand washing before and after contact with patients. After the sessions the hospital started receiving information in the suggestion box thanking the hospital for the high level of hygiene experienced by patients while at the hospital. This improved patient management and the hospital's image in the community.

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Increasing sustainable cataract services in sub-Saharan Africa: an experimental initiative



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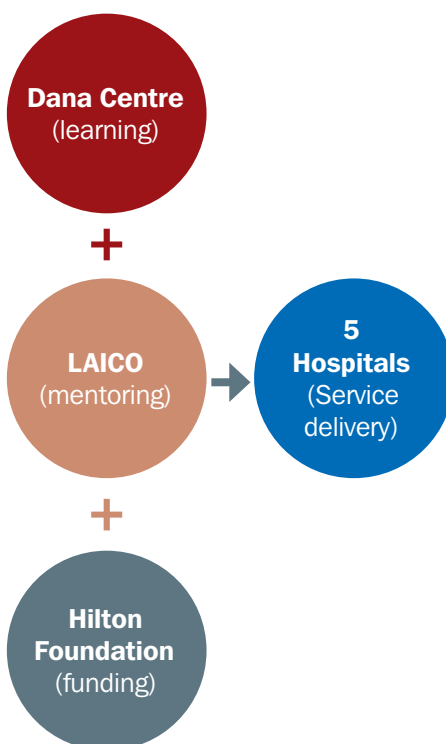
To begin to meet the need for cataract surgery in sub-Saharan Africa, the cataract surgical rate (CSR) should be at least 2,000 to 3,000; i.e. there should be 2,000-3,000 cataract operations per million population, per year. The current levels are below 1,000 (and often much lower). Sub-Saharan Africa poses a unique set of challenges: low population density; inadequate transportation systems that inhibit access; big differences in wealth; and a shortage of eye care resources (which are usually concentrated in larger cities). Additional issues relate to productivity, the supply chain and the quality of outcomes,¹ all of which contribute to the low cataract surgical rates. It is in this context that the Hilton Foundation sought to enhance cataract surgical services in sub-Saharan Africa, through the Hilton Cataract Initiative.

Organisations involved in the initiative and their roles (Figure 1)

There are three international partners.

- The Hilton Foundation (provides funding)
- The Dana Center for Preventive Ophthalmology, Wilmer Eye Institute, Johns Hopkins University, USA, (supports learning)
- Lions Aravind Institute for Community

Figure 1. Organisations involved in the initiative



Ophthalmology, Aravind, India (offers consulting and mentoring support)

The three partners are working with five hospitals in sub-Saharan Africa.

- **Kitwe Central Hospital, Zambia:** A public hospital, located in the Copper Belt Province.
- **Innovation Eye Centre, Kenya:** A private venture, located in Kisii, 300 km from Nairobi.

- **UHEAL Foundation, Kenya:** A Public-Private Partnership, located in Nairobi to serve the poor.
- **Deseret Community Vision Institute, Nigeria.** A for-profit institution with a not for profit arm, located near Lagos.
- **Fitsum Birhan Specialized Eye Clinic, Ethiopia:** A private venture, located in Mekele in Tigray province.

The project aspires to build the five hospitals' capacity to perform an additional 22,000 cataract operations per year with high quality outcomes. This would increase the CSR in their service areas by 1,000. While the targets were set for cataract, there is an equal emphasis on comprehensiveness in the provision of eye care and the sustainability of this outcome beyond the project period.

Needs assessment and strategic planning

Each hospital set realistic, yet ambitious targets for the number of cataract operations they would aim to perform each year. The targets were based on the unmet need. This was calculated as the number of cataract operations needed in the service area, minus the current number of operations. and their capacity (their current capacity, together with the proposed enhancements during the project period).

Each hospital developed institution- and context-specific strategies and action plans covering the following domains.

- **Demand generation,** including attracting more patients in need of cataract surgery, with a focus on the

Continues overleaf ➤

Table 1. Current and target annual cataract surgical output

Hospital (primary service population)	Number of operations per year		% of increase
	Current	Target	
UHEAL Foundation, Kenya (5 million)	0	5,000	New venture
Innovation Eye Centre, Kenya (5 million)	210	5,600	Just started
Fitsum Berhan Speciality Eye Centre, Ethiopia (5 million)	6,016*	10,000	282%
Eye Foundation, Nigeria (5 million, plus 15 million reached through outreach)	1,476	5,000	239%
Eye Dept, Kitwe Central Hospital, Zambia (5 million)	2,500	6,200	180%
Five hospitals (Population: 40 Million)	10,202	31,800	213%

*3,400 of these operations were performed during surgical outreach, supported by a special one-off programme

Sasipriya M Karumanchi



Sasipriya M Karumanchi



At a screening camp organised by Fitsum Berhan Eye Clinic. ETHIOPIA

poor and those who struggle to come to the hospital, for whatever reason.

- **Human resources:** both the number of people required (capacity) and the skills required (competence).
- **Quality:** measuring and ensuring high quality clinical outcomes and patient satisfaction.
- **Operating efficiency:** ensuring that scarce resources are optimally used.
- **Financial viability:** pricing to ensure affordability, and putting in place revenue and cost control strategies.

What have we learned so far?

After one year of data collection and initial training, the project is in the early stages of implementation. Strategic plans at each of the hospitals are being finalised and implemented. Site visits have been made and baseline details (including organisational practices and procedures) are being documented. In July 2014 all three international partners and the five hospitals met for an initial review of developments and to share lessons.

While there are challenges specific to each of the hospitals, the following areas required attention in nearly all of the hospitals:

- 1 Patient volumes.** Inadequate patient volumes mean that it is necessary to take a closer look at patient experience and develop proactive strategies for increasing patient access and demand.

Tayo Bogunjoko



After cataract surgery at Deseret Community Vision Institute. NIGERIA

- 2 Patient-centred design.** Current processes and systems are biased towards serving the interests of the hospital rather than those of the patients.
- 3 Human resources.** A shortage of staff members, as well as imbalances in the composition of the teams' skills and expertise, needed to be addressed.
- 4 Administration.** Better systems were needed to bring about higher efficiency in day-to-day activities.
- 5 Managing with evidence.** There is inadequate generation and use of evidence for making decisions. This is due to a lack of systems for obtaining needed evidence, as well as the lack of systems for routinely using evidence to guide continuous improvement of processes.

The journey over the next few years should assist the hospitals in developing innovative and sustainable strategies for reaching their goals. The process will no doubt be iterative (i.e., will be repeated), and will benefit from shared learnings.

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Editorial comment

Universal eye health (UEH) calls for:

- An increase in access to health care with the goal of providing 100% (universal) access.
- An increase in the range of services offered, with the goal of offering fully comprehensive eye care.
- Making services affordable with the goal that no-one is excluded from eye care because of cost.

Several not-for-profit organisations have significantly contributed towards UEH in India. The *Community Eye Health Journal* looks forward to learning about the outcomes of this initiative in Africa.

The uncorrected r

Kovin Naidoo, Pirindha Govender and Brien Holden

Refractive error affects people of all ages, socio-economic status and ethnic groups. The most recent statistics estimate that, worldwide, 32.4 million people are blind and 191 million people have vision impairment.¹ Vision impairment has been defined based on distance visual acuity only, and uncorrected distance refractive error (mainly myopia) is the single biggest cause of worldwide vision impairment. However, when we also consider near visual impairment, it is clear that even more people are affected. From research it was estimated that the number of people with vision impairment due to uncorrected distance refractive error was 107.8 million,¹ and the number of people affected by uncorrected near refractive error was 517 million,² giving a total of 624.8 million people.

Vision impairment affects the ability to function optimally, socialise and engage in activities of daily living and emotional well-being. In children, vision impairment is known to affect school learning, outdoor activity and the individual's social life or integration.³ Uncorrected distance refractive error leading to vision impairment can reduce quality of life⁴ and decrease participation in daily activities that are vision-related.⁵ Uncorrected near vision also reduces an individual's educational and employment opportunities.⁶ Uncorrected refractive error has broader implications for communities, countries and the global community. The potential lost productivity as a result of uncorrected distance refractive error is US \$268.8 billion per year. The cost to train refractionists and maintain refractive services to deal with uncorrected refractive error (including presbyopia) is US \$28 billion.⁷

Despite being one of the more easily corrected conditions resulting in vision impairment, uncorrected refractive error still remains a significant cause of vision impairment globally. A number of factors contribute to this situation: a lack of trained eye health workers to address the current refractive challenges, poor integration of refractive services into existing eye health services and a limited number of good quality training programmes.

Key strategies in addressing the problem

Human resource development

The World Health Organization's Global Action Plan for 2014 to 2019 has

Refractive error challenge

identified human resources for refractive error as a priority in reducing avoidable blindness globally.^{7,8} Current challenges include the uneven distribution of refraction training institutions and a lack of standardisation, which makes it difficult to maintain the quality of services. In some countries, competing eye health priorities also mean that providers sometimes neglect refractive error services.

Service delivery

In many low- and middle-income countries, it is necessary to provide refractive services at all levels of the health care system, especially at primary level, where services are provided in the community. Successful services have an integrated team approach, with a clear referral pathway and a defined scope of service at each level. For example: screening/case finding at community level, presbyopia or basic refraction services at primary or community health centre level, specialised services at secondary or district level, and pre- and post-operative refraction services at tertiary or regional level.

Social enterprise

Social enterprise (SE) solutions provide refractive error services while at the same time alleviating poverty and providing employment opportunities. SE initiatives are meant to complement existing eye care delivery systems, and can take many forms. A vision centre model charges those who can pay and uses this income to subsidise services for the poorest of the poor and is usually run by NGOs or in partnership with the public sector. A social franchise model allows entrepreneurs to



Courtesy Brien Holden Institute

Uncorrected distance refractive error is the biggest single cause of vision impairment worldwide. SOUTH AFRICA

be supported to make affordable frame and lens packages available in underserved areas.

Infrastructure and supplies

Delivering comprehensive, accessible eye care to communities means that the necessary equipment and space needs to be allocated for services to be delivered and an affordable spectacle supply chain should be in place. In some cases, refractive services are provided, but an inadequate supply of spectacles makes these services irrelevant as people still have to live with uncorrected refractive error.

It is evident that there is still much that should be done to alleviate the problem. By developing evidence through research initiatives (e.g. determining the regional and country-specific prevalence of uncorrected refractive error or mapping human resources), country-specific solutions can alleviate the problem in a comprehensive and coherent manner. Research data on the impact correcting refractive error has on people's education and socioeconomic status will provide the information needed for successful advocacy efforts.

'Successful services have an integrated team approach'

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Courtesy Brien Holden Institute



Courtesy Brien Holden Institute

An estimated 517 million people worldwide are affected by uncorrected near refractive error, which reduces their employment opportunities. SOUTH AFRICA

Giving a health talk



Detlef Prozesky

Acting Head: Department of Medical Education, Faculty of Medicine, University of Botswana, Gaborone, Botswana.

This is a form of health education that is used very commonly throughout the world, probably more commonly than any other method.

- Typically it takes place in a health centre or clinic, at the beginning of the day, when the patients have arrived. Health talks are also commonly given to the patients in a hospital ward.
- The subject matter is decided upon by the health care staff, often in advance – they may have a programme worked out for the month. Often the subject matter is related to the medical programme for the day – for example, if it is the day for the glaucoma clinic the talk might deal with compliance.
- The talk is usually given in the local language, which is good for communication.
- Visual aids may be used – posters, or real objects like birth control tablets.
- The popularity of health talks varies from country to country. In some countries they are not used at all, whereas in others they are used a lot. Often health centre staff members feel strongly that it is their duty to give these talks, because 'health education' is thought of as one of the elements of Primary Health Care. It is seen as a routine task like any other in the health centre, and is done more or less faithfully.

The effectiveness of health talks

Health talks are a means to share information with the community, as mentioned on page 67, and this approach can support and complement more participatory approaches. There is much evidence that health talks are effective in passing on health information. Research done in South Africa in a large rural area found that the level of community knowledge about important primary health care topics was very high, and community members reported that their source of information was the local health centres.

The advantages of health talks

- The main advantage is that you can reach a fairly large number of people at the same time; with discussions you are limited to about 10 people at a time.
- Health talks need relatively little preparation.
- Because the staff know the patients and the community, their messages are



Patients listen to a health talk. SWAZILAND

usually very relevant to the health problems and the culture of the community.

The limitations of health talks

- One of the main limitations is that you are talking to people who are already 'converted' to modern health care – the ones who really need the information may not come to the health centre at all.
- People may resent being kept waiting for the sake of a talk – they have their buses to catch and their lives to live.
- Only knowledge can be taught, not skills. It is also hard to empower and motivate people by just talking to them.
- Often, relatively junior staff members, with less knowledge and experience, are given the job of health education.

Good and bad health talks

From his experience in Africa, the author has picked up the following good and bad habits that health workers have when they give health talks (see Table 1).

Table 1. Good and bad habits when giving a health talk

Good	Bad
<ul style="list-style-type: none"> • Two-way communication – lots of interaction with the audience • Short and entertaining – one or two key messages only • Practical subject matter – deals with important local health issues • Visual aids used • Simple, understandable language • Friendly, respectful and approachable 	<ul style="list-style-type: none"> • One-way lecture – only the health worker talks • Long and boring – too many messages for the audience to remember • Subject matter is theoretical or decided on without considering local priorities • No visual aids used • Using lots of technical/ English words • Behaving like a schoolteacher – e.g. the audience have to stand up when they ask a question, etc. • Insists on a formal atmosphere • Audience silent • Doesn't check for understanding.

As in all health education, the health talk will be better if the educator addresses people's concerns and fears, deals respectfully with them, builds on useful customs that they already have, and keeps in mind their problems and limitations.

Health talks are a popular and very common method of health education. If they are done well, they can be highly effective in passing on important knowledge.

Top tips

- Timing: Keep it to 20 minutes
- When choosing content, focus on what people must know
- Remember: your hearers are only going to remember 3–4 of the facts you tell them. Make sure these are the important ones!
- When presenting the content, avoid jargon and complicated words.

Preparing an outline to help you

- 1 A striking **introduction** that creates interest and explains what is going to happen
- 2 A concise **body**. There must be a logical sequence of information. Reduce information to the key points.
- 3 A meaningful **conclusion**, containing a summary of the key or important points.

Ensuring proper and safe use of the cryotherapy machine



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Cryotherapy machines, also known as cryosurgery machines, continue to be widely used for surgical procedures of the eye such as retinal detachment repair, cataract extraction, glaucoma and so on.

Cryotherapy machines (Figure 1) control the release of a compressed gas, stored under high pressure in a cylinder. When the foot pedal is depressed, the gas is regulated to a lower working pressure and pumped to the metal tip of the cryoprobe, where it expands rapidly. This reduction in pressure cools the gas and the tip freezes very quickly. Release of the foot pedal causes warm low-pressure gas to flow through the probe for defrosting.

The main compressed gases used for cryotherapy are carbon dioxide (CO₂) and nitrous oxide (N₂O). Nitrous oxide is more effective for cryotherapy, but in many low-resource settings carbon dioxide is often much less expensive and more readily available.

The pressure gauge on the back of the machine (in the case of the model in Figure 1) indicates how much gas is inside the cylinder. The pressure gauge in the front indicates the regulated or 'working' pressure that is applied to the probe. This pressure can be adjusted using the knob on the front, according to the strength of cooling that is desired and the type of probe used, as per the manufacturer's recommendations. The higher the working pressure the greater the cooling.

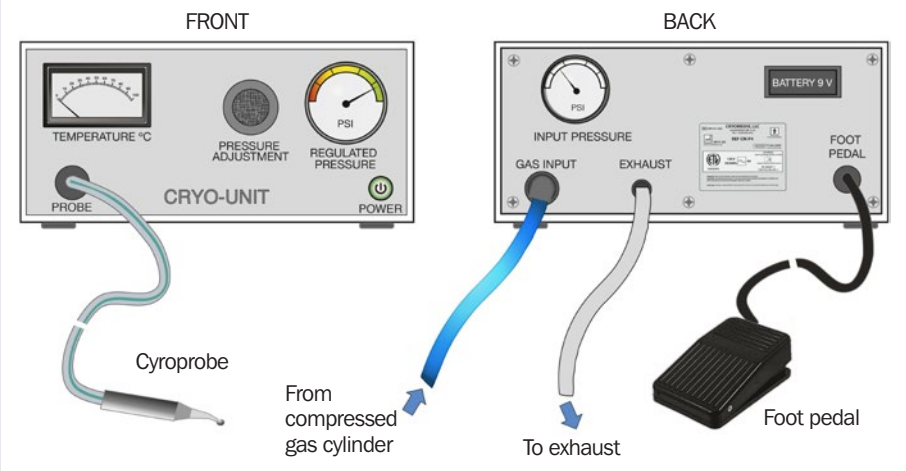
Many probes have a thermocouple that measures the temperature at the tip and this measurement is displayed on the temperature gauge on the front of the machine. Most standard cryotherapy machines do not have to be connected to an electrical outlet but may require a small battery to power the temperature gauge.

Avoiding exposure to N₂O

The concentration of N₂O in the room can reach several thousand parts per million during a cryosurgical procedure if the exhaust gas from the probe is not vented properly, and levels may remain elevated for a long time. Exposure should be minimised to prevent the short-term behavioural and long-term reproductive health effects that can be caused by N₂O.

Most modern N₂O cryotherapy units are equipped with an exhaust. A length of

Figure 1



plastic tubing available from the manufacturer can be connected directly to this port, with the other end connected to a discharge location outside the building. Remember:

- Always discharge N₂O to the outside, away from any air-intake ducts.
- Do not vent the N₂O into a sink, drain trap, air recirculation duct, or the piped medical/surgical suction system.
- Consult with the manufacturer to determine which scavenging methods they recommend for their equipment.

Before use

- Ensure that the gas cylinder is properly secured.
- Store the cylinders upright for a minimum of eight hours at ambient room temperature prior to use.
- Ensure that the gas cylinder is full, properly connected to the machine and that the cylinder valve is fully open.
- Ensure that the exhaust hose is connected and directed to a proper discharge location, as stated above.

The equipment should be tested immediately before use as follows:

- Use the foot pedal to release some gas with the probe tip immersed in water; a 2 cm ice ball should form at the tip.
- If the ice ball does not appear, then the machine is faulty or the gas cylinder is almost or completely empty.
- The freezing action should continue only so long as the foot pedal is depressed.

During use

- Always vent N₂O to the outside, away from any air-intake ducts.
- Do not constrict, kink, bend, lay objects on, or otherwise damage or restrict

probe or exhaust lines.

- Do not attempt to insert or remove the probe at the probe jack when the cryosurgical machine is pressurised.

After use

- Turn off the cylinder and depress the foot pedal to release all the gas in the tubing and probe. If this is not done, the tubing and probe can become damaged as the N₂O leaves deposits inside the tubing.
- Wipe the machine with a damp cloth.
- Sterilise the tubing and probe according to the manufacturer's instructions.
- Wipe the foot pedal with a damp cloth and dry it before storing.
- Protect the machine with a plastic cover.
- Change the cylinder, if necessary, before the next operation.

Basic troubleshooting

If the probe tip is not freezing sufficiently, this could be due to any of the following.

- **The regulator is not functioning**, which means there is not enough N₂O coming through the machine. The regulator can be replaced, but an experienced technician should do this.
- **Leaking gas at the cylinder head.** Check that the hardened rubber O-ring at the junction of the cylinder and machine is there and in good condition.
- **An empty gas cylinder, or the pressure is too low in the cylinder.** Replace the cylinder.
- **Residual moisture in probe following sterilisation.** Re-purge the probe.
- **Probe blocked with particulate matter.** Replace the probe.
- **Exhaust hose is blocked or occluded.** Check the exhaust hose for blockages or occlusions and replace if necessary.

Using a case study approach to document 'preferred practices' in MDA

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Trachoma elimination programmes use the SAFE strategy: **S**urgery to correct trichiasis, **A**ntibiotic distribution to treat and prevent infection and **F**acial cleanliness and **E**nvironmental improvements to reduce transmission.

Mass drug administration (MDA) of the antibiotic Zithromax® is conducted using a variety of approaches and strategies. To reach the goal of global elimination of blinding trachoma by 2020, there will need to be more than double the current distribution efforts. However, many programmes are struggling to determine the best approaches, as there has been no evidence of the effectiveness and efficiency of the various approaches and strategies and 'preferred practices' have not been adequately documented or shared among programmes. It was, therefore, crucial to document 'preferred practices' of Zithromax® MDA.

What is a preferred practice?

A preferred practice is 'a technique or methodology that, through experience and research, has proven reliable to lead to a desired result.' For trachoma it refers to 'knowledge about what works in specific situations and contexts to achieve high coverage of MDA'.

The World Health Organization's African Regional Office's (AFRO) guide to identify and document best practices in health programmes says 'preferred practices' should be effective (achieve measurable results), efficient (be implemented with reasonable resources and time), and relevant (address a priority health issue).

What is a case study approach?

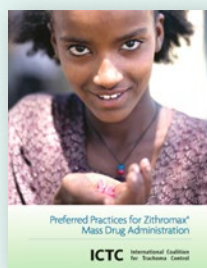
A case study approach to research is particularly useful to understand and explore practical changes, variations and processes of a complex and multifaceted intervention or programme in a real-world context.

We took six steps in conducting and using the case studies.

Step 1 Definition and selection of cases

The 'cases' in our study were MDA programmes. Seven case studies were conducted on 7 trachoma control programmes from 4 countries (Ethiopia, Kenya, Nigeria, and Uganda). The criteria for selection were as follows.

- The MDA programme should have been in place for at least 2 years, during which time the programme should have made some changes (matured) based upon the previous experiences.
- The MDA programme should have reasonable administrative coverage (ideally 80% or more of the total population in a targeted district receiving treatment).



The preferred practices manual

Step 2 Creation of a conceptual framework

Simply put, 'what information do we need to collect, why do we need this information, and how are we going to collect this information?' The framework was developed based on the literature review and through input from a working group of experts. The conceptual framework was the common reference and guide for data collection in all settings.

At national and regional level, information was collected on planning and coordination, financing, integration with other NTDs or services, and reporting.

At the level of MDA implementation (usually district level), information was collected on:

- pre-MDA advocacy
- personnel training
- delivery of Zithromax® to distribution areas
- experiences of integrating Zithromax® MDA with MDA of other NTDs

Elizabeth Kurylo



Mass drug administration of Zithromax® MOZAMBIQUE

- micro-planning
- recording of treatment and adverse events
- participant incentives
- supervision
- timing of MDA
- perceptions of the recipients of Zithromax® MDA

Step 3 Implementation of the case studies

The case study approach requires collecting quantitative and qualitative data from multiple sources. Qualitative methods such as interviews, focus group discussions and observations are particularly useful. A review of records was done to produce the necessary quantitative data.

Step 4 Analysis and interpretation of data

First, each case study report was reviewed by the planners and implementers of the programmes from which the case study was taken; this was to confirm and clarify all aspects of the case study. Then, the relevant characteristics from each case study were compiled into coherent groupings (preferred practices) which were sent to the expert group for input.

Step 5 A meeting of experts and implementers to review the preferred practices

A one-day meeting in Ethiopia focused on reviewing the preferred practices in the Ethiopian context. The outcomes of the discussion, plus the full body of preferred practices, were then presented at an experts meeting in Cape Town, South Africa. These meetings enabled the team to get valuable input as well as to obtain agreement on the best way to use the information.

Step 6 Establishment of a small writing group with participation from a wide group of stakeholders

Individuals on the writing group were requested to prepare specific sections of the preferred practices manual, which then underwent compilation and editing.

It took almost two years to complete the process, and the publication can now be downloaded free of charge from <http://www.trachomacoalition.org/resources/ictc-publications>. The International Coalition for Trachoma Control (ICTC) has adopted the preferred practices as the basis for its support to national programmes that are funded through ICTC consortia.

Note: This is a shortened version of the full article, which can be found on www.cehjournal.org



Test your knowledge and understanding

This page is designed to help you test your own understanding of the concepts covered in this issue, and to reflect on what you have learnt. We hope that you will also discuss the questions with your colleagues and other members of the eye care team, perhaps in a journal club. To complete the activities online – and get instant feedback – please visit www.cehjournal.org

1. Despite setting up service provision/health interventions, there may be challenges that prevent uptake of eye health services. What are the most likely barriers for the community?		Select one
a.	There is no one answer – it depends on the community	<input type="checkbox"/>
b.	Physical barriers to services	<input type="checkbox"/>
c.	Financial barriers to services	<input type="checkbox"/>
d.	Lack of information about services	<input type="checkbox"/>
e.	Local beliefs about eye health	<input type="checkbox"/>
2. When 'marketing' eye health services to a community, it is important NOT to		Select one
a.	Provide in-depth counselling for patients and relatives	<input type="checkbox"/>
b.	Provide written information suitable for the local beliefs and traditions	<input type="checkbox"/>
c.	Empower women and family members to go against the views of the head of the household	<input type="checkbox"/>
d.	Ensure that local fears about safety and accessibility are considered	<input type="checkbox"/>
e.	Highlight the personal experiences of some community members who have previously received treatment	<input type="checkbox"/>
3. Monitoring is a continuous process of collecting information to ensure that activities are implemented. Which indicator below could be MOST valuable when monitoring activities to improve uptake of cataract services?		Select one
a.	Number of villages visited	<input type="checkbox"/>
b.	Number of health workers trained to identify people blind from cataract	<input type="checkbox"/>
c.	Number of leaflets printed and circulated	<input type="checkbox"/>
d.	Number of women and older people who attended each discussion meeting	<input type="checkbox"/>
e.	Number of cataract operations done	<input type="checkbox"/>

ANSWERS

1. Correct Answer: A. There is no 'one size fits all' approach to increasing uptake of services at the community level, and as service providers it is your responsibility to understand and overcome potential barriers alongside community members.

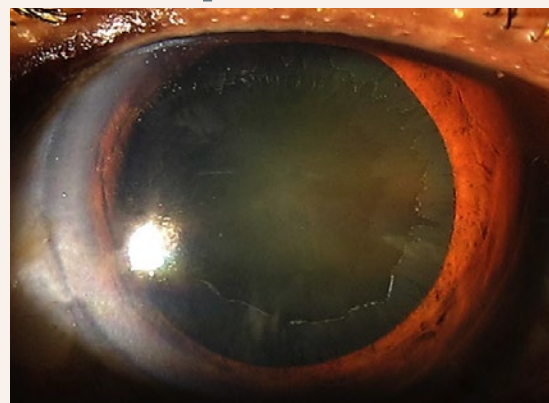
2. Correct Answer: C. If the household head makes the decisions on expenditure and time use for all members of the family, including women, disabled or elderly household members, it is important not to try and bypass their authority but instead to try to work with them.

3. Correct Answer: D. Monitoring is a simple process of checking how you are progressing towards your goals. Uptake of services is best monitored by understanding the number and demographics of people reached, particularly those who often face the greatest barriers, e.g. women and older people.

Reflective learning

Visit www.cehjournal.org to complete the online 'Time to reflect' section.

Picture quiz



Heiko Philippin

A 71 year old woman from East Africa presents with gradual loss of vision in both eyes. Her visual acuity is reduced to 6/60 (RE) and 6/24 (LE), intraocular pressure is 33/29 (RE/LE) and she has a relative afferent pupillary defect (RAPD) on the right-hand side.

1. What are the diagnoses? Select all that apply.

- ☐ a. Chronic iritis
- ☐ b. Pseudo-exfoliative glaucoma (PXF)
- ☐ c. Age related nuclear sclerosis cataract
- ☐ d. Uveitic glaucoma
- ☐ e. Severe climatic keratopathy

2. Which other signs may be visible doing a slit lamp examination? Select all that apply.

- ☐ a. Cells and flare in the anterior chamber
- ☐ b. Pigmentary loss from the pupillary margin or mid-iris and positive transillumination
- ☐ c. Accumulation of white exfoliative material at pupillary border
- ☐ d. Subluxated lens
- ☐ e. Rubeosis iridis

3. Which are potential challenges when doing cataract surgery on the eye shown above?

- ☐ a. Loose zonules possibly causing a lens dislocation
- ☐ b. Poorly dilating pupil
- ☐ c. Excessive bleeding
- ☐ d. Increased risk for vitreous loss
- ☐ e. Anterior capsular fibrosis

ANSWERS

1. b, c. The patient is affected by pseudo-exfoliative glaucoma and age related nuclear cataract. The RAPD is caused by the glaucomatous optic neuropathy (not the cataract). The picture shows the typical deposits of white material on the anterior lens surface in pseudo-exfoliative glaucoma.

2. b, c, d. The pseudo-exfoliation material on the lens is associated with iris pigment loss from the pupillary margin (ruff) or mid iris (b). Pseudo-exfoliation material is often found at the pupillary border (c) and broken zonules can lead to a subluxated lens (d).

3. a, b, d, e. Patients with pseudo-exfoliative glaucoma have an increased risk of lens dislocation and vitreous loss. Capsulotomy might be more challenging due to an anterior capsular fibrosis and the pupil often doesn't dilate well.

Save the date



The IAPB 10th General Assembly will take place in Durban, South Africa, on 18-20 September 2016. <http://www.iapb.org/10th-general-assembly>

Paediatric cataract DVD

This paediatric cataract surgery DVD, by Albrecht Hennig, is for ophthalmologists undertaking cataract surgery on children on a regular basis. To receive a free copy, send your address details and a brief description of the service you provide to: Anita Shah, International Centre for Eye Health, London School of Hygiene and Tropical Medicine, London WC1E 7HT, UK.

admin@cehjournal.org

Commonwealth Eye Consortium fellowships

Eye health workers based in Commonwealth countries can apply for Masters programmes, scholarships, clinical fellowships and research fellowships supported by the consortium.

<http://cehc.lshtm.ac.uk>

ICO fellowships

One-year and 3-month fellowships are available to ophthalmologists working in low- and middle-income countries.

www.icoph.org/refocusing_education/fellowships.html

Online courses

Aurosiksha

Free short online courses for eye care professionals to help them maintain skills and continue their professional development, from Lions Aravind Institute of

Community Ophthalmology (LAICO), India. Visit www.aurosiksha.org

New free online course: International Centre for Eye Health (ICEH)

An online short course on **Global Blindness: Planning and Managing Eye Care Services** introduces the magnitude and causes of visual impairment at a global level, highlights key global initiatives to manage avoidable blindness, and provides practical approaches to strengthen and plan local eye health services, with an emphasis on low- and middle-income country settings. Starts April 2015 for 6 weeks. Time commitment: 4 hours per week. Register your interest: www.lshtm.ac.uk/eyecourse

EyecareCE

Free and low cost online courses for the entire eye care team: nurses, ophthalmic assistants, orthoptists, ophthalmic photographers and clinical officers. Over 280 courses in 20 content areas, by the Joint Commission on Allied Health Personnel in Ophthalmology (JCAHPO). Visit: www.eyecarece.org

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Free courses on strabismus, cataract, paediatric ophthalmology, neuroophthalmology and the cornea are currently available. Registration is free. Visit www.cybersight.org

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Community Eye Health Institute, University of Cape Town, South Africa

Short courses, postgraduate diploma, and MPH Community Eye Health. Scholarships are available for the MPH. For more information, visit www.health.uct.ac.za or email chervon.vanderross@uct.ac.za

Lions Medical Training Centre, Nairobi, Kenya

Small Incision Cataract Surgery (SICS). Write to: The Training Coordinator, Lions Medical Training Centre, Lions SightFirst Eye Hospital, PO Box 66576-00800, Nairobi, Kenya. Tel: +254 20 418 32 39

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Community Eye Health JOURNAL

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Next issue

The theme of the next issue of the Community Eye Health Journal is **Eye infections**

Using a case study approach to document ‘preferred practices’ in mass drug administration for trachoma

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Worldwide, trachoma has blinded about 1.2 million people and resulted in visual impairment in a further 1 million people. It is estimated that about 230 million people live in trachoma-endemic areas.¹

Trachoma elimination programmes use the SAFE strategy: Surgery to correct trichiasis, Antibiotic distribution to treat and prevent chlamydial infection, and Facial cleanliness and Environmental improvements to reduce transmission within communities. Treating all individuals within households and communities with antibiotics reduces the pool of trachoma infection in the population and controls transmission.^{2,3} WHO guidelines indicate mass drug administration (MDA) to entire districts where the prevalence of active trachoma in children is more than 10%.⁴ The most commonly used antibiotics are either a single dose oral azithromycin (Zithromax®) (20mg/kg) or 1% tetracycline eye ointment applied twice daily for six weeks.^{5,6} MDA of Zithromax® has been extensively conducted in trachoma-endemic countries following the donation of the antibiotic by Pfizer Inc. through the International Trachoma Initiative (ITI).³ During the year 2012, over 48 million people were treated with the antibiotic.

Trachoma control programmes use various approaches to conduct Zithromax® MDA.³ The MDA approaches are influenced by the health system of the country and availability of resources. Programmes generally use either community-based volunteer drug distributors or front-line health workers to distribute the antibiotic. Some programmes implement a campaign approach while others implement a staggered approach. In recent years, external pressure for

integrated MDA with other neglected tropical diseases (NTDs) has greatly influenced Zithromax® MDA strategies.³ Nevertheless, there has been no evidence of the effectiveness and efficiency of the various approaches and strategies for Zithromax® MDA. ‘Preferred practices’ of community-wide Zithromax® MDA have not been adequately documented or shared among programmes. In order to reach the goal of global elimination of blinding trachoma by 2020, there will be a need to more than double the current distribution efforts.⁷ However, many programmes are struggling to determine the best approaches to efficiently and effectively implement Zithromax® MDA. It was, therefore, crucial to document preferred or best practices of Zithromax® MDA to guide new and existing trachoma control programmes.

What is a preferred practice?

A preferred practice is generally defined as a ‘technique or methodology that, through experience and research, has proven reliable to lead to a desired result.’⁸ In respect to trachoma MDA it can be used to refer to ‘knowledge about what works in specific situations and contexts to achieve high coverage of MDA.’⁸ Documenting practices that did not work in a particular programme and why they did not work is also a fundamental component of preferred practices.⁸

The World Health Organisation African Regional Office (AFRO) guide to identify and document best practices in health programmes includes 9 characteristics (see panel). Among these, preferred practices should at least be effective (achieve measurable results), efficient (implemented with reasonable resources and time) and relevant (address a priority health problem).⁸

Various approaches can be used to document preferred practices. We implemented a four-part methodology to identify and document Zithromax® MDA preferred practices.

1 Conduct a literature review on MDA (any disease or condition).

- 2** Distribute a standardised form to all national coordinators of countries where Zithromax® MDA is implemented to establish baseline data on the health systems of each country and to learn how Zithromax® MDA is conducted in particular settings.
- 3** Implement a multi-country case study approach to learn how Zithromax® MDA was conducted in practice.
- 4** Carry out an expert review of the case studies to identify preferred practices generated from the cases studies and lessons learned (which led to the drafting of a preferred practices manual).

Here we will review how the case study approach was developed and implemented to help eye care programme personnel and researchers consider how a case study approach may be useful for addressing other eye care interventions.

What is a case study approach?

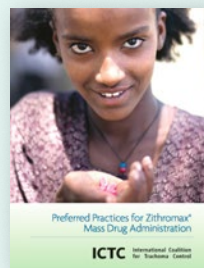
A case study approach to research is particularly useful to understand and explore the practical changes, variations and processes of a complex and multifaceted intervention

or programme in a real-world context.^{9,10} Unlike other experimental designs, case studies are useful in presenting occurrences and processes in their natural context.¹⁰ According to Crowe and colleagues, a case study helps to “capture information in more explanatory ‘how’, ‘what’ and ‘why’ questions, such as ‘how is the intervention being implemented and received on the ground?’ and ‘what gaps exist in its delivery?’ or ‘why one implementation strategy might be chosen over another?’”.⁹ Among the various types of case study designs, we have chosen to implement the “collective” case study approach where we studied and documented the various components and processes of Zithromax® MDA in a number of different settings.⁹

There were six steps we undertook in conducting and using the case studies.

Step 1 Definition and selection of ‘cases’

The ‘cases’ in our study were MDA programmes. The criteria for selection included the following.



The preferred practices manual

Preferred practice characteristics

- effectiveness
- efficiency
- relevance
- ethical soundness
- sustainability
- possibility of duplication
- partnership
- community involvement
- political commitment

- The MDA programme should have been in place for at least 2 years and the programme should have made some changes (matured) based upon the experiences of the previous year or two.
- The MDA programme should have a reasonable MDA administrative coverage (ideally 80% or more of the total population in a targeted district receiving treatment) although, as noted above, much also can be learned from programmes that are not achieving their targets.
- A variety of different approaches (centralised versus decentralised planning, community volunteers versus health workers as distributors, vertical trachoma MDA versus integrated NTD MDA) to obtain a range of experiences. Seven case studies were conducted on seven trachoma control programmes from four countries (Ethiopia, Kenya, Nigeria, and Uganda).

Step 2 Creation of a conceptual framework

Simply put: what information do we need to collect, why do we need this information, and how are we going to collect this information? The framework was developed based on the literature review and through input from a working group of experts. The conceptual framework was the common reference and guide for data collection in all settings.

At national and regional level, information was collected on:

- planning and coordination
- financing
- integration with other NTDs or services
- reporting.

At the level of MDA implementation (usually district level), information was collected on:

- pre-MDA advocacy
- personnel training
- delivery of Zithromax® to distribution areas
- experiences of integrating Zithromax® MDA with MDA for other NTDs
- micro-planning
- recording of treatment and adverse events
- participant incentives
- supervision
- timing of MDA
- perceptions of the recipients of Zithromax® MDA.

The framework was not designed to be restrictive; it was possible to expand areas of exploration, as needed.



Elizabeth Kurylo

Individuals on the writing group were requested to prepare specific sections of the preferred practices manual, which then underwent compilation and editing. The result can be found online at www.trachomacoalition.org.

The entire process took almost two years to complete and it should not be assumed that a preferred practice manual is, by itself, sufficient to improve the effectiveness and efficiency of MDA for Zithromax®. Based upon the work, however, a number of

capacity building activities have been identified and will be undertaken over the coming few years. Improvements in effectiveness and efficiency are the primary goals.

The International Coalition for Trachoma Control (ICTC) has adopted the preferred practices as basis for its support to national programmes that are funded through ICTC consortia. During the start-up workshops for the Queen Elizabeth Diamond Jubilee Trust's Trachoma Initiative, preferred practices and the adoption of these to local settings have become the standard. In order to ensure that the goal of elimination of blinding trachoma will be reached, there is an urgent need to ensure that high quality programmes are implemented from the start and are reaching as many people as possible.

The Kilimanjaro Centre for Community Ophthalmology (KCCO) was the lead partner on behalf of the International Coalition for Trachoma Control (ICTC), with support from ITI, to carry out this project.

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Step 3 Implementation of the case studies

The case study approach requires collecting quantitative and qualitative data from multiple sources. Qualitative methods such as interviews, focus group discussions and observations are particularly useful and are commonly implemented.⁹ These methods, in addition to a review of records, were used for these case studies. The first case study was carried out jointly by two of the authors in order to test out the framework, get a sense as to the right balance of interview and observation, decide on the level of detail to include in the final version of the case study, and to jointly highlight characteristics of MDA (from the triangulation of data) that embodied the concepts of effectiveness and efficiency. The remainder of the case studies were conducted in 2011 and 2012.

Step 4 Analysis and interpretation of data

First, each case study report was reviewed by the planners and implementers of the programmes from which the case study was taken; this was to confirm and clarify all aspects of the case study. Then, the relevant characteristics from each case study were compiled into a coherent grouping (referred to as preferred practices) which were sent to the expert group for input.

Step 5 A meeting of experts and implementers to review the preferred practices

A one-day meeting in Ethiopia focused on reviewing the preferred practices in the Ethiopian context. This information, plus the full body of preferred practices, were then presented at an experts' meeting in Cape Town, South Africa. These meetings enabled the team to get valuable input as well as to obtain agreement on the best way to use the information.

Step 6 Establishment of a small writing group with participation from a wide group of stakeholders