
Improving Eye Care in the Primary Health Care Setting

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One of the challenges facing primary health care in South Africa is the delivery of quality eye care to all South Africans.

Abstract

One of the challenges facing primary health care in South Africa is the delivery of quality eye care to all South Africans. In this regard the role of the primary health care worker, as the first point of contact, is crucial. This paper reports on the problems primary health care workers experience in providing quality eye care in Region B of the Free State. Problems identified by those involved in the study include the cumbersome referral system, the unavailability of appropriate medicine at clinics, the insufficient knowledge of primary health care workers regarding eye conditions and the lack of communication between the various eye care service providers. Suggestions to address the problems identified included more in-service training of primary health care workers regarding eye conditions, liaison with NGO's providing eye care, decentralisation of services and the establishment of an eye care committee in the region.

Opsomming

Een van die uitdagings vir primêre gesondheidsorg in Suid-Afrika is die lewering van kwaliteit oogsorg aan alle Suid-Afrikanners. In hierdie verband is die rol van die primêre gesondheidsorgwerker, as die eerste kontakpunt tussen die pasiënt en die gesondheidsorgsisteem, van kardinale belang. Hierdie artikel fokus op die probleme wat primêre gesondheidsorgwerkers in Streek B van die Vrystaat ervaar met betrekking tot die lewering van kwaliteit oogsorg. Probleme wat tydens die navorsing geïdentifiseer is, sluit die volgende in: die omslagtige verwysingsisteem, die nie-beskikbaarheid van geskikte medisyne by klinieke, die ontoereikende kennis van primêre gesondheidsorgwerkers met betrekking tot oogtoestande en die gebrek aan kommunikasie tussen die verskillende oogsorg diensverskaffers. Suggesties om van die probleme op te los is onder andere: meer indiensopleiding van primêre gesondheidsorgwerkers met betrekking tot oogsorg, samewerking met ander NGO's (organisasies) wat oogsorg bied, die desentralisasie van dienste en die stigting van 'n oogsorgkomitee in die streek.

INTRODUCTION

This study formed part of the PHC/INFO project¹ that was undertaken in all six health care regions of the Free State. The main objective of PHC/INFO project was to establish a culture of research as well as a capacity to do research amongst the primary health care workers² of the province. The overall motivation of this project is that if the research skills of primary health care workers are improved, it will contribute to an effective and efficient information system that can be used to guide primary health care planning, policy making and management. The study concentrated on improving

the quality of eye care in the primary health care setting. The WHO has warned that if attempts to improve eye care are not intensified, blindness and serious loss of vision could double by the year 2020. According to Meyer (1998:192) the biggest challenges currently facing eye care in South Africa are:

- *Cataract blindness* - to eliminate blindness in the "curable blind", by means of surgical intervention.
- *Glaucoma* - the early detection of this serious disease, in order to implement treatment and prevent blindness.

Research Article

1 The Primary Health Care Information Project (PHC/INFO project) was facilitated and co-ordinated by the Centre for Health Systems Research of the University of the Free State and was funded by the GTZ (*Deutsche Gesellschaft für Technische Zusammenarbeit*), the Health Systems Trust and the Free State Department of Health.

2 Throughout the article "primary health care workers", will be referred to as PHC-workers.

- *Diabetes Mellitus* - early detection of this condition, so that the patient can receive treatment to save vision.
 - *Corneal transplants* - identification of patients and motivation of potential donors.
- Unfortunately South Africa has a shortage of ophthalmologists, with one eye specialist for every 50 000 people in the private sector and one eye doctor (specialist or clinical assistant) for every 390 000 people in the public sector - Belgium, for example, has one ophthalmologist for every 6000 people (Meyer, 1998:491). In light of this shortage, it is crucial that quality eye care begins at the very first point of contact, the primary health care sector.

SETTING

The study concentrated on Region B of the Free State province (see map). This region consists of widely scattered small towns and has a relatively small population (of which 53% live in the rural areas). Region B is also considered to be economically poor with a monthly per capita income of R892 (Health Systems Trust and Department of Health, 1996:22). The nearest urban centre is Bloemfontein (situated in Region A) where tertiary public health care facilities are available at Pelonomi, National and Universitas hospitals. The distance from Bloemfontein to the furthest towns in Region-B is about two hundred kilometres.

Regarding health care in the region the Rehmis report (1996: 43) had to follow-up to say: "Certain regions had few or no members of key professional groups; their service could not be efficiently decentralised. This applied to pharmacists, social workers, nurses, clinical psychologists, dentists and doctors. This issue relates to the availability of suitably qualified personnel. This applied particularly in the isolated rural areas such as region B, where only 70% of professional nurse posts were filled." Regarding eye care, it is important to note that at the time of writing, no specialist services for eye care existed in Region B.

RESEARCH OBJECTIVES

The overall objective of this study was to provide better health care treatment to patients with eye problems in Region B. More specifically to determine:

- the level of availability of resources for proper eye care treatment
- the level of satisfaction of PHC-workers regarding their knowledge of the diagnosis and treatment of eye problems and diseases

- what problems regarding eye care are experienced by PHC-workers
- and develop strategies to address the most urgent problems identified during the course of the study.

RESEARCH METHOD

Both qualitative and quantitative study methods were used in this study.

Qualitative methods

One focus group and one workshop were conducted. PHC-workers from twenty towns in Region B participated in the focus group to establish what problems were experienced in providing eye care. As the participants were part of a training program the focus group also served as an exercise on how focus groups are conducted. All the role players involved in eye care in Region B, were invited to the workshop. The workshop focused on the problems concerning eye care and was facilitated by the Centre for Health Systems Research and Development of the University of the Free State. In both instances tape recordings were made of the proceedings, later transcribed and analysed for the research report.

Quantitative methods

The quantitative aspect of this study entailed a survey (using self-administered questionnaires) among all PHC-workers in Region B. No sampling was done and all the PHC-workers in Region B were included. The questionnaire was administered and completed by the PHC-workers during a training session. The questionnaires were completed anonymously in order to protect the respondents, so that any criticism delivered could not be traced back to the respondents, possibly endangering their careers or personal relationships.

RESEARCH FINDINGS

Service factors relating to eye care in the primary health care setting

In order to understand the problems identified by PHC-workers, it is important to briefly sketch the procedures involved in eye care in the primary health care setting. Eye care in primary health starts when the PHC-worker diagnoses an eye problem. If the problem is severe, the patient is referred to the specialist services (for example optometrists for refractive errors or ophthalmologists for diseases such as cataracts). How-

ever, as no specialist services exist in Region B, patients identified with an eye problem, are first referred to the Medical Officer of Health - previously called the "district surgeons". The Medical Officer of Health then either makes an appointment or refers the patient back to the PHC-worker, with a request to make an appointment for the patient at a specialist service located in Region A (usually at Pelonomi or National hospitals in Bloemfontein). The PHC-worker then has to write a letter of referral to the specialist clinic and is expected to organise transport for the patient to these clinics.

Most patients are attended to at the above mentioned hospitals, while others get a prescription for medicine which they receive from their local clinics (which in turn receive it from the local pharmacist -who functions as part of the local primary health care clinic). Some patients may receive dates for follow up visits, which are then dealt with in the same manner as mentioned above.

Problems regarding the provision of quality eye care

Table 1 illustrates the responses of the PHC-workers to the survey. This section of the survey concentrated on problems experienced in the delivery of quality eye care in Region B. Respondents were asked to grade each statement on a scale of 1 to 5 in terms of how serious a problem they considered it to be. The scale went from few problems (1) to serious problems (5).

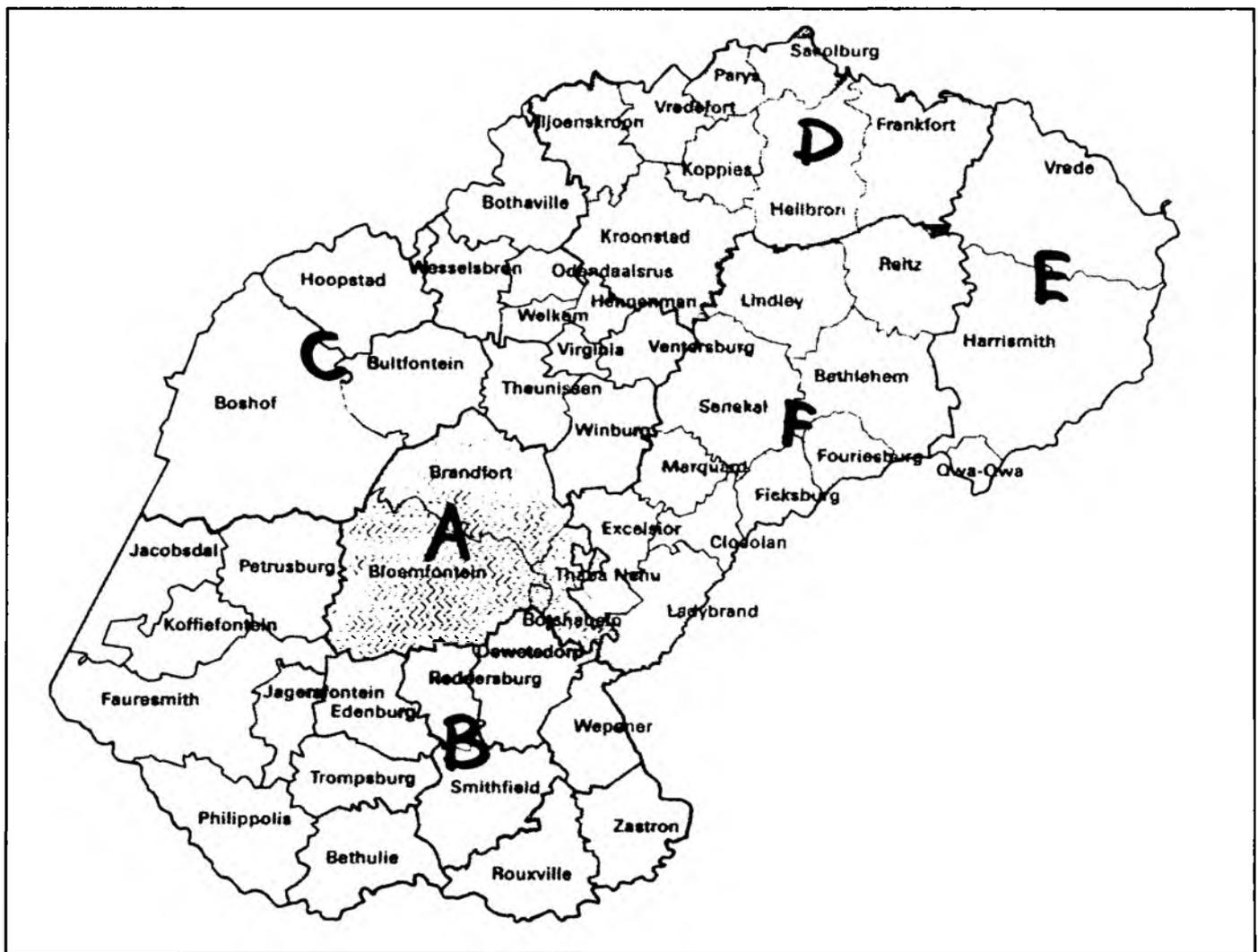
The quantitative findings of table 1 will be discussed together with the qualitative findings. In the analysis of both the following problem areas in the delivery of quality eye care were identified:

- Cumbersome referral system
- Problems with transport
- Problems related to the supply of medicine
- Insufficient knowledge of PHC-workers regarding eye problems
- An overload of specialist services
- Insufficient communication and co-ordination between services
- Carelessness concerning occupational safety.

Cumbersome referral system

The cumbersome referral system creates problems for more than half (55%) of the respondents. It often happens that once the PHC-workers have seen the patients and referred them to the Medical Officer of Health, the patient has to return the next day because the Medical Officer of Health has left for another

Map 1 : The Free State Health Regions



Source : Health Systems Trust & the Department of Health (1996) : 13

town, where s/he also renders services. Should the patient get to see the Medical Officer of Health, the latter may refer the patient to the specialist services. An appointment at these services has to be made either by the Medical Officer of Health or the PHC-worker. When the date approaches, another referral letter must be obtained from the referring person for transport authorisation.

The PHC-workers regard this as cumbersome, because by this time the patient has had to travel to the local medical service four times, often under difficult circumstances, for instance by foot, or by taxi, which many cannot afford.

Problems with transport

It may even happen that the patient may lose out on this hard come by opportunity to see the specialist, because of problems experienced with transport. As mentioned before, many of the towns in Region B are far from Bloemfontein. All patients that have appointments at the tertiary institutions on a specific day are picked up by the transport services. At

times, however, some patients are left behind due to lack of space in the vehicle as a result of poor communication between the transport staff and the primary health care services.

An example cited by the participants involved a child with very poor vision. Although the treatment was needed during February the first appointment available at the specialist services was in April of the same year (2 months later). The necessary documents (including the request for transport) were completed but the transport officer did not receive the message to pick up the child. The child and her mother waited at the correct place, at the correct time, but had to be left behind because the vehicle was already full by the time they arrived at the child. The child consequently lost her appointment, and the whole process had to be repeated. What was interesting, however, is that when one looks at the quantitative data, only 31,9% of the PHC-workers indicated that transport posed serious problems, but from the qualitative discussions this appeared to

be a problem.

Problems related to the supply of medicine

With any condition requiring continued medication it is important that the patient adheres to prescribed medicine in order to obtain optimum results. A practitioner who was present at the workshop stressed that if patients do not get their medication in rural areas, work done at a great expense (e.g. corneal transplants), will be useless.

PHC-workers experience two problems with the supply of medicine. Firstly, patients cannot afford the medicine. More than half of the PHC-workers (53,6%) indicated that the patients could not afford the R15.00 fee in order to receive the prescribed medicine at the specialist eye care services. As a result they do not receive the necessary medication.

Secondly, 60,8% of PHC-workers identified the unavailability of suitable medicine at clinics as problematic. Primary health care clinics can only provide level

Table 1 : Problems experience by Primary Health Care Workers concerning eye care in Region B

		1.	2.	3.	4.	5.
1.	Transport of patients to specialist services	32 46,4%	4 5,8%	9 13,0%	6 8,7%	16 23,2%
2.	Availability of resources, for example accessibility of eye clinics and other specialist services	5 7,2%	1 1,4%	4 5,8%	11 15,9%	47 68,1%
3.	Feedback from specialist services, thus eye clinics at tertiary institutions	9 13,0%	4 5,8%	6 8,7%	12 17,4%	36 52,2%
4.	Availability of applicable medication in clinics	8 11,6%	5 7,2%	13 18,8%	11 15,9%	31 44,9%
5.	Affordability of specialist services for PHC clients (e.g. the R15-00 fee)	6 8,7%	3 4,3%	21 30,4%	7 10,1%	30 43,5%
6.	Lack of support from families for the treatment of patients	10 14,5%	13 18,8%	23 33,3%	7 10,1%	16 23,2%
7.	Lack of co-operation from the employer for the treatment of the patient	13 18,8%	11 15,9%	15 21,7%	11 15,9%	19 27,5%
8.	Carelessness concerning occupational safety regulations (e.g. neglect to wear protective glasses)	12 17,4%	4 5,8%	12 17,4%	16 23,3%	23 33,3%
9.	Cumbersome referral system	10 14,5%	6 8,7%	9 13%	11 15,9%	27 39,1%
10.	Your own knowledge concerning the diagnosis of eye problems and diseases	13 18,8%	14 20,3%	15 21,7%	18 26,1%	9 13%
11.	Your own knowledge concerning the treatment of eye problems and diseases	10 14,5%	15 21,7%	17 24,6%	17 24,6%	10 14,5%
12.	Your own knowledge concerning the referral system	32 46,4%	11 15,9%	11 15,9%	8 11,6%	7 10,1%
13.	Superstitions, e.g. that blindness is inherited or that it is caused by a spell which was cast over the family	22 31,9%	13 18,8%	16 23,2%	12 17,4%	6 8,7%
14.	Culture of violence, e.g. knife wounds and family violence	13 18,8%	11 15,9%	20 29%	13 18,8%	11 15,9%
15.	Uninvolvement of other institutions (e.g. pre-primary schools, schools and employers) concerning the early detection of eye problems	13 18,8%	9 13%	15 21,7%	8 11,6%	24 34,8%

1 medicine (such as eye-ointments). The problem is that level 1 medicine is not always the appropriate treatment. Medicine prescribed by specialist services is also not on list of medicines that can be prescribed by the Medical Officer of Health, who may only prescribe level 2 medicine. The result, according to the PHC-workers, is that the patient is forced to return to the specialist services to obtain treatment (which they cannot afford) or special authorisation is needed to obtain the medication, which is a cumbersome process.

This is particularly problematic for pa-

tients who have to receive medication for an extended period (e.g. Allumide, for six months). Patients are forced to go through an unnecessary and lengthy procedure every time they run out of medication. They added that if patients do not receive prompt and appropriate treatment they become disappointed and lose confidence in the service and this could lead to a discontinuation of treatment.

Insufficient knowledge of PHC-workers regarding eye problems

Although, during training, professional

nurses and PHC-workers receive lectures in the physiology and diseases of the eye, PHC-workers feel that they do not receive enough *in-service* training regarding eye care and the early detection of eye problems. This has a negative influence on PHC-workers, adversely affecting their self-confidence as professionals due to the fact that they realise that their knowledge is inadequate. In turn the Medical Officers of Health and specialists are overloaded with patients who could have been treated by the PHC-workers if they had the appropriate knowledge. A more serious consequence of this lack of knowledge is that

eye problems that are more serious and/or less obvious, go undetected, often with serious consequences for the patient. Blindness for example may be the result of not being diagnosed in time with a disease like Glaucoma (Update, 1993:24).

An overload of specialist services

Many of the above problems mentioned add to the overload of specialised services. It was stated in the qualitative discussions that newly diagnosed patients with problems, such as cataracts, stood no chance of being operated on during the year of diagnosis as the quota for the year had already been filled. Thus the services become inaccessible to newly diagnosed patients. The biggest problem identified by the respondents (table 1) is the unavailability of resources, such as the inaccessibility of eye clinics and other specialist services (84% indicated this issue as a serious problem). The small standard deviation (1,266) indicates a high level of agreement on this issue. This is a great source of frustration to PHC-workers.

Insufficient communication and co-ordination between services

The PHC-workers identify a lack of communication between organisations rendering eye care services and the staff of Primary Health Care Clinics. PHC-workers say they are often unaware of specialist services visiting the region, and if they get to know (usually by coincidence!) about an intended visit to the area, it is often too late to refer a client to the specialised service. The general sentiment of PHC-workers is that region B, being poor and widely spread, is being neglected. PHC-workers also expressed their concern at the lack of feedback regarding the condition of the patient, with 69,6% of the respondents considering this to be problematic. It sometimes occurs that a patient returns from the specialist services with only a prescription - no diagnosis is communicated to the PHC-worker, nor is any accompanying letter provided. PHC-workers thus gain no knowledge from the referral of the patient and do not know how to approach the follow-up treatment of the patient. They are of the opinion that valuable learning experiences for PHC-workers are lost, and if other patients with the same problem approach the PHC-worker, they simply refer them while perhaps they could have treated at the clinic. This situation aggravates the overloading of specialist services, which again results in the staff of specialist services not having enough time to give proper feedback to the PHC-worker. A vicious cycle develops.

Carelessness concerning occupa-

tional safety

The last point, although not related to the actual health care delivery system, refers to carelessness of patients regarding occupational safety regulations. Although this was not touched on in the qualitative data it is interesting to note that 56.5% of the respondents stated that carelessness concerning occupational safety created problems. This is an issue that has to be looked into by the occupational health officers of companies or employers in Region B.

RECOMMENDATIONS FOR IMPROVING EYE CARE

The following solutions were proposed by those involved in the research.

Liaison with NGO's offering eye care

Meyer (1998:491) emphasises the importance of co-operation between NGO's and the health care sector in the provision of eye care in isolated regions. In this regard co-operation with the Bureau for the Prevention of Blindness in Region B is vital. The Bureau for the Prevention of Blindness organises clinics on request. However they have found that in scarcely populated regions like Region B it is difficult to hold clinics cost effectively. Therefore it is of the utmost importance that PHC-workers should work together with the Bureau in order to enable them to hold clinics in Region B in a cost-effective manner. PHC-workers can then allow the less urgent eye cases to accumulate for the week the clinic will be held.

If time and cost effective eye care clinics (or "eye care weeks") can be held in the region it will serve two important functions. Firstly, these clinics can be effective in eliminating backlogs that have built up in terms of the "curable blind". In the second instance these clinic will also relieve some of the pressure on the eye clinics at the tertiary institutions. It is crucial that these clinics are properly organised and co-ordinated, especially in a vast district such as Region B.

Improve the knowledge of PHC-workers concerning the diagnosis of eye impairments

The very success of eye care at a primary health care level depends on the ability of the PHC-worker to correctly diagnose eye conditions. This can only be achieved by adequate training. At the moment the diagnosis of eye problems is neglected during general training and

is also not addressed during the sifting courses.

PHC-workers suggest that during general training at least three days of training should be spent on the diagnosis and treatment of eye problems. Besides the training aspect, another strategy that could address this problem is the decentralisation of services - as in this case there will be more contact between the specialised service providers and the PHC-worker and create learning experiences for the PHC-worker, thus enhancing their knowledge.

PHC-workers see two types of patients (new patients and follow-up patients) and should have a definite strategy to deal with every case. In the case of new patients, the PHC-worker should have enough knowledge to ascertain whether the patient is an emergency or cold case. Emergencies include: sudden loss of vision, penetrating trauma, corneal ulcers, a painful red eye and chemical burns. The PHC-workers must also know which of these emergencies to treat and which to refer to the specialist. Cold cases include those that have to be referred within one month, such as newly developed strabismus and "white pupil" in children. Follow up patients, however, should be treated differently as the diagnosis of their problem is known and treatment should proceed in accordance with the condition.

Frantz (1998:49) also emphasises the ability of PHC-workers to use eye care equipment correctly. He states that the early detection of raised intra-ocular pressure can be established by a tonometer. The routine use of the tonometer is mandatory, so that more patients can be diagnosed with Glaucoma at an early stage and treatment can be instituted in time.

Decentralisation of specialised eye care services

It is important that eye care programs are decentralised from urban centres in order to facilitate early detection and intervention of eye problems in communities in greatest need (Heldt, 1987: 836). It was suggested that decentralisation of eye care in Region B would be more cost effective because the specialist team could travel in one or two vehicles to a centre in the region on a set date. Whilst at the moment each patient that requires specialised care has to travel or be transported to Bloemfontein. It was suggested that a clinic at one of the more central towns in Region B (such as Jagersfontein or Smithfield) be equipped with the most frequently used eye examination equipment.

Decentralisation would be advantageous because it will decrease travel expenses for the patients (making the service more affordable) and lessen the burden on the eye care clinics at the tertiary institutions. In addition to this, valuable learning opportunities will be created for PHC-workers, as they will be present when the patient is examined and diagnosed. This will promote communication between the PHC-worker, the specialist and the patient, which will enhance the personal and professional relationship between the three role players. This may also really lead to an improved after care service to the patient.

Improve the supply of medicines

PHC-workers are well aware of the valid reasons underlying the procedures currently being followed in the prescription of medication, but argue that it is time to investigate more effective options as they are overloaded and cannot afford unnecessary duplication, money, time and productivity-wasting procedures.

Financial management and the allocation of resources

Co-ordination of services should not only take place at ground level, but also during the financial planning of services. In this regard specialist services complain that whenever they request specialised equipment, they are told that there is no money available because of the emphasis on primary health care. Specialist services, however, are an integral part of primary health care. Without the support of specialist services no quality service can be rendered at grassroots level.

The establishment of an eye care committee for Region B

A committee for eye care was proposed in Region B, in order to co-ordinate activities relating to eye care. This committee should include members of all the relevant organisations. The structure of the committee should consist of: top management (Deputy-director of Health Care in the Free State Province), mid-

level management, a training component, an Ophthalmology section (including the academic/tertiary hospitals under the jurisdiction of the University of the Free State), PHC-workers, NGO's (such as the Bureau for the Prevention of Blindness) and community representatives. With the Deputy-director being responsible for the functioning of the committee and the committee reporting directly to him/her.

Functions of the committee would include:

- the co-ordination and promotion of eye care training of PHC-workers
- liaison with other role-players
- the promotion of eye care issues – such as talks at companies regarding safety standards and talks at schools and community halls regarding basic eye care
- the initiation of events to bring eye care issues under the attention of the public, such as eye care days or weeks
- the initiation, co-ordination and implementation of decentralisation of eye care services in Region B
- the co-opting of the private sector in the rendering eye care services to the rural areas

CONCLUDING COMMENTS

One of the challenges facing primary health care in South Africa is the delivery of quality eye care. In the delivery of eye care, the PHC-worker's role as point of first contact is absolutely crucial as much blindness and loss of vision can be prevented if addressed at an early stage. It is thus crucial that eye care at a primary health care level operates effectively. Therefore it is essential that the suggestions of those at grass root level are considered in planning and policy making. The result being improved eye health for all South Africans.

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