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Planning Meeting on

SOCIAL AND BEHAVIOURAL ASPECTS OF COMPREHENSIVE EYE CARE

(1984; Brussels)

Report on a WHO Meeting

Brussels
25 and 26 January 1984

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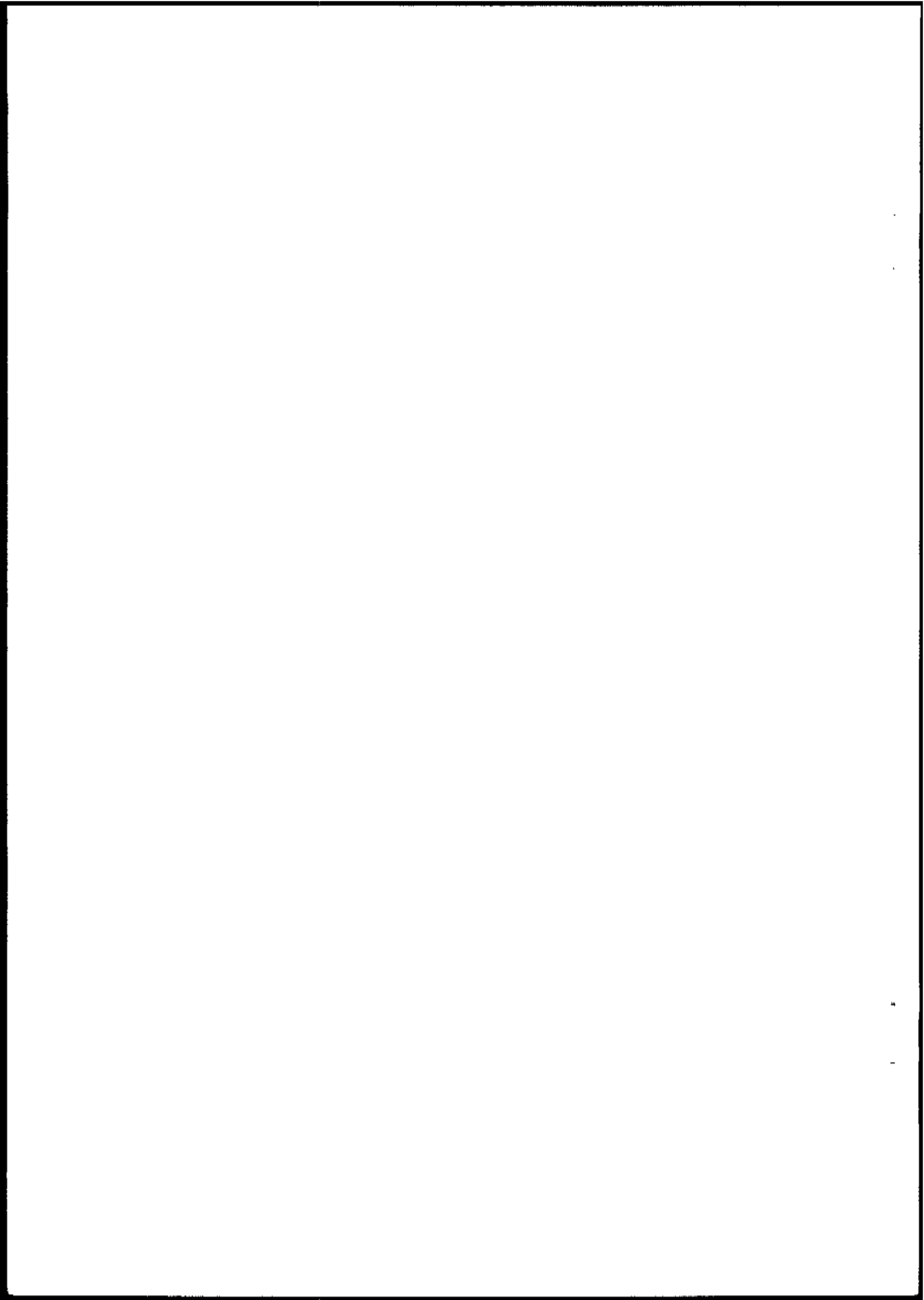
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1. Introduction

The Planning Meeting on Social and Behavioural Aspects of Comprehensive Eye Care was held at the Institute of Hygiene and Epidemiology, Brussels, on 25 and 26 January 1984. The purpose of this meeting was to elaborate and to refine concepts of comprehensive eye care and thereby to identify directions for further planning that can lead to improvements in national health undertakings related to comprehensive eye health care by national health authorities.

Inasmuch as the implementation of comprehensive eye health was seen to require multidisciplinary planning and multi-professional participation at international levels and subsequently at national levels, the range of responsibilities, disciplines, and specialities represented at this initial meeting was intentionally extremely broad.

Participants came from 9 countries of the WHO European Region (Belgium, Denmark, Federal Republic of Germany, Italy, Ireland, Portugal, Sweden, United Kingdom, and Yugoslavia) and from the United States of America. The specialities represented included ophthalmology, health economics, psychology, rehabilitation, teaching, sociology, public health, and health research.

The roles represented included direct ophthalmological services and research, medical research, health services research, public health administration, public health teaching and research, educational administration, scientific research administration and development, and administration in blindness prevention. (For list of participants see Annex 1 attached)

Professor A. Lafontaine, Director of the Institute, addressed the meeting on behalf of the Ministry of Public Health and the Family, stressing the interest of the Belgian Government in continuing to support activities in this field, pioneered for many years by the Regional Office.

The meeting was formally opened by Dr B.Z. Nizetic, Chief, Research Promotion and Development, WHO Regional Office for Europe, who stressed the generosity of the Belgian Government in sponsoring, for several years, a series of meetings in this field. He pointed out that the conclusions and recommendations of these meetings have been widely quoted and there could be no doubt that they had influenced and would continue to influence the development of policies in the eye health field; that this series of meetings including the present one, serves as an illuminating example of the way in which a Member State could catalyze action on health matters in the international community.

This meeting would tackle a relatively new and unexplored field of inquiry at least in the field of eye and vision care and should help to identify new insights into the determinant of visual impairment and blindness and possibly, therefore, open new approaches to the prevention of visual impairment as well as to new and imaginative operational strategies for an optimal provision of eye health care at individual and collective levels.

Professor J. François was elected Chairman, Professor L. Ferraz de Oliveira was elected as Vice-Chairman and Professor L.H. Orzack, Rapporteur.

2. Scope and purpose

The scope and purpose prepared for the meeting stated:

"The modern trends in public health emphasize the increasing importance of the continuity of care for patients in all areas of the medical field. This fact leads to efforts to foster the development of a system of comprehensive care. This system includes the promotion and protection of eye health, early detection of ocular and visual disorders, an early medical diagnosis, prompt and long-term treatment as well as rehabilitation in its medical, socioeconomic, vocational and educational dimensions.

The implication of the above trends are multifold:

- (a) Eye care in the above context has to involve other professional and paraprofessional groups.
- (b) The necessary research activities must become increasingly inter- and multi-disciplinary.
- (c) Promotion of eye health and prevention of ocular and visual disorders as well as different dimensions of rehabilitation also imply the consideration of social and behavioural aspects as determinants of eye health/eye disease equilibrium.

With the above in mind, the group is expected to:

- analyze, determine and formulate the problem area;
- identify priority aspects needing further and deeper analysis;
- identify the necessary and appropriate expertise in a multidisciplinary and international context;
- prepare a structured agenda for a possibly larger consultative meeting on identified priority aspects."

3. Basic concepts

Traditionally the eye care practitioners (mostly ophthalmologists) have based their studies and practice on the medical model of eye disease.

In the most simple form, this model can be expressed in the sequence

ETIOLOGY-PATHOLOGY-MANIFESTATION

and for a long period the prevalent thinking has been based on theories of monocausality, particularly so in the field of infections. An evolution of this thinking has taken place at a later stage, and particularly with the increase of the burden of chronic diseases. The delicate balance between health and ill-health is increasingly recognized to be determined by a series of factors, necessary or sufficient to produce a disorder (see fig. 1.).

**EXPANDED MEDICAL MODEL OF
EYE HEALTH, EYE DISORDERS AND
THEIR CONSEQUENCES**

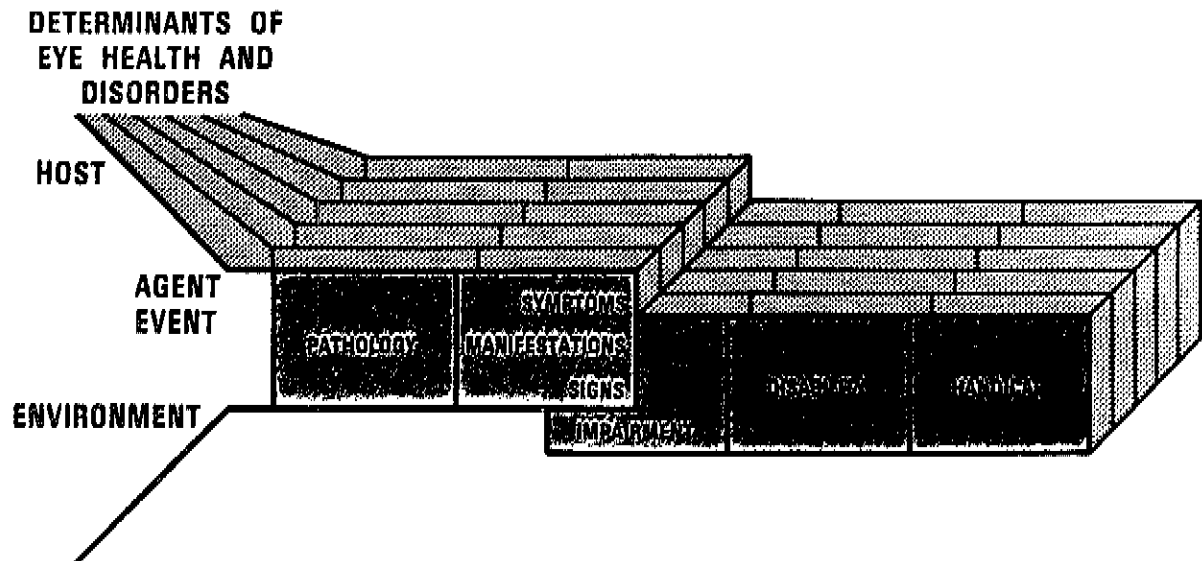


Figure 1

B.Z. NIZETIĆ, 1983

These factors may be related to the host himself, in terms of his genetical and/or immunological set-up, his nutritional status, as well as his behaviour values and attitudes towards health related issues, which in turn are strictly related to his own educational level and cultural background.

Environmental factors are increasingly recognized as important determinants of the equilibrium health/ill-health. Here, not only physical environment has to be taken into consideration, but also the social, economic and cultural environment.

Finally, factors linked with particular events may disrupt the equilibrium health/ill-health, and it is sufficient to think of different types of traumas (including the psychological ones) as examples.

The classical medical model of disease fails furthermore to reflect the full range of problems that lead people to make contact with a health care system.

A conceptual extension of the model outlining the consequences of disease has therefore been proposed.^a It includes the concepts of impairment (disturbances at the organ level), disability (disturbances at the level of the person), and handicap (concept reflecting the individual's interaction with, and adaptation to, the person's surroundings).

Coverage and quality are considered two main dimensions for the evaluation of an optimal health care. The latter concept implies the elements of continuity and comprehensiveness, and the dimensions of comprehensive eye health care were the focus of detailed discussions.

It was made clear that both care at the level of individual needs and collective care concerned with broad social patterns requiring the allocation of social resources through collaborative planning were involved. These two levels are mutually interdependent while not synonymous. Elaboration of comprehensive eye health care was seen as comprising a series of stages from the most general promotion of eye health, to more specific efforts associated with protection of eye health, the early detection of eye disorders, their early diagnosis, diagnosis and prognosis, prompt treatment, continuing treatment, and rehabilitation encompassing as appropriate diverse medical, vocational and social aspects. (Fig. 2: The Spectrum of Comprehensive Eye Health Care) At each stage, the identification and effort of providers and receivers need clarification.

THE SPECTRUM OF COMPREHENSIVE EYE HEALTH CARE

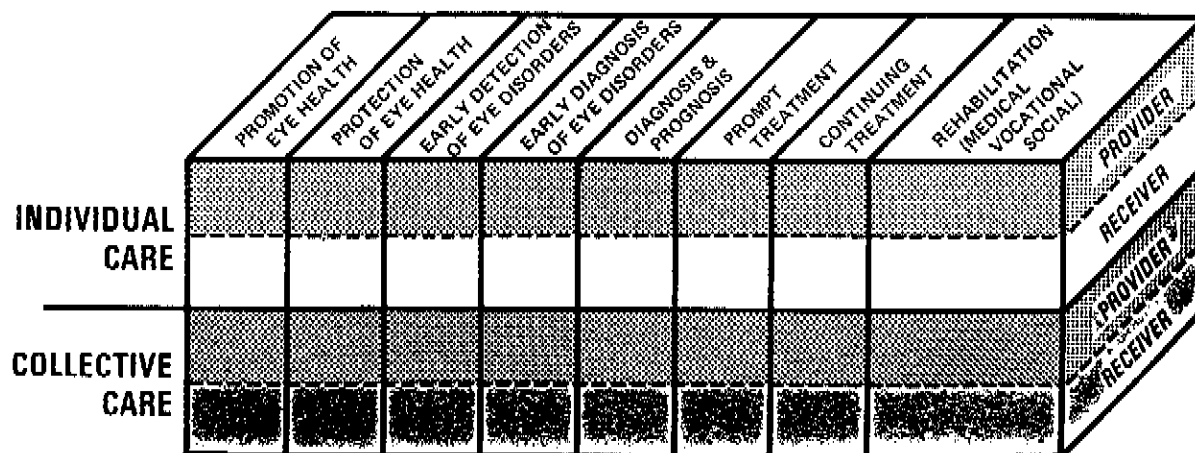


Figure 2

B.Z. NIŽETIĆ - 1983

Comprehensive eye care was seen as representing a much broader and more multi-faceted concept with the possibility of changing varieties of actors and their courses of action at the various stages already noted. The components of this model, their interrelationships at given stages, and the interrelationships of the several stages came into detailed consideration. The extreme importance of vision for the entire human personality, its formation and functioning was emphasized, giving rise to the thorough concern for eye impairments and their consequences, manifest in all societies of the developed and developing world. Broad concern was seen to exist among the individuals directly affected and their peers, parents, school peers and teachers,

^a See International Classification of Impairments, Disabilities and Handicaps, World Health Organization, 1980

family, and in all fields of economic enterprise covering agriculture, industry and professions, inclusive of co-workers and responsible managers.

Limitations in the strictly medical model are derived from the varieties of persons, roles and undertakings that play part in the promotion and prevention of eye disease, their diagnosis and treatment, the inhibition of behaviour and environmental causes contributing to the occurrence of visual impairments, and the rehabilitation of those requiring treatment and rehabilitation. The discussion about eye health care system stressed the complexity of that system, its internal organization and consistency, and its operation in various societies.

Economic considerations were seen as a most important element of the links between comprehensive eye health care and other activities of society. The costs of visual impairments confront both individuals and the constituent institutions of society; the limitations of full functioning to capacity levels preferred were seen to provide important rationales for concern because of emotional reactions, increased personal dissatisfactions, loss of earnings, loss of productive contributions, and limitations of personal autonomy and growth of personality. These costs were seen mainly as theoretical or abstract bases for generating allocations of resources to comprehensive eye health care, but the link between need and solution was seen as problematic. The allocation of economic resources, occupational and professional, to comprehensive eye health care was seen as not sufficient in any society.

The allocation process existing at practical levels reflects the existence of multiple priorities, and comprehensive eye health care co-exists with other important social and economic priorities. Competing obligations and preferences may in fact lead to under-appreciation of the importance of vision or at least of efforts to sustain education of specialists and the public. It was noted that individual priorities for resources and social allocations can often conflict. An illustration provided was the costs of supporting health education programmes as well as those concerned with rehabilitation. While these can be of vital importance to individuals affected by visual impairments, their costs must be sustained by broader groups of persons and by public bodies which may be reluctant or unable in the light of other undertakings to allocate funds for those purposes.

New allocative processes that could associate additional economic resources to comprehensive eye health care at its several component stages and levels would require at least further education of the general public, of policy makers and planners, and of specialists already in the field of educational programmes for specialists. New categories of ophthalmologists, for example, concerned with public health ophthalmology inclusive of rehabilitation programmes along with existing emphasis upon medical and surgical treatments would be the necessary interim step toward comprehensive eye health care.

Educational variables affecting often both limited concern for and allocations to comprehensive eye health care were also identified. Persons in contact with sight-impaired individuals may attribute limitations in behaviour or in attitude to factors unassociated with vision. Thus, the nature of handicaps and impairments can readily be misunderstood by persons in many occupational and professional specialities, inclusive of medicine, teaching at primary and intermediate levels, and leaders in local communities, while at the same time parents and peers in families, in schools, and in community groups may also not have sufficient information or ameliorative understanding of visual impairments and their effects.

Both lack of knowledge and of attitudes for perceptions which contribute to worsening the orientations and social standing of persons with visual impairments could be altered through appropriately focussed and sustained educational programmes.

Further elaboration of the distinction between individual needs and collective efforts raised, if it did not answer, the question of how, in what degree, and over what time span, comprehensive eye health care can provide adequately for the health needs of all in society. The eye and vision related needs of all individuals can require resource allocations that seem to stretch the resources and to go beyond the capabilities now available to societies, given the existence of other undertakings and of priorities associated with them. The question was seen as applicable to other health undertakings as well. Planning for comprehensive eye health care in the light of WHO goals concerning health for all was seen to require rethinking of economic priorities and increased realization of the importance of vision for successful completion of many individual responsibilities.

It was made clear, as an important area for change, that the allocation of economic resources to prevention and rehabilitation stages of comprehensive eye health care will have to be strengthened by significant degrees, and that this confronts existing views and priorities both within the medical community, among clinical specialists in ophthalmology, and within the

community at large. Such expansions of concern for comprehensive eye health care were seen to depend in large part upon strengthening new personal conceptions of specialist responsibilities within the medical and other professional communities, and at the same time expanding educational programmes for teachers, parents and rehabilitation specialists.

4. Relations among developed and developing countries

In this connection, it was also observed that any newer concepts of comprehensive eye health care could have a generalizable value, both for and between developed and developing countries. Health problems concerned with vision, modes available for their resolution, and economic as well as technological resources would undoubtedly seem to have at least somewhat dissimilar characteristics in developed and in developing countries. Further clarification of the concept of comprehensive eye health care would have to be undertaken, as participants at the meeting noted, to establish projections for implementation in all countries. Their respective complexities and priorities relating to health would require adaptation of solutions contrived in developed societies to other situations and places.

5. Policy makers and health professionals

Policy makers, it was noted, need convincing in all countries, and the scientific community inclusive of both natural and behavioural scientists engaged in fundamental research as well as those responsible for and participating in the many implementation and technical tasks of various phases of comprehensive eye health care must present their results and accomplishments to such policy makers. Various types of links were identified at the meeting and problems accompanying them were mentioned.

The scientific and health communities constitute overlapping groups with diverse interests and objectives which are not uniformly synonymous. Under selected conditions, they constitute one element, although a key element it was stated, in the complex of groups impinging upon the efforts and perspectives of policy makers in health sectors.

The results of scientific research work can be of value to the further development of knowledge. Such results have to be explained and their importance made clear to policy makers charged with responsibility for allocation of resources.

The dependence of researchers and health specialists upon policy makers and to other sectors of society for the allocation of resources related as well to the solicitations often made by policy makers to scientific researchers and to health specialists. Their objectives would be the development and implementation of programmes yielding results and answers to questions initiated by policy makers.

The complex relations between society in the broadest sense, on the one hand, and the scientific and health specialist complements, on the other, were reviewed in detail (see Figure 3. Health Policy Development).

HEALTH POLICY DEVELOPMENT

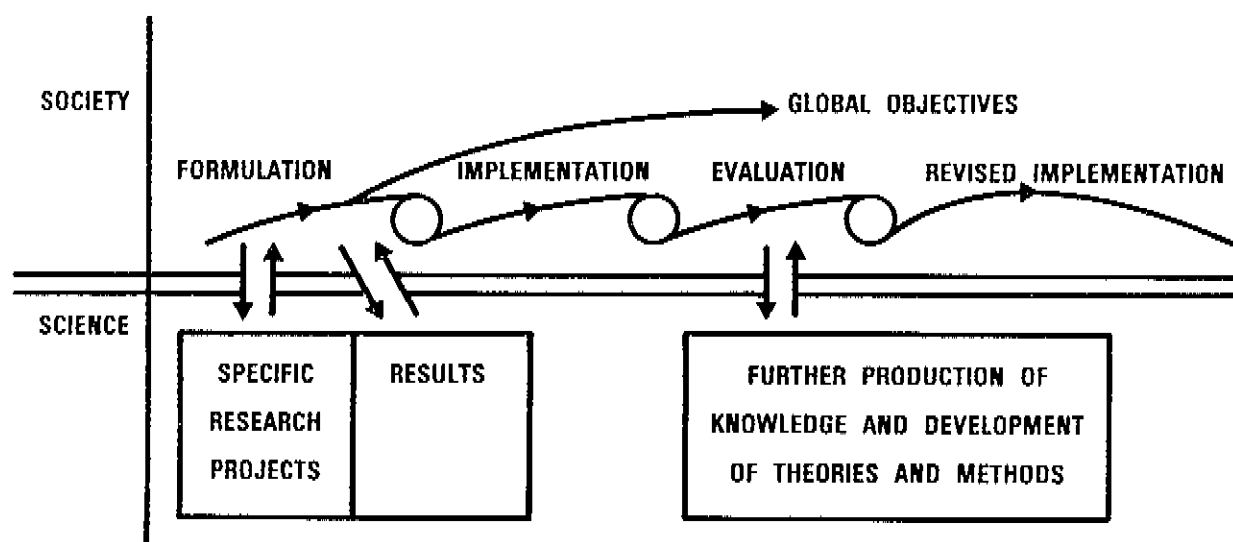


Figure 3

The links of society and the scientific and health communities were reviewed in terms of how questions concerning expenditure levels were approached by both health specialists and policy-makers in society at large. Participants stressed the heavy burdens on the effects of eye and vision diseases and impairments, burdens upon society at large, as well as those directly affected. Substantial commitments of resources were seen as necessary, especially where the heavy costs of the technology utilized in surgery in particular occur. It was noted that efforts to identify and to introduce complementary or even alternative methods of patient diagnosis and treatment may ameliorate those burdens in part. Policy makers and the health communities could possibly, it was thought, develop programmes to secure proximate results through diverse programmes at quite divergent cost levels. Some educational and training programmes can lead, it was noted, to such efforts. For example, training programmes of school children may lead to greater awareness of eye health and vision problems, thus allowing for the prospect of improved comprehensive eye health care which can reduce the demand for surgery.

One participant with current experience in eye health programmes in Africa mentioned the significant utility of communication with nurses concerning ophthalmological problems, treatment, and rehabilitation. This has extended to specific inclusion of selected nurses in programmes of formal education and training, so that their direct participation in eye health programmes is improved. Further, they serve as trainers, teachers and role models for other participants in health programmes.

Where significant shortages of specialists exist, programmes of such a nature can significantly extend their reach and impact. This may occur in both developing and developed countries, and indeed the need to broaden the efforts from mainly clinical specializations following the strict medical model to the broader conceptions of comprehensive eye health care was seen as requiring such an objective. At the same time, the introduction of such new persons and newer clusters of skills and behaviours into the contemporary arrangements for provision of eye health may encounter opposition from current specialists. It was stated that financial resources alone do not constitute the obstacle preventing change; the bottleneck, it was observed, derives from limited appreciations of the value of multiplicity of manpower and the perception by some that participation by groups not previously incorporated in the provision of services and comprehensive eye health care constitutes in some measure a threat to existing arrangements.

6. Areas where knowledge is lacking and research or other actions are needed

This led to formal identification at the meeting of a series of impediments to the introduction of change in effort and in the kinds of specialists participating in such effort. These impediments were stated to require further refinement and research and were listed as follows:

1. Communications concerning eye health care among patients, professionals, and other specialists. Such communications, it was stated, involve much understanding and a great deal of information become lost, misunderstood, or, often does not result in the desired actions by those who are recipients of the communication.
2. Organizational aspects of comprehensive eye health care. This referred to the diverse structuring and formalization of eye health care, such as the links to hospital settings for implementation of clinical eye services while rehabilitation and early diagnosis stages occur in other kinds of settings, themselves possibly dominated by organizational structures. It was noted that the operation of organizations within the comprehensive eye health care systems could quite usefully become a topic for further enquiry.
3. Roles or expectations concerning behaviour and attitudes for such categories as "ophthalmologists", "doctor", and "patient". Mutual understanding of actions of others engaged in various stages of comprehensive eye health care can be lacking, or, at least, limited and thereby the effectiveness of efforts can be voided or restricted. Further clarification of how roles shape behaviour, how pairs or other combinations of roles function, and how both formal education and work experience contribute to performance in roles was seen as desirable.
4. Expectations of individuals such as patients. Examples offered included the common forgetting of messages and medical recommendations as other life routines attract greater attention. Reliance upon medical doctors and other health specialists for advice concerning life routines may be unusual. Agreement that further inquiry about the relation of medical and health knowledge to other patterns and assumptions which affect routines and traditions accepted within the community at large and patients in particular was expressed.

5. Attitudes concerning the degree of acceptance of health care. These concern orientations, feelings, and beliefs served as preconditions for or against the acceptance of change. Additional examinations of relations between attitudes and acceptance of change were recommended.

6. Compliance by patients and by staff. This refers to the acceptance or non acceptance of authority as bases for changes in behaviour, and directly concerns the extent of willingness of patients and doctors, for example, to adjust to each other's behaviour. Medical advice may be unappreciated or unaccepted as part of a general antagonism to authority. Further research on how to modify interferences resulting from limitations of compliance was urged.

7. Equity aspects of eye health services. This pertains to the possibility that components of population, such as migrants and transients in a given society, may be excluded for reasons of cost, cultural hostility or rebuffs from existing institutions, from the full benefits of health services. It was also noted that such groups as the chronically ill, multiply handicapped, or mentally handicapped may be excluded from full ranges of services in the health services. This relates to the possibility of differentiation in the amounts and kinds of services available to individuals with varying levels of income, education, or generational background. How services vary for diverse groups requires additional analysis.

Throughout this part of the discussion, emphasis was placed upon the importance of concerted multinational and national study and research. National variations in culture, roles, authority, expectations, organizational systems, and resource allocations were noted. The state of health and in particular the state of eye health and the implementation of the comprehensive eye health care concept were seen as not constant. These directly affect the quality of life. It was noted that complements of professionals and other health specialists as well as the definitions of their roles and mutual expectations with each subgroup within the health sector and other sectors differ in the various societies, both within the developed nations and developing nations. Such factors impinge directly upon the acceptance of the health specialist and his/her advice and recommendations. The threshold of action depends in part upon the patients' cognitive awareness, in this instance, of the importance of vision. The acceptance of the need or desirability to seek out health services, followed by participation in such service settings and then acceptance of recommendations or advice, rests upon complicated processes of behaviour by both patients and health-care providing specialists.

The phase of early detection was seen in itself as affected by such factors. Attitudes, roles of individuals within family, within school or higher education and within work place, and levels of education were seen as generating more or less concern for vision and for care or treatment at later stages, critically linked, with early detection and eye health awareness.

The promptness of treatment once eye and vision problems have been detected was in itself seen as dependent upon a complex of factors associated with the operation of the social, economic, educational and occupational sectors of society.

It was agreed that the various stages of comprehensive eye health care are associated in various nations with diverse combinations of levels of concern for vision and eye health, investments of resources in the several kinds of health professionals and of health institutions, educational communication about health, and access to health technology. The last was seen as an important determinant of eye health service patterns in that medical personnel and patients may perceive that the use of extremely sophisticated and expensive equipment leading to dramatic results constitutes the exclusive measure of effectiveness of the eye health services.

The value of sophisticated technology was stressed, but even greater stress was identified at the meeting upon the acquisition of new motivation and new understanding that comprehensive eye health care in all its stages constitutes the objective. This was seen to require a multi-dimensional approach and to necessitate the utilization of varieties of qualified specialists along with efforts to bring about greater understanding, by policy makers in all sectors, of the importance of eye health.

It was noted that within the medical community within certain countries, the prestige of ophthalmologists seems closely related to their access to use of complicated technology, to their skill in its use, and to the extent to which they achieve results through elaborate and costly surgical procedures. It was seen as necessary to supplement such orientations and attitudes with appropriate changes in professional formation and education and with modifications in the ways in which recognition of levels of skill occur from within the communities of professional peers. Until that is done, some degree of resistance to public health ophthalmology and to the implementation of comprehensive eye health care can be expected.

Concentrated efforts to learn more about the organization of the medical and other health professions, inclusive of education and practice arrangements for example, were seen as desirable, so that bases for identification of the ways in which resistance occurs and is sustained can be delineated.

Within this context, the reluctance of ophthalmologists, whether the solo practitioner, the hospital service ophthalmologist or the university medical faculty professor, to participate in policy-making and in the giving of advice was mentioned. It was also observed that seeing themselves as neglected and misunderstood by policy makers was characteristic of medical doctors, including ophthalmologists, as well as other health and scientific specialists. What was seen as desirable was, first, the concerted effort to alter existing conceptions toward greater realization and acceptance of comprehensive eye health care and, second, the commitment of individuals within the broad range of those concerned with health, including ophthalmologists as well as many others, to share responsibility for influencing policy makers to ensure the implementation of comprehensive eye health care.

Thus, a major need is a further investigation of how change in professional and community attitudes toward broader concepts of comprehensive eye health care can occur. This was seen as requiring the testing of various strategies for change, and, it was indicated that the areas where such strategies could be fruitfully investigated include the following:

- (1) the manner in which research about comprehensive eye health care comes to be commissioned;
- (2) the organization and functioning of health care programmes which seem to operate effectively, especially in eye health care;
- (3) the financial mechanisms for services, for specialist education, for handicaps and impairments;
- (4) the comparison of curative and preventive approaches;
- (5) the organization of medical and health services, including the results of primary, secondary, and tertiary care arrangements;
- (6) the educational systems for health and other specialists, especially in regard to the identification of how most effectively to lead towards acceptance of comprehensive eye health care within specialist roles;
- (7) the assessment of alternative technologies;
- (8) the implementation of rehabilitation approaches for eye and vision problems; for example, through introduction of new approaches to rehabilitation and sensory complementarity training for the very visually impaired.

An important need affecting a number of these areas is the accumulation of further data concerning the prevalence of vision handicaps in the European Region, and the extent of co-variation of levels of vision handicaps with other kinds of changes in sensory performance and participation in social sectors. It was noted that for Denmark and Holland, some 45% of all severely visually impaired children were also considered as mentally retarded.

For children in Europe, 40 in 100 000 are said to have severe visual impairments, while data for adults and in particular the elderly are unclear and confused. Further collection of data was seen as critical. The need for WHO generally and the Regional Office to acquire reliable data on visual impairments was seen as critical; this is a matter of great complexity especially in developing countries. It was also noted that routine medical examinations of mentally handicapped children and adults, in particular in institutions, often do not include visual screening, leading to possible misidentification and the introduction of inappropriate or unnecessary treatment procedures.

As observed earlier at the meeting, such occurrences can entail issues of equality not only for this group but also for further sectors of populations at risk.

The treatment of visual impairments confronts other phenomena; for example, issues associated with the cultural definition of blindness, who may in fact benefit in economic or in social terms from classification by society as a person with such a condition. It was pointed out that demographic or survey data in certain social settings and societies can be subject to question through operation of financial benefits inclusive of tax exemptions or benefits. As such arrangements differ, the effect of avoidance of economic burdens or of preferment with regard to

financial support or social service access can lead to behaviour which modifies at the levels of reporting. A related reaction is the association of visual impairments or blindness itself with stigma, that is, the negative evaluation of the person and his/her worth leading possibly to discrimination and most likely to prejudicial treatment.

During this discussion about the availability of data, the view was expressed that such variations as noted above should not by themselves halt or delay the development of implementation of policy decisions. As with costly and sophisticated technology, alternatives may exist which can provide desired or needed services. For some at least, costly and elaborate efforts through modern survey methods or census enumerations may not be essential. While useful, they should not hold back the emplacement of urgently useful services.

What was stressed through this and other sections of the meeting was the underlying intensity of concern among all population sectors for broader ranges of health services, for support of educational programmes to ensure appropriate formation of the various specialists, and for the sustenance at the optimal levels of support for operation of all necessary adjunct arrangements. For specific nations, and communities within them, further knowledge securing undertakings must be mounted in order to identify the factors which work for or against the introduction of arrangements for those programmes, services, and personnel which comprise the health care systems. These can include economic, cultural, and moral factors which affect the introduction or application of knowledge toward the resolution of human problems. Given diversity in economic priorities about financial resources, it would be undoubtedly important to identify those strategies which can yield the most useful and extensive results within the shortest time frames. The applicability of programmes and their evaluation within various developed as well as developing nations were further discussed in terms of the standards applied to in costly technologies. The objective of improving vision and eye health services for the largest proportions of the population of a particular society may be seen as following particular models in any country. The overlooking of the necessity of evaluation of alternative methods may occur, and costs easily borne in one society may prove excessive elsewhere.

One example discussed was the concern about provision of spectacles at low cost through local production. In Pakistan, for example, it was noted that between 15% and 18% of the population of school age children need spectacles. Arrangements to manufacture such devices locally, to make them more acceptable to children, to distribute them through appropriate channels, and to sustain the costs are the subject of present exploration. The World Lens Project concerned with the introduction of intraocular lenses was described as representing another illustration where cost considerations reflect complications. The costs of production and distribution of the intraocular lenses appear sustainable, but many problems have arisen from the lack of follow-up and continuing care. As a result, further allocations have to be investigated and it becomes clear, in any event, that the cost measurement of the introduction of any such technological devices or services must require the most careful economic, cultural, and structural analysis in order that efforts to identify such consequences can occur.

Professional systems were seen as interlocking with other components of society, with other specializations and with other sectors. Each shapes a set of priorities which can not be presumed to be in synchrony. It was made clear that eye health care must be comprehensive and indeed is by definition. Implementation requires links between medical doctors and the field of medicine with other participants in cooperating teams sharing concern and effort. This interdisciplinary character of comprehensive eye health care rests upon shared concerns.

Professional formation or education generally remains separated, however, with candidates in each of the various health professions becoming exposed for the bulk of their formation to the espousing of ideas which come from restricted sources. Little contact with teachers and practitioners, or with patients or clients as human beings, occurs. It was thereby mentioned that a major part of the difficulty of introducing and sustaining the concept of comprehensive eye health care derives from the insular characteristic of contemporary formation. While gaining the advantages of specialization, the professions have sacrificed at least in part the benefits of mutual exposure, cooperative education, and sustained contacts with the dependent humans whom they are training to serve.

The composition of participants at the meeting was itself seen as an effort to initiate dialogues among those representatives of the health specialists and those whose competencies include various behavioural science sectors. The presence of sociologists, psychologists, economists, and teachers entering serious discussions about the nature and organization of comprehensive eye health services with ophthalmologists, whether practitioners, service heads, university professors, or administrators of national institutes of ophthalmology, is in itself noteworthy. No group has a monopoly of authority to speak about all relevant issues. Those at the meeting expressed the view that such communication can generate new questions for further research in many fields of investigation and service.

Inclusion of representatives of equally diverse sectors was recommended for the various organizational and speciality components engaged in undertakings within the framework of comprehensive eye health care. It was reported that in certain national settings, shared participation by health specialists, teachers, parents and opticians or optometrists, representing a manifestly interdisciplinary range of persons takes place. Contacts between medical staff and parents or children within home settings occur routinely, thereby extending the medical role from the office or cabinet to the community itself.

It was noted that further research on the stigmatization of impairments as handicaps could benefit substantially from interdisciplinary cooperation in research planning and possibly implementation. This was seen as extending to prevention of eye disease, inasmuch as the variety of factors affecting or determining the levels of concern or unconcern with eye disease or of steps to prevent or minimize such eye disease and the consequences of eye disease are known to be extremely diverse. No single discipline or even limited combinations of disciplines can expect to approach and to attack all of these problems. The medical doctors' efforts in such areas depend substantially upon contributions by behavioural scientists. The experience of the meeting may itself contribute, it was hoped, to such modern combinations of talents and skills. It was noted that other fields, such as dental services and hearing services, have undergone very substantial change in the last decade. The rapidity and scope of change in those fields of health care have been impressive. The putting into place of comprehensive eye health programmes and the expansion of recognition of the importance for the entire range of human functioning and personal fulfilment was seen as a most vital objective at the present time. The example of change in the other fields mentioned may possibly serve for this specialized field with necessary adaptations.

Cooperative undertakings by WHO (the Regional Office for Europe), UNESCO and UNICEF may yield such results in creating or stimulating creation by national governments of the knowledge necessary. The existence of a Regional Office Oral Services Monograph was mentioned, accompanied by the observation that a similar effort might prove valuable for eye health vision services.

Other national programmes which may provide detailed information about the organization of comprehensive eye health care were discussed. This included Sweden's low vision centres which, while mainly concerned with elderly and with children, constitute a pattern of cooperative effort by nurses, teachers and technicians providing optical aids, along with visiting ophthalmologists. Both rehabilitation efforts and referrals to any needed medical personnel exist in these settings; and consultation services are also available for teachers. In Denmark, a low vision centre serves Copenhagen, and other areas are served by locally based ophthalmologists.

Finally, Portugal's centres for school children were discussed. There, school children reach the centres with teachers from the schools, appropriate examinations occur, and optical aids are provided, with referrals back to the schools. Close cooperation between teachers and medical doctors is facilitated through such arrangements.

These organizations of comprehensive eye health care may provide useful models, it was thought, that can serve as suggestive sources for other national settings and for extensive to additional population groups with appropriate modifications.

7. Research needs for implementation

The participants observed that the implementation and extension of the comprehensive eye health care concept beyond its current levels required further enquiry concerning the following areas:

- (1) Detailed information in various national settings concerning the (a) degree and extent of vision problems in the population at large and of specific subgroups, and (b) eye health services, including information concerning the numbers, utilization, education and authority of various health professions, such as ophthalmologists, paraprofessionals, as well as the involvement of various other key persons, such as teachers, psychologists, co-workers, managers, and social service persons.
- (2) Detailed information about continuities and discontinuities in the flow of services, inclusive of interruption, conflicts, dysfunctional relations, gaps in knowledge and in understanding, changes in priorities, shifts in emotional supports and the like.
- (3) Research needs concerning the dimensions of professional specialist roles, inclusive of professional and paraprofessional roles within the health sectors as well as within other involved or potentially involved sectors linked to health, and the organizational structures and related authority within which health services related to vision care, whether limited to medical and surgical skills or covering the more elaborated comprehensive eye health care conception underlined at the meeting.

This broad framework led to intensive discussion concerning programmes considered essential and desirable by the multidisciplinary participants at the meeting.

A specific topic covered comprised the bases for the exacerbation of vision problems arising out of existing dislike of complex technology prevalent in certain cultural subgroups. It was noted for example that certain school children have a rather substantially developed dislike of elaborate and complicated appearing machines. Such apprehension can obviously deter their full readiness to accept procedures and interventions which of course are very highly developed within ophthalmological services. The providing of such services must, in full concert with others including behavioural scientists, fully explore alternative methods and approaches which do not have any negative implications in the thinking of the children whose interests are the target for diagnosis and treatment.

Another example drawn from the experience of educators concerned with visually impaired children within a school in the Federal Republic of Germany provided clear support for the vital desirability of further research on the very nature of visual handicaps, their consequences, how to deal with the impairments, and even more broadly how to supply support of a broad psychological nature for the visually handicapped person. This concerned the use of mobility experiences for visually handicapped children whose independent and self-initiated physical mobility is otherwise restricted. Significant change occurred through the involvement of these children in sports programmes involving substantial physical education, including the experience of riding horses with support and supervision as appropriate to the prevention of any potential harm. The experience of riding astride and controlling a horse moving rapidly through space, and indeed of initiating changes of direction and rapidity of movement, has contributed both extensively and intensively to the improvement of psychological confidence and positive self concepts for these visually impaired children. The sense of handicap has diminished in significant ways.

A final illustration from the school in the Federal Republic of Germany is concerned with the encouragement of learning by the visually impaired children. Great stress is placed upon extensive participation by teachers, trainers, parents, and the children themselves, as a far reaching complement to existing efforts by medical doctors. The participation by non-medical persons in the learning undertaking adds very many dimensions to the opportunities available to the impaired person.

Participants at the meeting referred somewhat to the various issues associated with the involvement of visually impaired children within the school systems of society, in the so-called mainstreaming alongside of children with normal vision or with minor visual impediments. More enquiry about the psychosocial impact of such experiences upon the visually impaired children might be called for in order to provide bases for generating improvements, if necessary, in preparation of teachers, and in the creation and sustenance of positive attitudes and behaviours by both the visually impaired children and those with more normal vision.

Another subgroup requiring the undertaking of additional research is the elderly; it was reported that about 70% of those considered blind or with severe visual impairments are over 65 years of age. Public programmes often exclude support for mobility training and social services for individuals over 65 years of age with visual impairments, and a fee for service system generally prevails. Those with inadequate incomes are thereby excluded, or at least excluded under currently prevailing systems. It was suggested that further research along lines of economic alternatives or focussed on existing professional roles and service organization may well be undertaken in order to remove or minimize this inequity and gap.

For adults who become "newly blind", a research question concerns what kind of occupational or professional training should be most functional. Does this most appropriately entail retraining so that new specialities with accommodations to any imposed limitations are identified and suitable preparation for them provided to the handicapped person? Or, alternatively, can the interests of such handicapped individuals best be served if the training provided concentrates on the prior occupational and professional specialities and those adjustments in behaviour or in attitudes which, if learned, can allow the person once again to pursue a career in the occupation initially chosen prior to the events leading to the loss or serious diminution of sight?

It was pointed out at the meeting that, for certain groups within the population with composite physical and social characteristics which may further receive disapprobation, very little is known about the extent of possible visual handicaps. These are illustrated by the so-called "invisible" adults who have less than the usual degree of acceptance or full participation. One controversial illustration is "women" whose roles are now changing in various societies, developed and developing, yet whose participation at least in the recent past, let alone the historic past, have often remained out of public view, cloistered as it were from many outside activities in which men engage. The evaluation of the health standing of such women has been less frequent than that for men, for example, in association with military service.

Other sets of persons who often remain "invisible" with regard to many social characteristics encompassing health generally even more likely may be unexposed to careful and routine visual evaluations. These include institutionalized groups such as those considered mentally ill, chronically ill and multiply handicapped persons, the elderly and, outside institutional settings, those who are occupationally or residentially transient.

The overlapping of visual handicaps and handicaps associated with other sensory modalities has apparently been rather consistently overlooked. The initial or seemingly dominant handicap may result in stigmatization of an individual for that limitation, and can possibly lead to treatment along specific lines or relegation to a particular social category. Thus, the persons experiencing deficiencies of hearing, and receiving treatment or care related to those conditions may in fact have visual limitations, multiplying the effects of the particular limitations, yet overlooked in the diagnostic and treatment processes derived from the hearing classification. It was noted that data on visual handicaps for those considered to have such hearing losses are scarce or of uncertain validity.

One participant noted that a thorough ophthalmological examination is extremely rare among the mentally retarded and the multiply handicapped so that the data that may exist for those groups may currently be generated from the appraisals of medical specialists without advanced educational preparation or skill in the complex technical aspects of ophthalmological analysis when clouded or complicated with other problems. Specialists in one field, it was noted, may not have the necessary capabilities, and certainly inter-speciality communication problems often occur, both in medicine and in most other specialities. These can intrude, it was thought, upon data collection, treatment and rehabilitation approaches alike.

Interrelationships of visual losses and of hearing losses were described, and more experimental work based upon innovations already having provocative value to determine how improvements in either sensory modality relate to improvements in other areas was recommended.

8. Priorities and recommendations

The participants at the meeting proposed multi-faceted approaches for further efforts and undertakings which reflected the urgency of concern about the implementation of the comprehensive eye health care concept model and which could in their view help accomplish its realization through further research and through further planning both within national settings and at international levels.

These considerations derived from the participants' multi-dimensional experience, educational preparation, work capabilities, and professional obligations. They considered it noteworthy in, and of itself, that the meeting comprised representatives of the medical community's ophthalmological speciality, of the sector concerned with educational rehabilitation services relating to the visually impaired, and of the behavioural science component of university-affiliated specialists. Beyond this element of their individual lives, they shared concern for a common problem which they discussed and evaluated in a concerted effort, specifically, the universal task of facilitating the implementation of the comprehensive eye health care concept for the benefit of individuals in society. They viewed this as a demanding priority which requires the talents, resources and commitments of the entire community instead of the traditional model of limited responsibility for one or two specialities and of concern only to those with direct experience. Throughout the meeting, the medical, economic, sociological, psychological and educational aspects were expressed openly and approached with full access to dialogue and evaluation. This reflected the agreement by WHO, the Regional Office and the participants that many specialities must participate since all have opportunities and obligations for the concept and its implementation by action.

The recommendations covered the following areas:

- (1) The need for instituting evaluative processes dealing with specific programmes so that:
 - (a) selection and re-enforcement of the most effective elements of programmes can occur;
 - (b) maximal results can derive from the allocation of speciality, institutional, and economic resources.
- (2) The need for further evaluation of the consequences - psychological burdens, social responsibility for losses or diversions, and economic impacts of both the income losses and extra costs for those directly involved and the enhanced obligations placed upon family, community, work colleagues, and government.

- (3) The need for systematic analysis of alternatives, including but not limited to, such arrangements as:
- (a) initiating and maintaining greater continuity of care,
 - (b) broadening participation so as to supplement the contributions of ophthalmologists with the efforts of educators, rehabilitation counsellors, psychologists, physiotherapists, speech and hearing specialists, and other medical and non-medical occupational and professional specialists,
 - (c) enhancing the quality and range of programmes for the visually impaired so as to facilitate the removal of any sense of stigma, exclusion for the normal range of life experiences within the worlds of the family, work, community, school, recreation, and leisure.
- (4) The need to evaluate conditions that aid motivation for specialists in various health related fields, medical and non-medical, conditions which can lead to more full participation and implementation of comprehensive eye health care programmes including the comparative evaluation of alternatives within:
- (a) levels of economic and financial rewards and systems of step improvements in such areas,
 - (b) fee for service, capitation, and organizational salary systems, and
 - (c) ladders of career accomplishment, recognition by peers, and prestige associated with diverse behaviours such as discrepancies for career futures of focal concentrations upon surgery or rehabilitation.
- (5) The need for evaluation of the consequences of alternative technologies and procedures in various elements of comprehensive eye health care, such as the introduction of expensive laser equipment useful in intraocular lens implants, rehabilitation procedures, and early diagnosis and prompt treatment procedures.
- (6) The need to evaluate new staffing models for different stages of the comprehensive eye health concept, so as to determine what kinds of specialists can be educationally prepared so as to contribute skills that have maximal utility and provide support for the various stages of care and help ensure continuity of care.
- (7) The need to evaluate the consequences of demographic changes in population inclusive of increases in life expectancy and greater geographical mobility upon the operation of the overall concept of comprehensive eye health care as well as specific components and stages of the concept.
- (8) The need to evaluate the effectiveness and utility of early detection programmes concerned with eye health and visual disorders in prevention of restriction of the emergence of impairments and development of handicaps.
- (9) The need to evaluate the effects of alternative modes of issuance and substance of educational information and targeting choices associated with the propagation of such educational information, covering various sectors of the specialist community, family, teachers, co-workers, school children and others.
- (10) The need to evaluate the impacts and correlates of various risk factors upon visual impairments, inclusive of nutrition and changes in modes of communication.
- (11) The need to evaluate the consequences both psychological and economic of misclassifications of both visually impaired and of normals with regard to school participation, occupational choice and success in work, community participation, family experience, recreational participation, and personal development such as degrees of self-confidence and personal self-respect.
- (12) The need to evaluate the resources within the specialist ranks and within the overall communities of nongovernmental organizations in the various national settings which can provide greater understanding and knowledge to the national communities and can serve to support efforts within the settings both of national governments and non governments for more extensive and continuing support by combinations of specialists and institutions.

9. Conclusions

The discussion of the concept of comprehensive eye health care which occurred at the meeting comprised contributions from representatives of varied professions drawn from a wide range of disciplines and specialities, with varied responsibility for education, service, research, primary care, and administration, coming from 10 countries, and associated with health and other important sectors of society.

It was manifest throughout the meeting that the participants accepted the value of comprehensive eye health care as the appropriate orientation to eye health and vision deficiencies.

Awareness of the underlying importance of sight for linking individuals with others and with the organizations and institutions of society accompanied recognition that existing systems for provision of services related to eye health and vision deficiencies fall short of both their potential and the need. Acceptance of these principles encouraged the wide ranging and extensive discussions among the participants of widely disparate backgrounds, responsibilities, and origins.

Four major substantive themes characterized the extensive discussions at the meeting. Firstly, further research covering the status and prospects of the visually impaired within society and the extent and quality of services available should be developed and supported in a wide spectrum of scientific fields: medical, sensory, economic, sociological, fiscal, administrative and psychological.

Secondly, the results of such research and their implications for changes in the organization of comprehensive eye health care should be readily available for policy makers in general education, community settings, education of specialists in both health and non-health fields, occupations and professions, rehabilitation, health and other ministries, and health institutions, thereby providing sounder bases for decisions among alternative paths of action.

Thirdly, implementation of the concept of comprehensive eye health care requires concerted and innovative efforts to identify how existing patterns of established worth can most readily be transferred, adapted and applied within new settings and institutional sectors thereby invigorating previously under-utilized domains of services and providing for individuals currently under-served or un-served.

Fourthly, examination of current patterns and levels of utilization of specialists within health and non-health sectors and of the resources accessible to the visually impaired can identify barriers to careers, problems in inter-speciality communication and mutual acceptance, discriminations in social and economic rewards and allocations, stigmas restricting personality development, restraints upon physical and sensory growth, and deflections from pursuit of educational objectives, as well as arrangements and structures to circumvent or overcome such barriers.

Throughout the meeting concern about restraints upon full realization of the quality and scope of services now within the capabilities of specialists engaged in diagnosis and treatment of eye disease and vision handicaps was repeatedly expressed. Participants generally contended that such work could have more far-reaching value for those receiving services, for those persons, groups and institutions with whom and where such individuals function, and for the community as a whole, if the concept of comprehensive eye health care could be effectively implemented. The value of broader interdisciplinary approaches than are now manifest in systems of health care was underlined as an essential element of that concept. Systematic comparative analysis of diverse patterns within nations and of similar patterns in different national settings was recommended for such key undertakings as the levels and organization of (1) financial support for education, direct care, and rehabilitation; (2) technology; (3) staffing complements; (4) communications; (5) administrative structures; (6) career assignments, and, perhaps most significantly of all, (7) the sustaining of services intrinsic to assurance of the breadth and continuity of care.

The participants deplored the neglect of arrays of eye health needs for all sectors of the population, especially those related to the initial stages of eye health promotion and protection, early detection and diagnosis, as well as the later stages of continuing treatment and rehabilitation. Limitations, exclusions, or failures in provision of services at whatever levels were stated to occur for various kinds of individuals at risk and experiencing stigma in both developed and developing nations. Further restrictions apply to the mentally handicapped, transients, geographic isolates, rural populations, economically deprived, prisoners, the elderly, persons with multiple impairments and those whose needs remain un-entitled in systems of health services or insurance. It was noted that esoteric ailments with public visibility and emotional appeal often enjoy elaborate technologies and extensive financial and specialist commitments, while other components of comprehensive eye health care receive more limited attention. The

participants identified problems in communication and under-appreciated, or lack of knowledge of, capabilities and skills of others as significant impediments to realization of the concept. Examples of such difficulties were reported with regard to exchanges among specialists, between specialists and policy makers, between providers and recipients of eye health care, between policy makers and those engaged in education and service, and between individuals and groups active in diverse sectors of society such as health, education, and social service.

The participants observed that elements of organization of eye health care in place in various countries within the developed and developing sectors of nations can possibly have exemplary significance for other areas, leading to the need for intensified cross-national and collaborative research and communication. Transfers and adaptations across national lines and between developing and developed nations can be identified and suggested, creating the potential through such research and application for significant increments to the implementation of comprehensive eye health care.

The implementation of comprehensive eye health care through further research and collaborative undertakings in the various regions of WHO can be promoted through establishment of appropriate multidisciplinary advisory groups at regional levels created to concentrate on planning, identification of research priorities, implementation of comprehensive eye health systems, and improving the exchange of information about the extension of responsibilities by current and prospective participants in comprehensive eye health care. Such developments would facilitate the accumulation and dissemination of knowledge about the burdens of eye disease and visual handicaps, about the structures of arrangements for maintaining levels of effort for comprehensive eye health care, about the complements of personnel engaged with those undertakings, and the scope of both accomplishments and needs.

WHO could further sponsor reviews of evidence on the options for use of existing as well as amplified resources in education, prevention, diagnosis, treatment, and rehabilitation, including the costs and benefits associated with them. This effort could help in suggesting to national governments and to interested parties that they support multi-disciplinary research on the medical, educational, sociological, and economic aspects of comprehensive eye health care as implemented and as needed within their own countries.

The participants at the meeting finally accepted the responsibility of preparing statements covering specific and general suggestions and recommendations. The resulting documents prepared at the meeting and at the virtual conclusion of discussions were intentionally restricted in length. Summaries of these short documents are presented below. These indicate how the participants, coming from a wide range of professional specialities within and related to the health sector, academic research, service centres, and university programmes, nonetheless shared the belief in and the commitment to the value of comprehensive eye health care. In their acceptance of that as an objective and as a component of the overall WHO programme of "Health for all by the year 2000", the participants identified both a series of obstacles and impediments to realization of comprehensive eye health care and the necessity of moving to overcome those through additional research followed by implementation.

The statements in summary follow:

- (1) Promotion within professional and life-long education for medical doctors generally and for ophthalmological specialists of broader commitments to health care rather than an emphasis that restricts their skills and objectives to undertakings described as "medical cures".
- (2) Providing impetus and support to national authorities, encompassing Ministries of Health, education, finance, to provide stronger support for and attention to programmes dealing with eye health care in pre-school and school-age children and with low vision and blindness of any age who have the capability of rehabilitation.
- (3) Expansion of existing health and medical screening programmes with children so as to include necessary eye and vision examinations that can identify those with congenital malformations and genetic disorders, conditions becoming the main precursors to impairment.
- (4) Mandating of ophthalmological screening and examination for all mentally handicapped persons and the improvement of measurement procedures for ophthalmological conditions among such groups.
- (5) Improve understanding of the links of vision and eye health to intellectual functioning, personality development, educational performance, and social behaviours generally, hereby providing the bases for the strengthening of programmes for genetic counselling.

- (6) Clarification of the skewing of the distributions of financial, educational, medical, psychological, and social services resources away from the categories of human beings whose vision handicaps and eye disorders are under-reported, unknown, under-measured or inappropriately evaluated, the mentally handicapped, non-speaking persons, institutionally aged, persons with multiple physical and emotional handicaps, transients, migrant or guest workers and families.
- (7) Assessment of the consequences of self-care for early detection of eye disease and visual impairments for various cultural, economic, and educational groups within populations having differential access to appropriate specialists.
- (8) Elaboration of the ways in which occupational and educational requirements associated with industrial and technological developments affect the kinds and levels of vision requirements for those involved.
- (9) Appraisals of the links among varying levels and qualities of resources available at the several stages of early detection, early diagnosis, prompt treatment, and long-term treatment and rehabilitation.
- (10) Assessment through research by health economists of the costs in economic and social terms of the burdens of eye diseases and vision handicaps consequent upon gaps in the implementation and appreciation of comprehensive eye health care, with the research investigations linked to various programme components of prevention, diagnosis, treatment, and rehabilitation.
- (11) Evaluation of alternative economic, social, and educational strategies for organizing programmes within comprehensive eye health care and for uses of the resources that can be sought and made available for such endeavours.
- (12) Development of newer methods for strengthening specialists' motivations to participate in implementation of comprehensive eye health care and for identifying the combinations of re-enforcements and incentives such as changes in work structures, education structures, financial, career and job security, prestige, peer recognition and participation, which contributes to higher and broader degrees of participation.
- (13) Strengthening of opportunities for cross-national collaboration and comparative analyses relying upon systematic collaboration among health specialists, including ophthalmologists, medical doctors, sociologists, health economists, psychologists, and educators.
- (14) Preparation of summaries along national lines of the scopes, current implementations and prospects for comprehensive eye health care, using such comparable dimensions as:
 - (i) prevalence and incidence of eye disease and visual problems, for populations generally and for subgroups;
 - (ii) structures involved in provision of health education, prevention, early diagnosis, diagnosis and prognosis, prompt treatment, continuing treatment, and rehabilitation as components of comprehensive eye health care including their administrative and organizational characteristics, complements of specialists and sub-specialists, funding levels, technological capabilities, and accessibility to population cohorts inclusive of "invisible groups";
 - (iii) identification of gaps in implementation, assessment of the kinds and levels of changes in economic, financial, technological, occupational, educational, and psychological resources required for alteration or removal of impediments to comprehensive eye health care, and appraisals of the approaches to policy makers, their concerns and interests which promise substantial improvements.
- (15) Extension of rehabilitation programmes as components of comprehensive eye health care will require research on the transmission of visual stimuli through vibrotactyle pathways for children, for adults, for elderly and for those with dual or multiple handicaps, and on the most effective ways of educating and re-educating parents, teachers, and health care providers to incorporate relevant results in their contacts with such visually impaired persons.
- (16) Further refinement of the concept of comprehensive eye health care through research to determine:

- (i) How different actors perceive the services now or prospectively provided, covering individual patients, relatives, medical doctors including ophthalmologists and other health care specialists, government, manufacturers and supplier aids and prosthetic devices.
- (ii) What are the features of the demand for comprehensive eye health care, disaggregated along various lines, such as amenability to prevention, to treatment, to rehabilitation; nature of eye disease or vision condition; form of aids; and availability of qualified specialists?
- (iii) What are the features of supply of comprehensive eye health care disaggregated in terms of varieties of educational qualifications, financial coverage for services and aids, and along national lines?
- (iv) What criteria can be applied to evaluation of public policies as implemented in various developed and developing nations in relation to comprehensive eye health care.

Annex I

LIST OF WORKING PAPERS AND BACKGROUND MATERIAL

Working papers

ICP/PBL 101(m01)/1	Provisional list of working papers and background material
ICP/PBL 101(m01)/2	Scope and purpose
ICP/PBL 101(m01)/3	Provisional agenda
ICP/PBL 101(m01)/4	Provisional programme
ICP/PBL 101(m01)/5	Provisional list of participants

Background material

-	Involvement in health: a social concept of health education by Ilona Kickbusch, in <u>International Journal of Health Education</u> , supplement to volume 14, issue no. 4
-	People's health in people's hands by Ilona Kickbusch
-	International classification of impairments, disabilities, and handicaps, a manual of classification relating to the consequences of disease, World Health Organization, Geneva, 1981
ICP/PBL 001	Economic aspects of eye health care, report on a meeting, Copenhagen, 31 January to 1 February 1980
EURO Reports and Studies 5	The role and function of national institutes of ophthalmology, report on a WHO meeting, Brussels, 11-14 December 1978
EURO Reports and Studies 41	The use of residual vision by visually disabled persons, report on a WHO meeting, Brussels, 28-30 January 1981
EURO reports and Studies 65	Preventing disability in the elderly, report on a WHO working group, Cologne, 16-19 November 1981
EURO Reports and Studies 73	Medical and social problems of the disabled, a report based on the technical discussions at the thirty-first session of the Regional Committee for Europe, by Dr V. Kallio
EURO Reports and Studies 83	Services to prevent disability in the elderly, report on a WHO meeting, Sokobanja, 12-15 October 1982
Technical Report Series 668	Disability prevention and rehabilitation, report of the WHO Expert Committee on Disability Prevention and Rehabilitation, World Health Organization, Geneva, 1980

Annex II

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* at own expense