II Community Eye Health (CEH) Workshop
Residency Programs in Brazil:
Possible Options on Curriculum Design

The Community Eye Health course took place at Instituto da Visão, Universidade Federal de São Paulo, from November 20-22, 2006, under the support of IAPB- VISION 2020 Initiative for Latin America. It was organised by IAPB and Conselho Brasileiro de Oftalmologia-CEH subcommittee and sponsored by Christoffel-Blinden Mission together with Sightsavers International and ORBIS through the IAPB.

BACKGROUND

The Brazilian Council of Ophthalmology has 11,000 ophthalmologists registered and 53 residency programmes under supervision. However, community eye health is not included in the curriculum. CBM has a long experience of CEH courses in Brazil (São Paulo, Recife, Teresina, Fortaleza etc), though the knowledge provided by the courses remained limited to those who attended the courses. In October 2005, 28 participants from 11 residency programmes in the country attended the I Community Eye Health (CEH) Workshop-Residency Programmes in Brazil: Possible Options on Curriculum Design, held in Brasilia. A 5 day community eye health curriculum was suggested by the end of the course. From February to May 2006, Dr Celia Nakanami attended the Diploma in CEH course at LSHTM, sponsored by Unifesp, CBM and the British Council for the Blind.

AIMS AND OBJECTIVES

To present programme and/or research initiatives on: cataract, refractive errors, prevention of blindness in the elderly, diabetic retinopathy and ROP
To develop a curriculum of community eye health for residency and post graduate programmes
To plan and define collaborators: Manual on CEH for CBO residency programmes

PARTICIPANTS

There were 22 participants in total distributed by Universities as follows:
Universidade Federal de Goiás (1), Hospital de Base de Brasília (1), UNICAMP (1), Universidade Federal de São Paulo (7), Universidade de São Paulo – Ribeirão Preto (4), Universidade de São Paulo (2), Universidade Federal de Minas Gerais (1), Fundação Altino Ventura (3), Universidade Federal do Rio Grande do Sul e Hospital Banco de Olhos de Porto Alegre (1), UNESP-Botucatu (1)

FACULTY

International faculty: Dr Colin Cook, University of Cape Town, South Africa and Dr Rainald Duerksen, Fundación Visión, Paraguay.
Local faculty: Celia Nakanami, UNIFESP and Dr. Andrea Zin, FIOCRUZ
Representing CBM LARO: Andrea Zin

PROGRAMME

Attached

V2020 in Brazil
On 26 May 2003, the Fifty-sixth World Health Assembly in Geneva accepted the resolution 56.26 promoted by VISION 2020: The Right to Sight regarding the elimination of avoidable blindness by the year 2020. This resolution urges all WHO Member states to set up national VISION 2020 plans not later
than 2005, to establish a national coordinating committee for VISION 2020, and to start implementation of the action plan by 2007 at the latest.

On 2005, CBO established the V2020 subcommittee with the aim of implementing this programme in the country. The coordinator is Dr Carlos Arieta and the members are Andrea Zin, Celia Nakanami, Marcos Wilson Sampaio, Pedro C R Carricondo, Paulo H Morales and Rodrigo P C Lira.

CBO has a very traditional Prevention of Blindness Committee which has promoted coordinated actions with Ministry of Health, governmental and private hospitals towards the prevention of blindness. V2020 aims that the actions are based on human resources availability, appropriate technology and recognizes as main causes of avoidable blindness: cataract, low vision, childhood blindness, refractive errors, diabetic retinopathy.

Cataract
In Brazil, the prevalence of blindness is approximately 0.6%, which means approximately 1 million blind people (VA < 3/60, better eye, best available correction) and 4 million with low vision. It is estimated that cataract contributes with 50% of all causes.

The average Brazilian Cataract Surgical Rate (CSR) has increased from 1,000 in 1999 to 2,400 surgeries/million population due to the great effort from CBO and Ministry of Health.

The ideal CSR would be 3,000, in order to avoid the increase in the number of blind people from cataract. Unfortunately the current number of surgeries may decrease to 1,000/million as the governmental programme for cataract has stopped in February 2006.

ROP
Brazil is a large country with huge regional variation in levels of socioeconomic development. In 2004, there were 3 million live births and 1% have a birth weight of less than 1500g (approx. 34,000 per year). There are estimated to be 15,000 preterm infants requiring screening for ROP. There is some variation in the proportion of babies with threshold disease, but it is likely that 5 - 10% of those at risk will benefit from treatment i.e. 750 –1500 babies each year. Since 2002, the Brazilian Council of Ophthalmology and the Brazilian Society of Paediatric Ophthalmology have met at the I ROP Workshop. It was estimated that less than 50%of the 300 neonatal intensive care units (NICUs) in Brazil had a programme for ROP. After this meeting the Brazilian ROP group was founded, Brazilian screening and treatment guidelines were established, a standardized screening and treatment forms and awareness material were developed and a questionnaire was sent to all NICUs in the country. The group met in 2004, 2005 and 2006. A data bank will be piloted in 2007. After a coordinated effort involving partnerships with NGOs, foundations, universities, municipal and state secretaries of health, Recife, Rio de Janeiro, Fortaleza, Belém and São Paulo implemented ROP programmes with the aim of attending the needs of the governmental sector. São Luis will start a programme that will cover 100% of governmental units in 2007. A programme to Salvador is under discussion. Although there has been a tremendous effort to expand ROP programmes, still a great number of preterm babies born in Brazil do not have the opportunity of treatment. Most programmes are funded by NGOs and there is no strategic plan from Ministry of Health so far.

Diabetic Retinopathy
It is estimated that 10,294, 200 people are diabetic in Brazil and that 6-10% will require laser treatment for diabetic retinopathy (RD).

Ministry of Health has changed the routine regarding eye care and all procedures require much more paper work. Surgery is limited to 0.05% of total population which is clearly not enough. Patients from other municipalities can only have surgery if both secretaries of health have an agreement; new codes were implemented in January 2006, which will require some time so they can be correctly incorporated by all users. The National Health ID card is required if the patient needs surgery, but this card is not implemented in all units. Some previously approved exams important to the RD diagnosis are no longer covered. The State Committees (members from State Secretary of Health and CBO) that supervised the campaigns were extinguished.
Refractive Error

Research
The preliminary results of a Refractive Error Study in Children (RESC) done in São Paulo were presented. Cross-sectional observational study performed in school age children (11-14yo) in 9 governmental schools attending a low income population. There were examined 2,378 children (86.2% of total sample). Six percent of examined children were wearing glasses (142). Another study performed in 5 high income private schools in São Paulo found 20.1% of children wearing glasses. Possible reasons for this difference will be explored.

SUCCESS IN RELATION TO THE INTENDED OUTCOMES

- Very good programmes/research projects were presented
- All important groups in prevention of blindness attended the meeting
- There were defined writers and coordinators for each chapter of the CBO CEH Manual

Process to Write the CBO CEH Manual (see attached)
- For each chapter there will be 1 coordinator and 1-5 writers.
- Any collaborator can send ideas to the coordinator by January 15.
- The coordinator will define responsibilities among writers and will send first draft to be revised by all writers by February 15.
- Coordinator to send revised Chapter to Celia and Andrea by March 30.
- Manual to be presented to CBO by April 2007
- A CEH course based on the Manual will be given by and to faculty: Campinas, August 2007

PLANNED FOLLOW UP

- To present the report of the II CEH Workshop to CBO – Dec 15, 2006
- To present the CBO CEH Manual manuscript to CBO teaching committee – March 2007
- To train a second Brazilian ophthalmologist in CEH
- To organize the 5 day CEH course given by Brazilian faculty in Campinas, August 2007
- To plan the 2 CEH courses for residency programmes in Brazil – 1 for the North/Northeast regions (given by Fundação Altino Ventura) and the other for South/Southeast and Centre-east regions (would be given by different institutions in the region) to be given in 2008
- CBM will provide scholarships to cover residents’ expenses to attend the course.
# BRAZILIAN COMMUNITY EYE HEALTH COURSE FOR RESIDENTS
## CURRICULUM PROPOSALS

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<td>2</td>
<td>Basic epidemiology and statistics</td>
<td>Research methodology</td>
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<td>3</td>
<td>Assessing diseases in communities</td>
<td>Assessing resources Principles of planning</td>
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<td>4</td>
<td>Disease control strategies</td>
<td>Disease control strategies</td>
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<td>Communication and advocacy</td>
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## SESSION ONE
### LEADERSHIP/PROGRAMME OPERATIONAL MANAGEMENT

**OBJECTIVES:**
1. To have an understanding of the principles of operational management of a Vision 2020 programme.

**TOPICS TO BE COVERED:**
1. Leadership concepts: mission, task force, empowerment
3. Management information systems.
4. Services marketing and demand generation.
5. Quality management.
6. Change management.
7. Proposal writing.
8. Material resource management.

## SESSION TWO
### PROGRAMME HUMAN RESOURCE MANAGEMENT

**OBJECTIVES:**
1. To have an understanding of the principles of management of human resources for a Vision 2020 programme.
2. To have an understanding of the principles of financial management of a Vision 2020 programme.

**TOPICS TO BE COVERED:**
1. Leadership.
2. Teamwork.
3. V2020 recommendations for human resources; numbers, task analysis and job descriptions.
4. Overview of V2020 programme funding in Brazil.
5. Costs of cataract services.
SESSION THREE: BASIC EPIDEMIOLOGY + STATISTICS

OBJECTIVES:
1. To have an understanding of basic epidemiology.
2. To have an understanding of basic statistics.

TOPICS TO BE INCLUDED:
1. Definition of epidemiology; disease determinants, disease distribution, disease control (primary, secondary, tertiary prevention).
2. Demographics; classification, definitions, population pyramids, population distributions, population characteristics.
3. Health indicators; mortality rates, national indicators, WHO indicators.
4. Disease magnitude; prevalence, incidence.
5. Socio economic development and health services availability.
7. Social, cultural, and economic determinants of disease.
8. Proportions and rates.
10. Screening
11. Surveillance

SESSION FOUR: RESEARCH METHODOLOGIES

OBJECTIVES:
1. To have an understanding of the principles of research methodology.

TOPICS TO BE COVERED:
1. Delineating research questions
2. Establishing aims and objectives
3. Study designs.
4. Literature search; key words, pubmed.
5. Protocol structure.
7. Bias and confounding.
8. Research ethics.
9. Questionnaires.
10. Data analysis.
11. Reporting results, writing papers.

SESSION FIVE: ASSESSING DISEASES IN THE COMMUNITY

OBJECTIVES:
1. To have an understanding of the assessment of the burden of eye disease in the district.

TOPICS TO BE COVERED:
1. WHO and other definitions of low vision and blindness.
2. Magnitude of low vision and blindness; global, Latin America, Brazil; trends over time; blind person years.
3. Causes of low vision and blindness; global, Latin America, Brazil.
4. Research tools; rapid assessment of avoidable blindness (RAAB).

SESSION FIVE: ASSESSING RESOURCES (2 HOURS)

OBJECTIVES:
1. To have an understanding of how to assess the resources available.
2. To have an understanding of how to assess the optimal use of the resources according to the needs in the community.

TOPICS TO BE COVERED:
1. Primary level human resources – manager, health promoter, health agent, health monitor / auditor / evaluator; numbers available, numbers needed.
2. Secondary level human resources – general ophthalmologist, nurse, ophthalmic assistant; numbers available, numbers needed.
3. Tertiary level human resources – manager, sub specialty ophthalmologist, sub specialty nurse, ophthalmic technician; numbers available, numbers needed.
4. Facilities – Primary level centres, secondary level hospitals, tertiary level hospitals.
5. Material resources (hard) – instruments and equipment for OPD + OR, transport.
6. Material resources (soft) – medications, surgery consumables, glasses.
7. Financial resources – public / government, private, NGO.
8. Management – capacity, local and federal health laws, public health system, private health system.
9. Health systems; structure and function of district health services, referral networks; SUS.
10. Present eye care activities.
11. Assessing output ? here

SESSION SIX: PRINCIPLES OF PLANNING

OBJECTIVES:
1. To have an understanding of the principles of planning a Vision 2020 programme.

TOPICS TO BE COVERED:
1. Here-there concept.
2. Planning spiral.
3. Steps in planning; situational analysis, aim, objectives, activities, timetable, budget; monitoring, evaluation.
4. Planning template.
5. Short, medium, long term plans; operational plans, strategic plans.

SESSION SEVEN: DISEASE CONTROL STRATEGIES

Cataract
Refractive error
Diabetic retinopathy
Childhood blindness – ROP, cataract
Low vision
Glaucoma
Trachoma.

CATARACT
OBJECTIVES:
1. To have an understanding of the strategies for the control of cataract blindness.
2. To be able to plan and manage a cataract programme.

TOPICS TO BE COVERED:
1. Definitions, case selection.
2. Prevalence and incidence.
3. Barriers to cataract surgery.
4. Cataract case finding.
5. RACS.
6. Infrastructure required.
7. Human resources required.
8. Cataract surgery rate
9. Outcome of cataract surgery and causes of poor outcomes.
10. Cataract surgery coverage.
11. Cataract surgery capacity.
12. Cataract surgery costs, funding.
13. Appropriate technology / surgery; criteria for surgery.
14. Refractive services and management of other diseases after surgery
15. Improving cataract services.
16. Monitoring of cataract services.

REFRACTIVE ERROR
OBJECTIVES:
1. To have an understanding of the strategies for the control of visual impairment due to refractive error.
2. To be able to plan and manage a refractive error programme.

TOPICS TO BE COVERED:
1. Definitions; clinical overview.
2. Magnitude; age groups.
3. Infrastructure required; auto refractors.
4. Human resources required.
5. Access to services.
7. Provision of glasses, access to low cost glasses, guidelines for refractive corrections.
8. Collaboration with other programmes (eg adult literacy programme).
9. Monitoring; quality, quantity.

DIABETIC RETINOPATHY
OBJECTIVES:
1. To have an understanding of the strategies for the control of blindness due to diabetic retinopathy.
2. To be able to plan and manage a diabetic retinopathy programme.

TOPICS TO BE COVERED:
1. Clinical overview.
2. Classification.
3. Magnitude.
4. Primary, secondary, tertiary prevention.
5. Screening strategies; collaboration with endocrinologists; coverage.
6. Referral system; laser, vitreoretinal surgery, low vision.
7. Management; laser treatment, treatment guidelines.
8. Monitoring; quantitative, qualitative.
9. Costs of programme; access of funding, cost effectiveness.
10. (Upgrade of clinical training of residents, to recognize and classify diabetic retinopathy).

CHILDHOOD BLINDNESS
OBJECTIVES:
1. To have an understanding of the strategies for the control of childhood blindness.
2. To be able to plan and manage a childhood blindness programme.

TOPICS TO BE COVERED:
1. Definitions.
2. Magnitude of childhood blindness; global, Latin America, Brazil.
3. Causes of childhood blindness; global, Latin America, Brazil.
4. ROP clinical overview.
5. ROP management, primary prevention, screening and treatment guidelines.
6. ROP programme.
7. Paediatric cataract clinical overview.
8. Paediatric cataract management, primary prevention, screening and treatment guidelines.
9. Paediatric cataract programme.
10. Integration with low vision services; follow-up.
11. Infrastructure.
12. Human resources.

GLAUCOMA
OBJECTIVES:
1. To have an understanding of the strategies for the control of blindness due to glaucoma.
2. To be able to plan and manage a glaucoma programme.

TOPICS TO BE COVERED:
1. Clinical overview; diagnostic guidelines.
2. Epidemiology; magnitude, risk factors.
3. Case finding strategy.
4. Management; WHO recommendations.
5. Follow up.
LOW VISION

OBJECTIVES:
1. To have an understanding of low vision.
2. To be able to plan and manage a low vision programme.

TOPICS TO BE COVERED:
1. Definition.
2. Classification.
3. Causes.
5. Human resources; training of ophthalmologists, multi disciplinary team.
6. Low vision aids; access to low cost low vision aids.

TRACHOMA – suggest you drop this, as these are very packed sessions

OBJECTIVES:
1. To have an understanding of the strategies for the control of blindness due to trachoma.
2. To be able to plan and manage a trachoma programme.

TOPICS TO BE COVERED:
1. Clinical overview; magnitude, risk factors, clinical grading.
2. Human resources; training of local health agents.
3. Trachoma rapid assessment.
4. SAFE strategy; availability of azithromycin.

SESSION SIX COMMUNICATION AND ADVOCAY

GENERAL

1. Funding –
   a. IAPB NGOs (from ICEH).
   b. Local NGOs.
   c. Pharmaceutical companies.
   d. CBO.

   a. Evaluation of course participants –In session 10.
   b. ? Using a short answer written test.
   c. ? Using a test given at the start of the course and repeated at the end of the course. Could do this, but a lot of work – suggest you make it very simple

2. Training materials / resources –
   a. References / bibliography
   c. Power point presentations.
   d. Case studies, exercises.

3. Evaluation of the course –
   a. Using an evaluation form completed by the course participants.
4. Programme planned for 2007 + 2008 + 2009 –

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<tr>
<th>Item</th>
<th>Date For Completion</th>
<th>Person(s) Responsible</th>
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<tr>
<td>1. Report of the II CEH WS</td>
<td>Nov 30, 2006</td>
<td>Zin</td>
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<td>2. Present to CBO the programme with the hours</td>
<td>Dec 15, 2006</td>
<td>Arieta, Zin</td>
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<td>5. CEH course (faculty)</td>
<td>August, 2007</td>
<td>Campinas? Arieta</td>
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<td>6. 2 courses for residents FAV and UNIFESP?</td>
<td>2008</td>
<td>Ventura Nakanami/Scarpi</td>
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<td>7. Manual printed</td>
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<td>8. Include CEH in CBO Board exam</td>
<td>2009</td>
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## Tópicos

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<td>Leadership</td>
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