Community Eye Care in Western Sydney

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The challenge: disease prevalence

- **Glaucoma**
  - Prevalence 3.7% glaucoma in people aged 40+ years
  - i.e. estimate 14,000 people in Western Sydney region

- **Diabetic retinopathy (DR)**
  - NSW diabetes prevalence 9%
  - Western Sydney ‘diabetes hotspot’: 7-14% prevalence (i.e. 63,000-126,000 people)
  - ~35% diabetes will have some level of DR, i.e. >20,000-45,000 people
The challenge: health service access

- Optometrist clinically skilled to assess to Glaucoma and DR
- Regular ophthalmologist review is also needed
- Communication between providers (e.g. optometrist, GP, hospital)
- Public hospital ophthalmic services are in high demand
  - Long wait lists
  - Acute versus chronic disease management and preventative care
- Western Sydney
  - Services ~1 million population, plus patients from beyond boundaries
  - One major public Eye Clinic at Westmead Hospital
  - Patients/year: 3146 glaucoma; 6160 Med Ret & Diab Ret
  - Waitlists
  - Poor referrals quality
What do we need in service delivery?

• A model of care to:
  • Increase access and streamline services
  • Improve chronic eye disease management
  • Increase Eye clinic capacity
  • Reduce wait times
  • Integrate with existing clinic processes (including triage, patient notes)
  • Better use of resources
Models of Care: International solutions

• CHANGES (UK): Community and hospital allied network glaucoma evaluation scheme
  • Trained optometrists, virtual review >> 8% reduction hospital referral
• COGS (UK): Cambridge community Optometry Glaucoma Scheme
  • Trained optometrists, standard protocol, virtual review>> 49.5% patients discharged
• Manchester (UK): Referral refinement scheme
  • Trained optometrists complete referral criteria >> 40% reduction hospital referral
• Newmedica
  • Ophthalmologist virtual review>> 2.4% reduction in hospital review appointments
Models of care: Australian solutions

- IDEAs Van (QLD)
  - Mobile ophthalmology / Retinal screening
- Centre for Eye Health (NSW)
  - Collaborative Glaucoma management Clinic
- Lions Outback Vision (WA)
  - Tele-health and Outreach services
- Community Eye Care (Western Sydney)
  - ACI & WSLHD
What is Community Eye Care (C-EYE-C)?

• Collaborative care model (optometrists and ophthalmologists)

• Centrally coordinated by Westmead Eye clinic

• Standardised assessment/ equipment

• Low risk/ chronic eye disease

• New referrals and follow up patients

• Supported by Agency for Clinical Innovation (ACI)
C-EYE-C: Process for referral

1. **New GP/Optom referral**
   - Via Westmead Eye Clinic

2. **Triage of referral letter**
   - Not suitable for C-EYE-C

3. **Westmead Eye clinic**
   - Chronic patient follow up

4. **Suitable for C-EYE-C**

5. **Westmead Eye clinic**
   - Waitlist/appointment

6. **C-EYE-C assessment or follow up**
   - Blacktown/Parramatta

7. **Patient appointment booking**
   - Appointment letter and information mailed
   - Phone call/SMS to confirm appointment time and location details

8. **C-EYE-C Optoms sent a referral letter**
C-EYE-C: Patients not suitable

• Glaucoma
  • Unstable glaucoma
  • Complex ocular pathology/ secondary glaucoma (except for PXF or PDS)
  • Monocular patients
  • Visual field loss of ≥12dB or within 10 degrees of fixation
  • Target IOP <12mmHg

• Diabetes
  • Imminent risk of CSME or Proliferative DR

• Ineligible for Medicare (e.g. non-resident, Justice health)
C-EYE-C: Assessment process

**C-EYE-C appointment**
Optometrist completes:
- Assessment form
- OCT/ Photos/ HVF*
Optometrist recommends patient management plan* (*As per glaucoma and DR screening guidelines)

**Westmead C-EYE-C remote review**
Ophthalmologist:
- Reviews assessment
- Confirms diagnosis/ management plan

**Discharge local optoms /GP**
**C-EYE-C follow up review**
**Review at Westmead**

C-EYE-C assessment file transferred to Westmead patient records (EMR)
C-EYE-C: Proof of concept

• Trial period January-March 2017
• 241 patients assessed

• Monitoring:
  • Quality assurance/ safety
    • Patient attendance, optometrist assessment, receipt of files
    • Ophthalmologist review complete

• Evaluation:
  • Prospective clinical audit
    • Number of clinically appropriate referrals, Patient outcomes/ management
  • Processes
    • Logistics, communication, IT requirements
  • Patient experiences

• Extension of trial to Dec 2017
C-EYE-C: Team

• Blacktown clinic
  • Optometrist/technician: Joe and Shahe Nazarian
  • Supporting WSLHD Diabetes Initiative

• Parramatta clinic
  • Optometrists: Bendy Ng and Margaret Nguyen

• Westmead Eye Clinic
  • Ophthalmologists: A/Prof Gerald Liew (Reviewer), A/Prof Andrew White (Project lead)
  • Service Coordinator: Belinda Ford
C-EYE-C outcomes: Glaucoma assessment, n=162

Glaucoma diagnoses agreement = 69%

Optometrist assessment:
- Advanced Glaucoma: 19%
- Early Glaucoma suspect: 6%
- High risk suspect: 12%
- Low risk suspect: 12%
- Moderate glaucoma suspect: 7%
- Stable Early Glaucoma: 20%
- Stable moderate glaucoma: 24%

Ophthalmologist assessment:
- Advanced Glaucoma: 21%
- Early glaucoma suspect: 7%
- High risk suspect: 11%
- Low risk suspect: 19%
- Moderate glaucoma suspect: 25%
- Stable Early Glaucoma: 19%
- Stable moderate glaucoma: 11%
C-EYE-C outcomes: diabetes assessment, n=79

Dr diagnoses agreement = 81%

Optometrist assessment
- Mild NPDR: 28%
- Moderate NPDR: 4%
- No DR: 8%
- OCT Macular Oedema or CSME: 58%
- Proliferative DR: 2%

Ophthalmologist assessment
- Mild NPDR: 19%
- Moderate NPDR: 16%
- No DR: 10%
- OCT Macular Oedema or CSME: 49%
- Proliferative DR: 4%
- Unexplained vision loss, retinal detachment, rubotic glaucoma: 2%
C-EYE-C outcomes: Patient management plan

Optometrist assessment

- 12 month CEYEC: 48%
- 6 month CEYEC: 27%
- Discharge local optometrist: 14%
- Review at Westmead: 7%
- Urgent: 2%

Management agreement: 77%

Ophthalmologist assessment

- 12 month CEYEC: 52%
- 6 month CEYEC: 28%
- Discharge local optometrist: 14%
- Review at Westmead: 4%
- Urgent: 2%
C-EYE-C outcomes: Patient management plan

Management agreement = 77%
C-EYE-C outcomes: Patient management plan

Management agreement = 77%

Optometrist assessment:
- 12 month CEYEC: 48%
- 6 month CEYEC: 7%
- Discharge local optometrist: 14%
- Review at Westmead: 2%
- Urgent: 2%

Ophthalmologist assessment:
- 12 month CEYEC: 52%
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- Discharge local optometrist: 14%
- Review at Westmead: 2%
- Urgent: 28%

?? Original referral information quality
C-EYE-C Outcomes: Patient Exit survey

- Anonymous self-report survey, 20 respondents

- How would you rate the care you received in the CEYEC program?
  - 90% Very good, 10% good

- If asked about your experience of CEYEC, how would you respond?
  - 95% would speak highly

- Where would you prefer this type of appointment?
  - 55% CEYEC optometrist, 20% no preference, 25 % hospital

- Did you have confidence and trust in the CEYEC health professionals?
  - 85% Definitely, 15% To some extent
Questions?
Thank you

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