

All-Wales Contact Lens Service Proposal

A Review & Recommendations for Welsh Government



Report Date: 01 August 2025

Further to the Position Statement submitted alongside this document, the Welsh Optometric Committee (WOC) has conducted a comprehensive review of the provision of specialist contact lens services offered in Wales, identifying significant disparities, and proposing a unified All-Wales Contact Lens Service.

WOC feels that the suggestions outlined in this paper propose a robust and comprehensive service, bringing value to both patients and practitioners across the country.

WOC would like to thank all committee members who contributed to this work since inception, in particular Fran Lado, Optometrist, Cardiff and Vale University Health Board (CAVUHB), and Keith Williams, Hospital Contact Lens Optician, Betsi Cadwaladr University Health Board (BCUHB).

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Introduction:

- **Scope of the Review:** WOC has reviewed an appraisal from 2019 discussing inequities in the assessment, fitting, and supply of specialist contact lenses in Wales, particularly for patients with complex ocular conditions such as corneal ectasia and ocular disfigurement.
- **Background Issues:** Clinicians, patients, and health board managers have raised concerns about the lack of standardised services for clinically necessary contact lenses in Wales.
- **Current Service Provision:** Contact lens services in Wales are predominantly provided in secondary care, with significant regional variations in service provision, leading to inequities in access and costs for patients.

There is a lack of clear management and standardisation across localities, with patients facing unexpected costs and variations in service provision, exacerbating inequities in contact lens care.

WOC's findings highlight significant variations in contact lens service provision across different health boards in Wales, with some areas lacking any service at all.

- **Proposed Unified Service:** The WOC proposes a standardised All-Wales Contact Lens Service provided by collaboration between primary and secondary care practitioners to improve capacity in secondary care and enable local optometrists and contact lens opticians to provide care, aligning with the Welsh Government's long-term health plan. Training requirements for practitioners will require further scoping by Health Education and Improvement Wales (HEIW). Once adopted an All-Wales Contact Lens Service could easily be incorporated into Wales General Ophthalmic Services (WGOS) following tripartite negotiations between National Health Service (NHS) Wales, Welsh Government (WG) and Optometry Wales (OW).
- **WOC recognises that there will be significant implementation challenges around any contractual change or new service provision.** All primary and secondary care staff will require specific training (in consultation with other stakeholders, such as HEIW) and equipment to deliver any proposed services, with options for central procurement to ensure cost-effectiveness

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and standardisation. However, practitioners able to work within enhanced schemes have a wider range of opportunities and may a greater sense of fulfilment from their roles, an important consideration for workforce planning and stability.

Background:

Issues have previously been raised by clinicians, the voluntary sector, health board managers, and patients showing there to be no standardised service to provide clinically necessary contact lenses for complex ocular conditions such as corneal ectasia, high degrees of ametropia, therapeutic, and prosthetic needs. As such, many patients requiring specialist contact lenses are unable to access necessary services.

There are also several corneal conditions which require monitoring in secondary care and may sometimes require intervention, such as a corneal graft and corneal collagen cross-linking (CXL). Monitoring these conditions can take up significant secondary care capacity.

Clinically necessary or specialist contact lenses are required when normal vision cannot be obtained using spectacles (e.g., Ectasias such as keratoconus, pellucid marginal degeneration, post corneal graft (non-exhaustive)), or when the eye needs to be protected following injury, and for prosthetic and cosmetic purposes. Specialist contact lenses are distinct from those used to provide an alternative vision correction. Rationale for requiring clinically necessary contact lenses can be found in Appendix 1 & 2.

Keratoconus is a disease that affects the cornea, resulting in progressive thinning, scarring and distortion of the cornea. It accounts for a large proportion of specialist contact lens demand. As the disease progresses, normal vision may not be obtained with spectacles. Specialised contact lenses, typically rigid lenses, provide a smooth optical surface and thus 'normal vision' (Considered as better than 6/12 Snellen or 0.3 LogMAR) can usually be obtained. It is reported that between 74% and 90% of keratoconics rely on contact lenses for visual correction (Rabinowitz et al, 1998; Lass et al, 1990). This condition typically affects people in their teens and upwards and can progress rapidly with some patients requiring a corneal graft to achieve adequate visual acuity (Mohammadpour M, et al 2017). Even following a corneal graft, specialised contact lenses may still be required. There are several types of specialised contact lenses available depending on the stage of corneal disease.

Reported prevalence of keratoconus varies from around 54.4 per 100,000 people (Rabinowitz et al, 1998) to 265 cases per 100,000 (Godefrooij et al,

2017). That would lead to estimates of between 2,000-8,000 people in Wales living with keratoconus. It is difficult to quantify the prevalence of other conditions requiring clinical necessary contact lenses.

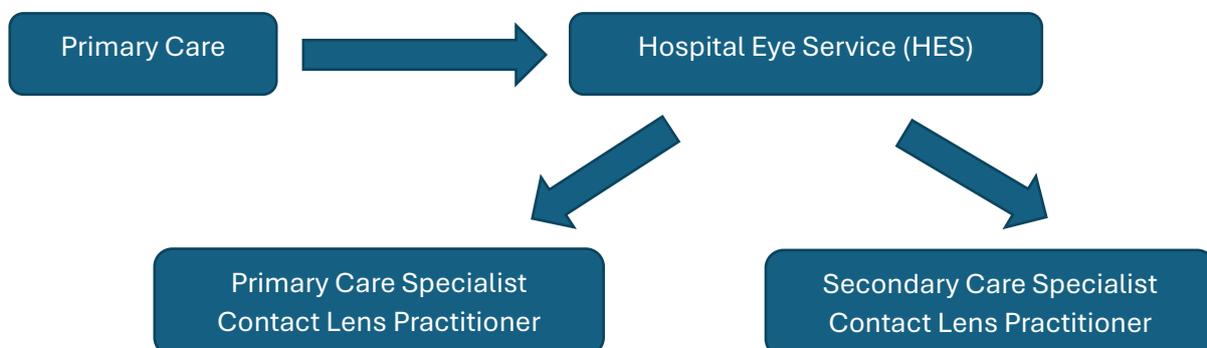
Corneal cross-linking (CXL) is a treatment that strengthens the cornea and helps to halt or slow the progression of keratoconus. Corneal cross-linking can help prevent the need for corneal transplantation (Godefrooij, D.A et al 2016). This surgery has recently become available in some areas of Wales and as a result, increased referrals to the Hospital Eye Service are expected from optometrists who may have previously managed this condition in practice. Greater demand will be placed on secondary care as more appointments are required for corneal cross-linking patients including consultations, as well as CXL surgery and annual follow ups. Patients usually still require contact lenses after CXL surgery (Mandathara PS et al., 2019), and so it may be pertinent to assume that post operative follow up could be performed by primary care optometrists and contact lens opticians in community practice.

Furthermore, there are a range of corneal conditions which at present require secondary care appointments to monitor progress once stable, for example Fuch's Dystrophy following corneal graft.

Keeping patients closer to home is a key aspiration of 'A Healthier Wales' (Government, A Healthier Wales, 2022). An introduction of an All-Wales Contact Lens Service could improve capacity in secondary care and enable patients to be seen by optometrists and contact lens opticians locally.

Analysis:

Current services in primary and secondary care in Wales



As outlined above, the majority of specialist contact lens services in Wales take place in secondary care, after referral from primary care optometry services

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into secondary care for initial diagnosis by a corneal consultant, who then refers onto a secondary care contact lens practitioner. In some health boards, specialist contact lens patients are seen by practitioners in primary care with an interest in specialist contact lenses, following a referral from the hospital eye service (HES).

There are a substantial number of patients who are entitled to NHS contact lenses but are currently managed by optometrists and contact lens opticians with the appropriate experience, through private arrangements. It is expected that an introduction of a potential All-Wales Contact Lens Service will very likely attract these patients, with an increase in numbers accessing the service. Appendix 2 outlines the groups of patients that may be expected to attend a specialist contact lens service.

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Current situation across the health boards:

- Patients are unable to access secondary care specialist contact lens services in a fair and equitable manner.
- There is no clear management of these services across localities.
- There is inequity of contact lens and contact lens care provision.
- There is a variation in expenditure on vouchers across hospitals even within individual health boards.
- Patients are often met with unexpected and varying bills in primary care when discharged from the HES with a hospital Voucher 12.
- Many consultant ophthalmologists are unaware of local service provision in primary care and patients are not getting the care to which they are entitled.
- Practitioners in primary care do not know which local practitioners currently provide specialist contact lens services and what specialist contact lens service is provided by local hospitals.
- There is uncertainty amongst some practitioners and the HES regarding the use of HES Vouchers for contact lenses. NHS Wales suggests that patients should pay A Voucher 12 value per lens (NHS Wales Shared Services Partnership (NWSSP) NHS Wales, 2021), which has remained unchanged since 2021, however this is not implemented consistently in all regions.
- In some areas, patients are not being provided with the lenses that they need, either due to barriers of cost or lack of service provision.
- Primary care optometry delivering more contact lens services would reduce demand in secondary care and bring care closer to home. This supports the Welsh Government's long-term plan for the future of health and social care in Wales (A Healthier Wales, 2022).
- Greater numbers of optometrists and contact lens opticians with specialist qualifications and experience can monitor a wider range of conditions and provide care closer to home following the implementation of NHS Wales optometry contract reform WGOS services.

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There is a varied approach in each health board area with specialty contact lens fitting:

- Hospital only service
- Shared care service between HES and accredited primary care practices
- Primary care practitioner contracts with HES
- No service provision at all

Since October 2023 Welsh Government have introduced WGOS optometric contract reform. The reforms align optometry in Wales with pharmacy and dentistry, enabling appropriately trained practitioners the skill set to diagnose, treat, and manage more patients in a primary care setting. This in turn improves patient access to care closer to home and reduces the burden on stretched hospital eye services.

As contact lens fitting is a core competency for optometrists and contact lens opticians, an All-Wales unified contact lens service should be considered as a pertinent response to contract reform.

Collaborative meetings have taken place to collect data relating to current regional service provision and investigate resolutions to the disparities in the provision of services across Wales, to create a unified All-Wales service that is fair and equitable for patients, Health Boards and NHS Wales alike.

Current Service Provision:

Geographically NHS Wales uses seven health boards (Figures 1&2) which are responsible for providing all health care needs for residents in their region, including both primary and secondary care settings for ophthalmologic and optometric practitioners.

Regional variations in contact lens service provision are shown in Figure 3 and a summary of the WOC findings for each regional health board are discussed below.

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Figure 1. Health Board Map Courtesy of Welsh Orthopaedic Society

North Wales	Betsi Cadwaladr University Health Board (BCUHB)
Mid Wales	Powys Teaching Health Board (PTHB)
West Wales	Hywel Dda University Health Board (HDUHB)
South Wales	Swansea Bay University Health Board (SBUHB) Formerly Abertawe Bro Morgannwg University Health Board (ABMU). Cwm Taf Morgannwg University Health Board (CTMUHB) Cardiff & Vale University Health Board (CAVUHB)
South East Wales	Aneurin Bevan University Health Board (ABUHB)

Figure 2. Health Boards based on region.

Hospital only service:

- Cwm Taf Morgannwg University Health Board (South Wales region)
- Aneurin Bevan University Health Board (Southeast Wales region)

Hospital & shared care:

- Betsie Cadwaladr University Health Board (North Wales region)
- Hywel Dda University Health Board (West Wales region)

Primary Care contract with hospital:

- Swansea Bay University Health Board (South Wales region)

No service provision:

- Powys Teaching Health Board (Mid Wales region)
- Cardiff and Vale University Health Board (South Wales)

Figure 3. Contact lens service provision by region.

North Wales (BCUHB)

BCUHB is recorded as having a population of 688,201 (StatsWales, 2022), and is the largest health board in Wales. It has the most mature and consistent contact lens service in Wales, with a proven track record of success with a hospital-based contact lens service working alongside primary care practitioners offering shared care of contact lens patients. The process has been included in detail within this report.

There are two hospital ophthalmology eye departments in North Wales offering contact lens fitting for 9 sessions over 5 days per week, the centrally located Stanley Eye Unit at Abergele Hospital and Wrexham Maelor Hospital based in North East Wales. There are currently 21 shared care practices (BCUHB Contact Lens Department, 2024) working in collaboration with the hospital contact lens department.

All new referrals for complex fittings, whether from primary care practices or consultant ophthalmologists, are conducted by the lead contact lens practitioner at Abergele Hospital.

Once a patient referral is deemed suitable for HES-level contact lenses, patients are block booked for their first three appointments, one month apart:

1. Appointment 1 - Initial assessment for CL suitability
2. Appointment 2 - Collection of contact lenses with handling instruction
3. Appointment 3 – 1 Month follow up to assess CL compatibility.

Once fitting is deemed as successful and depending upon the complexity and/or lens type fitted, the patients will continue to receive contact lenses and follow aftercare either directly from Abergele Hospital or Wrexham Maelor Hospital. For patients with less complex needs the hospital clinician will refer to a shared care practitioner for follow up (Figure 4); The patient remains under the care of HES and as such the supply of lenses are ordered directly from the hospital admin team.

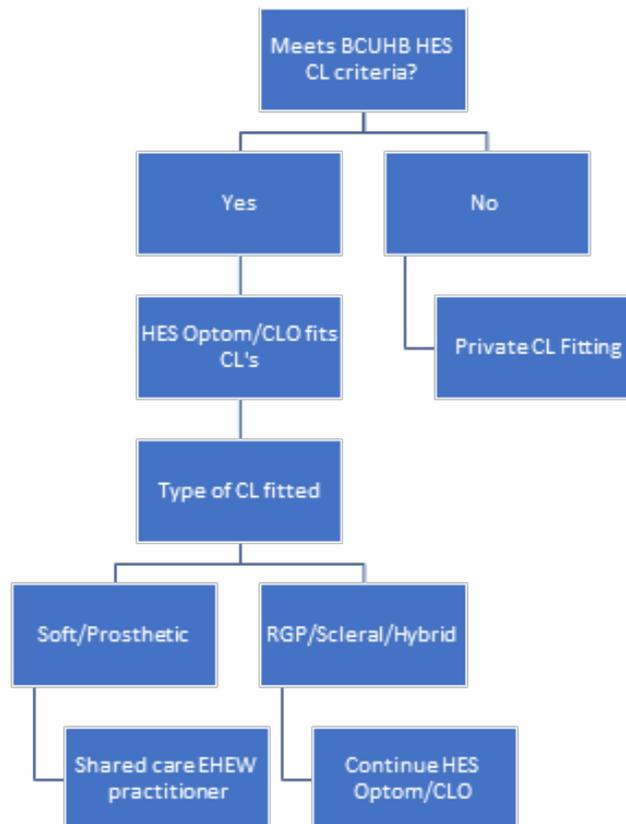


Figure 4. BCUHB Contact Lens (CL) Service

The list below shows the BCUHB HES eligibility criteria for contact lens fitting (Figure 5) and follows advice from the Association of Optometrists (Appendix 2). As this list may not be exhaustive there may be occasions where a patient's needs require the fitting of contact lenses that do not meet these criteria. In such cases, consultant approval would be necessary.

1. Corneal Irregularities: Albinism, aniridia, coloboma, ptosis
2. Myopia greater than -15.00D: Therapeutic applications
3. Hypermetropia greater than +10.00D: Ocular cosmetic disfigurement
4. Anisometropia of 5.00D or more: Facial or dermatological conditions
5. Astigmatism of 5.00D or more: Other consultation approval

Figure 5. BCUHB HES Contact Lens Eligibility

BCUHB provides fitting without charge to patients. The lenses offered include complex Rigid Glass Permeable (RGP), specialty soft including prosthetics, semi and full sclerals including impression lenses if necessary. The department also conducts collaborative appointments with the artificial eye service.

Contact lens supply is charged at (as of 2024) £58.15 per eye, per year except for zero powered lenses which are free of charge, this includes any refitting or prescription changes. It does not, however, cover additional lenses required due to loss or damage. An initial supply of solution/s are provided at no charge and reviewed on an individual needs basis.

There are currently 668 active patients receiving contact lens care, equivalent to 0.097% of the population; 602 from the hospital contact lens department and the remaining 66 patients from shared care practitioners (BCUHB Contact Lens Department, 2024).

Shared care practitioners receive payment from the hospital for follow up appointments to the equivalent value of a WGOS 2 Band 1.

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GIG
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Cymru
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Committee



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CYMRU
NHS
WALES

Bwrdd Iechyd Prifysgol
Betsi Cadwaladr
University Health Board

Specialist Contact Lens Service
HM Stanley Eye Unit
Abergele Hospital
Llanfair Road
Abergele
LL22 8DP
Form Reference: CLMP

Appendix A

Specialist Contact Lens Service
Plan for Management in Primary Care

Patient Details Hospital Number: _____

Name: _____ D.O.B. _____

Address: _____

Dear Optometrist / CLO,

It has been deemed clinically appropriate for the above named patient to receive their contact lens care in primary care. Their current wearing schedule is as follows:

Contact Lens Specification

	Lens Details	BC	TD	Sph	Cyl	Axis	VA
R							
L							

Other Information

Cleaning Solutions:			
Wearing Schedule:	Daily wear <input type="checkbox"/>	Aftercare every	Weeks / Months
	Extended wear <input type="checkbox"/>	Replacement lenses	Weeks / Months
Notes:			

Please continue their contact lens management as agreed in the documentation for this service.

Yours sincerely,

Contact Lens Clinician

Figure 6. BCUHB example of referral letter from secondary care BCUHB to primary care and patient management plan from them (BCUHB Contact Lens Department, 2024)

Specialist Contact Lens Service
Referral for Secondary Care Follow Up

<p>Patient Details</p> <p>Name: _____</p> <p>Hospital No: _____ D.o.B: _____</p> <p>Address: _____</p> <p>_____</p> <p>_____</p> <p>_____</p>	<p>Optometrist / CLO Details</p> <p>Name: _____</p> <p>GOC: _____</p> <p>Practice: _____</p> <p>_____</p> <p>_____</p> <p>_____</p>
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As part of the Specialist Contact Lens Service, I saw the above patient today and feel that follow up in the secondary care contact lens service is required for the following reason:

- The lens no longer fits well, and further fitting is required.
- There has been a change in the clinical state not requiring a consultant opinion.
- The patient has missed two consecutive appointments.
- Other: _____

Most recently issued lens(es):

	Lens Details	BC	TD	Sph	Cyl	Axis
R						
L						

Further details:

I recommend that the patient should be seen routinely / urgently (**delete as appropriate*).

Yours sincerely,

Figure 7. BCUHB example of primary care re-referral to secondary care for shared care patients. (BCUHB Contact Lens Department, 2024)

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Mid Wales (PTHB)

PTHB has a population of 133,891 (StatsWales, 2022). There is currently no contact lens service provided by PTHB. The ophthalmology departments refer patients to neighbouring health boards for contact lens care with the agreement of other health boards. There were no figures available for the numbers of patients referred out of area for contact lenses. It is believed the majority are seen at Shrewsbury Hospital and Hereford Hospital, with a few patients migrating to South Wales Hospital services (PTHB Optometric Advisor, 2024).

Based upon BCUHB activity data it would be reasonable to anticipate approximately 130 patients requiring contact lenses.

West Wales (H DUHB)

H DUHB has a population of 385,094 (StatsWales, 2022). A service which was formerly set up and run by an optometrist contractor based in Prince Phillip Hospital, has subsequently ceased approximately two years ago. Patients were not charged for fitting or supply of contact lenses; however, they were charged for their supply of solutions.

A new service is reported to be in the process of initial set up by the current specialty contact lens optometrist from Neath Port Talbot South Wales. New contact lens fits and refits will be conducted by the contact lens practitioner at Prince Phillip Hospital for 3 sessions per month along with follow up appointments being offered at primary care practices.

Patients will be required to contribute toward the cost of lenses and solutions; however, no pricing is currently declared (CL Specialty Optometrist, 2024)

No patient numbers are available for this health board, therefore based upon BCUHB activity data it is anticipated there to be approximately 374 patients requiring contact lenses.

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South Wales

SBUHB has a population of 383,440 (StatsWales, 2022). The contact lens service is provided centrally from Singleton Hospital, Swansea, by way of an agreement with an independent optometric practice within the hospital.

Ophthalmology issues an appropriate Voucher, which is given to the patient that can be taken to a practice of their choice, including the in-hospital practice. The practice invoices Singleton hospital for the cost of the lenses and chair time against the Voucher.

There is no patient charge for fitting or lenses. (WOC, 2023).

Based upon BCUHB activity data it is anticipated that there are 372 patients requiring contact lenses.

CTMUHB has a population of 444,037 (StatsWales, 2022). A hospital-based service currently exists at The Royal Glamorgan Hospital, Llantrisant.

The CL service offers all types of contact lenses ranging from specialist corneal RGP's, semi-scleral to impression scleral. They also fit soft printed or hand-painted prosthetic contact lenses. Fitting and a starter kit of CL solution are provided without charge to patients. However, scleral patients receive a General Practitioner (GP) prescription for ongoing solutions. The patient charge for contact lenses is £57.00 per lens (CTMUHB Optometrist, 2024).

Based upon BCUHB activity data it is anticipated there to be approximately 431 patients requiring contact lenses.

CAVUHB has a population of 505,581 (StatsWales, 2022). The contact lens service in Cardiff ceased in 2023 due to the resignation of the optometry team and has not yet been re-instated.

There is currently no information available where patients are being directed for their care. It is likely that care is being picked up in surrounding areas or patients must seek care privately via their local optometric practice.

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based upon BCUHB activity data it is anticipated there to be approximately 490 patients requiring contact lenses.

South East Wales (ABUHB)

ABUHB has a population of 591,396 (StatsWales, 2022). Contact lenses are provided via an optometry team based in Royal Gwent Hospital. There are no formal contact lens protocols / policies in situ at present (HES Optometrist ABUHB, 2024).

The initial fitting is funded without charge to patients. Solutions are not provided to patients; however, the hospital practitioner issues patient information on how to source them.

The numbers of patients requiring specialty contact lenses in ABUHB are skewed due to a number of patients choosing to receive their fitting and supply privately from local high street optometry practices. Also, some patients requiring corneal collagen cross linking are referred directly to the cross-border Bristol Eye Hospital. It is reported that many of these patients are then fitted with lenses out of area.

The current number of hospital contact lens patients is 164 (HES Optometrist ABUHB, 2024). However, as this figure is likely skewed, based upon BCUHB activity data it is anticipated there to be approximately 574 patients requiring contact lenses.

Summary of Findings

As the details above show, there continues to be a varied provision for fitting and supply of specialty contact lenses over Wales as a whole. Figure 8 shows the likely amount of active contact lens wearers in secondary care contact lens services.

North Wales

Betsi Cadwaladr University Health Board

- Total population: 688,201
- Active contact lens wearers: 688

Mid Wales

Powys Teaching Health Board

- Total population: 133,891
- Active contact lens wearers: 130

West Wales

Hywel Dda University Health Board

- Total population: 385,094
- Active contact lens wearers: 374

South Wales

Swansea Bay University Health Board

- Total population: 383,440
- Active contact lens wearers: 372

Cwm Taf Morgannwg University Health Board

- Total population: 444,037
- Active contact lens wearers: 431

Cardiff and Vale University Health Board

- Total population: 505,581
- Active contact lens wearers: 490

Southeast Wales

Aneurin Bevan University Health Board

- Total population: 591,396
- Active contact lens wearers: 574

Total Population: 3,131,640

Total active contact lens wearers: 3,039

Figure 8. Total Active Secondary Care CL Wearers based on population.

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Based upon extrapolation of BCUHB figure of 0.097% of population as active secondary care contact lens wearers, this gives a figure of 3,039 active contact lens patients for a population of 3,131,640 in Wales.

Figure 9 below shows the estimated total number of new-referral contact lens patients and follow up patients anticipated in a year into secondary care. These figures are based upon the live data from BCUHB and extrapolated for each region. The figures are based upon a percentage of base contact lens patients in a 45-week year to take into account staff holidays and bank holidays.

Betsi Cadwaladr University Health Board

- Number of Active Contact Lens Patients (Based on population):
 - 668
- Current No of CLs Clinic sessions:
 - 3 New referral p/w (Avg 6 Px p/w)
 - 6 Follow up p/w (Avg 30 Px p/w)
 - Equivalent = 9 sessions p/w
- Estimated total number of new letter appointments required in a year:
 - 270 (Based on 45-week year = 40% of Px base)
- Estimated number of follow-up appointments required in a year:
 - 1350 (Based on 45-week year = 200% of Px base)

Powys Teaching Health Board

- Number of Active Contact Lens Patients (Based on population):
 - 130
- Current No of CLs Clinic sessions:
 - N/A
- Estimated total number of new letter appointments required in a year:
 - 52
- Estimated number of follow-up appointments required in a year:
 - 260

Hywel Dda University Health Board

- Number of Active Contact Lens Patients (Based on population):
 - 374
- Current No of CLs Clinic sessions:
 - N/A
- Estimated total number of new letter appointments required in a year:

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- 150
- Estimated number of follow-up appointments required in a year:
 - 748

Swansea Bay University Health Board

- Number of Active Contact Lens Patients (Based on population):
 - 372
- Current No of CLs Clinic sessions:
 - N/A
- Estimated total number of new letter appointments required in a year:
 - 149
- Estimated number of follow-up appointments required in a year:
 - 744

Cwm Taf Morgannwg University Health Board

- Number of Active Contact Lens Patients (Based on population):
 - 431
- Current No of CLs Clinic sessions:
 - 2 New referral Px p/w
 - 8 follow up Px p/w
 - Equivalent =2 sessions p/w
- Estimated total number of new letter appointments required in a year:
 - 173
- Estimated number of follow-up appointments required in a year:
 - 862

Cardiff and Vale University Health Board

- Number of Active Contact Lens Patients (Based on population):
 - 490
- Current No of CLs Clinic sessions:
 - N/A
- Estimated total number of new letter appointments required in a year:
 - 196
- Estimated number of follow-up appointments required in a year:
 - 980

Aneurin Bevan University Health Board

- Number of Active Contact Lens Patients (Based on population):

- 574
- Current No of CLs Clinic sessions:
 - N/A
- Estimated total number of new letter appointments required in a year:
 - 230
- Estimated number of follow-up appointments required in a year:
 - 1,148

Average per Health Board

- Number of Active Contact Lens Patients (Based on population):
 - **434**
- Estimated total number of new letter appointments required in a year:
 - **136**
- Estimated number of follow-up appointments required in a year:
 - **868**

All Wales Total

- Number of Active Contact Lens Patients (Based on population):
 - **3,039**
- Estimated total number of new letter appointments required in a year:
 - **950**
- Estimated number of follow-up appointments required in a year:
 - **6,078**

Figure 9. Estimated number of new referral and follow up appointments in secondary care CL Depts. per annum

Options Appraisal

List 1. Options Appraisal from current service model

Option 1: Do nothing.

Strengths

- Service exists for some patients.

Weaknesses

- Patients will continue to receive a varied service at varied costs across Wales.
- Health Boards will continue to pay varying costs depending on local arrangements with optometrists and arrangements within the hospital service.
- Secondary care will experience an increased number of referrals for corneal cross-linking patients.

Option 2: Develop a standardised national service in primary care.

Accredited optometrists / contact lens opticians in primary care to fit and provide aftercare for specialist contact lenses (and contact lens solution/accessories). Remuneration to practitioners for lens fitting and aftercare is nationally consistent and delivered by NWSSP, and lenses are provided at hospital Voucher cost to the patient (except for patients exempt via means-tested benefits). Patients are managed under this system until case complexity requires referral to the Hospital Eye Service clinics when necessary.

Strengths:

- There exists a network of local practitioners in primary care who are currently delivering this service.
- Patients can be seen locally and will not have to travel to hospital.
- Patients can be seen in a timely manner without being subject to hospital waiting lists.
- Patients will receive uniform care and pay standardised prices irrespective of where they live in Wales, typically Voucher 12 Value.
- Practitioners will receive a set fee for fitting and aftercare for these patients which will align with WGOS levels.
- HEIW-developed training and accreditation of practitioners.

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- Patients will be more able to receive standardised advice and signposting (third sector support, employment support etc.)

Weaknesses

- This may be a more expensive service compared to hospital services and will require national agreement with the profession and health boards.
- There will be some administrative burden to oversee the delivery and governance of this system.
- Training or accreditation requirements to deliver the service would need to be agreed.
- Lens ordering and payment process will need to be agreed, with central procurement.
- Lenses ordered per patient may result in a higher cost compared to a procured service.
- There may be regions that lack service provision, and new training and accreditation requirements may be necessary.
- National agreement and training will be required to determine patient eligibility for clinically necessary contact lenses if referral to HES is not required to issue a WGOS Voucher 12.
- Practices will not receive payment for contact lenses compared to a privately funded service.

Option 3: Employ more hospital optometrists and contact lens opticians within hospital clinics.

Strengths

- Hospital optometrists/ contact lens opticians will already have the skills required to deliver this level of patient care.
- More experienced colleagues can pass on their skills to less experienced colleagues through in-house training.
- Staff costs are controlled through structured session allocations.
- Patients receive a specialist service, require less follow-ups and may need fewer lens changes on average, than a community-led service.

Weaknesses

- This may require some investment in equipment, may require additional clinic space (already limited), and will require more investment in sessional practitioner time.

- Patients will have to travel further to obtain this service compared to primary care.
- At least two health boards are struggling to staff their current service (and are looking to outsource services to primary care).
- A consultant appointment is usually required to diagnose eye condition and issue a (typically) Voucher 12 to start the pathway, which is an inefficient use of secondary care time.
- Patients must wait a long time for HES appointments and this working-age group take significant time off from their day jobs to come for these appointments.

Option 4: Develop local enhanced services and offer work to local optometrists/contact lens opticians to provide the lenses and care for a fee that reflects the total actual cost.

Strengths

- There exists a network of local practitioners (optometrists and contact lens opticians) in primary care who are currently delivering this service privately.
- Patients can be seen locally with high continuity of care and will not have to travel to hospital.
- Patients can be seen in a timely manner without being subject to hospital waiting lists.

Weaknesses

- This will likely be a more expensive service compared to a hospital service. Practices have overheads and charges for lenses, and appointments costs vary widely across different areas. It would be challenging to set nationally consistent remuneration.
- Practitioners use a variety of lenses, often due to experience and professional preference.
- Practitioners interested in providing the service are often unaware of how to gain training and expertise in this area as the service is so fragmented.

Recommendation from WOC to WG

To improve the delivery of specialist contact lens services and increase secondary care capacity, options for the provision of an All-Wales Specialist Contact Lens Service were considered.

The Welsh Optometric Committee agree that a single standardised strategy should be employed to create a unified All-Wales Contact Lens Service. It would be prudent to utilise registered WGOS practices along with hospital units already providing specialty contact lens care to achieve this, with primary and secondary care working collaboratively to deliver an integrated service.

Following the options appraisal, options 2 and 3 are recommended for progression with Figure 10 below showing a flow diagram of the anticipated service.

Proposed NHS Wales All-Wales Contact Lens Service in primary care.

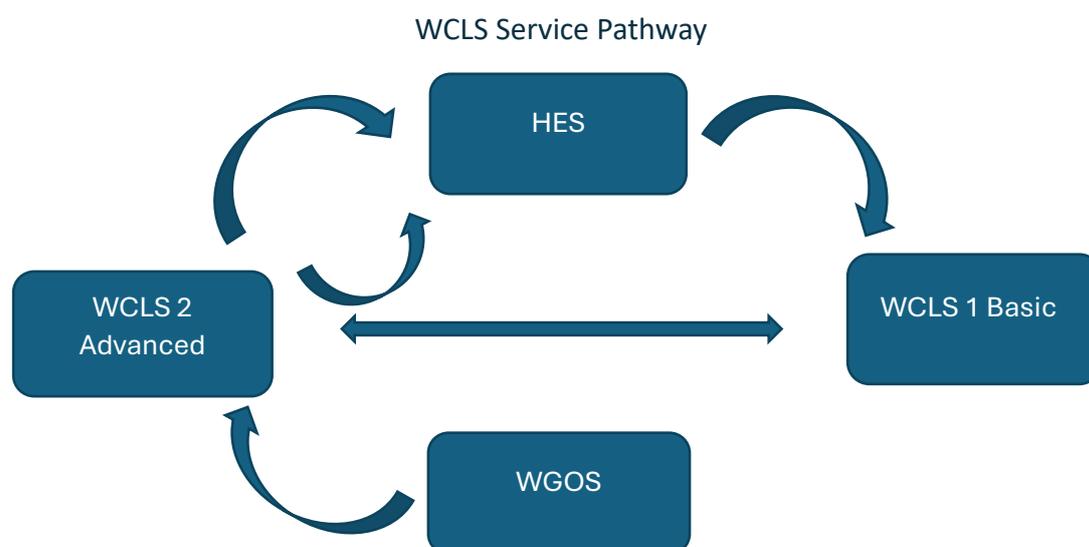


Figure 10. Proposed All-Wales Contact Lens Service Pathway.

Once a new service is running in primary care, patients currently seen in secondary care will be discharged at an appropriate time by the secondary care practitioner and seen in primary care, if deemed clinically appropriate. The aim will be to maintain patients in primary care for as long as is possible, with only the most complex cases continuing their care in a secondary care setting.

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The service will require alignment of lens fitting services, contact lens, and contact lens care products. To provide equity of service, secondary care will need to charge the patient the recommended optical Voucher (usually a Voucher 12) when a new contact lens is required (unless exempt).

List 2 below sets out potential details for the proposed All-Wales Specialist Contact Lens Service.

The fees for each aspect of the service will require tripartite negotiations between NHS Wales, the Welsh Government and Optometry Wales, and must take into account the levels of training required and the duration of appointment for each level.

There will be a degree of practitioner training required to ensure this service is delivered successfully, along with a consideration of grandfather rights for specialty contact lens practitioners already delivering current services.

Health Education and Information Wales (HEIW) will scope any training requirements once the proposal details have been finalised. The details of this can be seen in Appendix 5.

The current Voucher 12 patient contribution payment of £57.00 for each contact lens set by the Welsh Government is likely to be sufficient for a significant amount of lenses, however, some of the more specialist lenses may have a higher cost. For example, a scleral lens may cost in excess of £100.00 per lens or more (Menicon, 2024).

It would not be suitable for a practice to order and pay for lenses where the costs of the lenses exceed the remuneration. Some options for procurement of lenses are therefore outlined in Appendix 6.

Contact lenses are only one part of successful treatment and support for patients requiring specialist contact lenses, who may also suffer from significant visual impairment. To be successful, the WCLS service should be holistic in nature (as would be provided in secondary care).

WGOS supports an integrated approach to eye care services, pooling primary and secondary care time and resources.

2. Proposed All-Wales Contact Lens Service

Proposed Wales Contact Lens Service

Wales Contact Lens Service Level 1 (WCLS1): Aftercare service in primary care

An aftercare service could be provided by all WGOS accredited optometrists and contact lens opticians in Wales. For clarity, 'aftercare' for this service should involve checking that the lens is suitable for the patient (detailed description in Appendix 4). If the lens is deemed not suitable for the patient at the WCLS1 appointment, the patient should be redirected to WCLS2 for refit by a suitably trained practitioner.

As WGOS is an ideal platform for delivery of such services, it should be possible to deliver by all optometrists and contact lens opticians under the new minimum requirements. Appropriate fees would require tripartite negotiations between NHS Wales, WG and OW.

It is suggested that secondary care practitioners discharging patients into the service consider the patient to be suitable for this service and deemed to be stable therefore, a minimal risk of complication is expected.

For this reason, these appointments may be shorter in duration than more involved services.

Wales Contact Lens Service Level 2 (WCLS 2): Contact Lens Fitting & Corneal Referral Refinement (e.g., corneal collagen cross-linking)

This service will include:

- Lens fitting and aftercare service provided by WGOS accredited optometrists/contact lens opticians with an interest in specialty contact lens fitting and aftercare.
- Complex aftercare for clinically identified patients, including bandage contact lens patients for chronic conditions, as deemed suitable by the corneal specialist.
- Examination and recommendation/listing for corneal cross-linking and corneal cross-linking monitoring, using agreed and standardised equipment and measurement techniques/reporting via OpenEyes or equivalent electronic patient record.



There should be no limit to the number of practitioners able to offer this service.

Specialist Contact Lenses

A detailed description can be seen in Appendix 4. WCLS2 will require an additional level of training and grandfather rights may need to be considered for practitioners currently providing the service in secondary care, which HEIW could scope the training needs required once the service details have been agreed and finalised. It may also require provision of additional equipment to be funded by local health boards.

The duration of appointments will be longer.

Furthermore, follow-up appointments will be required to ensure fit success.

The frequency of these checks should be based purely on the eye care practitioner's professional judgement of the patient's clinical needs, the type of contact lens worn, the modality of wear and the practitioner's structured judgement of the risk of adverse incidents.

Specialised Corneal Referral Refinement

Patients who have been treated by the secondary care corneal team for corneal collagen cross-linking and stable corneal grafts who are deemed suitable for active monitoring of their condition would be suitable for a WCLS2.

The patient would require primary care corneal tomography, anterior segment slit lamp examination and best corrected visual acuity to assess corneal stability.

Wales Contact Lens Service Level 3 (WCLS3): Specialist Hospital Eye Service

A service for complex patients as clinically necessary, for both specialist contact lens fitting (e.g., Sclerals) and including those requiring corneal cross-linking and possible future development of the service to cover monitoring of other corneal conditions.

The patient would require corneal tomography, anterior segment slit lamp examination and best corrected visual acuity in order to assess corneal stability. Movement of corneal monitoring services and complex contact lens fitting into primary care would free up capacity for secondary care corneal services as well as hospital optometrists and contact lens opticians.

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Description shown in Appendix 4.



Appendix 1: The UK Department of Health (2006) sets out recommendations for the provision of clinically necessary contact lenses:

Department of Health (DOH) Section 2.7. Supply of, and patient charges for, clinically necessary contact lenses.

It is recognised that there are patients for whom contact lenses are clinically necessary. Only a hospital consultant ophthalmologist, or a person to whom the responsibility has been delegated, can decide whether a patient has a clinical need for contact lenses. There is a patient charge for clinically necessary contact lenses. The charge is reviewed annually and is payable in respect of each contact lens supplied. Where frequent change of contact lenses is clinically necessary the object should be to provide a supply of lenses lasting for about 6 months, so that thereafter the patient is only charged at the required interval.

DOH Section 2.8 Supply of contact lens care products.

Where the Hospital Eye Service has prescribed contact lenses on grounds of clinical necessity, the provision of contact lens care products (cleaning and sterilising solutions, and case) is regarded as an integral part of the therapy. Hospital Trusts should ensure that provision is made for contact lens care products to be made available to all patients for whom they have prescribed clinically necessary contact lenses. Patients should pay the normal prescription charge for each supply unless they are in an exempt category in respect of the supply of medicines or have a valid pre-payment certificate.

Where lenses are to be fitted/supplied by an optician outside the hospital or clinic, the Hospital Trust should ensure its arrangements with the optician cover the supply of care products over the life of the lenses.

DOH Section 2.9 Therapeutic and prosthetic contact lenses.

Plano powered lenses used as therapeutic bandages, occlusive and non-sighted prosthetic contact lenses are exempt from charges. Prosthetic lenses incorporating an optical correction are chargeable subject to the exemptions detailed in Annex 2 (DOH, 2006). People falling within the categories listed in Annex 2 (DOH, 2006) are entitled to help, through the NHS Voucher scheme, toward meeting the costs of their glasses or contact lenses. If the glasses or contact lenses cost more than the Voucher value, the patient will have to pay the difference.

Appendix 2: Advice from Association of Optometrists (AOP) regarding Clinically Necessary Contact Lenses

Available at: <https://www.aop.org.uk/advice-and-support/regulation/uk/hospital-supply-of-contact-lenses>

These notes are intended to assist practitioners when considering the clinical necessity of supplying contact lenses in a hospital setting. However, the notes are not meant to be prescriptive or exhaustive.

CLINICALLY NECESSARY CONTACT LENSES

Individual patients of hospital eye departments are eligible to be supplied with contact lenses under the NHS, where there is a clinical necessity.

Statutory NHS patient charges, including arrangements for the exemption or remission of charges will apply.

The Department of Health's guidance and any annual updates to optical charges should be referred to regarding the current patient's charges and exemption/remission from charges.

The cost of providing optical devices should also be considered by NHS commissioners.

Clinical necessity will normally be demonstrated when a contact lens is deemed, by the responsible ophthalmologist / hospital optometrist, as necessary to achieve best therapeutic, prosthetic, or visual function.

Subject to demonstrable clinical improvement (see notes below), clinical necessity would not normally be in doubt in the following circumstances:

Reduction in best corrected visual acuity secondary to:

1. Corneal Irregularities: Albinism, aniridia, coloboma, ptosis
2. Myopia greater than -15.00D: Therapeutic applications
3. Hypermetropia greater than +10.00D: Ocular cosmetic disfigurement
4. Anisometropia of 5.00D or more: Facial or dermatological conditions
5. Astigmatism of 5.00D or more: Other consultation approval

Advisory Notes Recommended by AOP:

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1. In all cases contact lenses should be prescribed to achieve maximum clinical benefit while placing the patient at minimum risk. Spectacles or other conservative management should always be considered.
2. Except in therapeutic (bandage) or prosthetic/cosmetic indications, contact lenses should achieve an improvement in visual function compared to spectacles. There should be either a measurable improvement in visual acuity, with the patient demonstrating improved visual function and/or an improvement in visual field with contact lenses, when compared to spectacles.
3. Patients with unilateral corneal irregularity frequently abandon contact lens wear.
4. Referrals for fitting contact lenses (fitting for psychological reasons) should be backed up by a report from a clinical or educational psychologist, or psychiatrist, and eligibility should be reviewed annually.
5. Referrals for contact lenses where the patient has severely limited fusional reserves, should be backed up by orthoptic and ophthalmological request following intolerance to spectacles.
6. Some conditions in children are likely to be amblyogenic if a child refuses to wear spectacles (or contact lenses).
7. These guidelines are based on the limited evidence available. We welcome a review following research into improved visual function with contact lenses for the correction of hyperopia.

Appendix 3: Options for equipment

Service: WCLS 1

- Equipment:
 - Silt Lamp
 - Keratometer
- Provision:
 - To be provided by a practitioner as minimum standard for all practitioners

Service: WCLS 2

- Equipment:
 - Silt Lamp
 - Keratometer
- Provision:
 - To be provided by practitioner as minimum standard for all practitioners
- Equipment:
 - Contact Lens Fitting Sets
- Provision:
 - To be provided by practitioner wishing to take part in WCLS2
- Equipment:
 - Corneal tomographer (*Essential for monitoring services*) - Tomographer recommended to be capable of assessing anterior/posterior corneal power; Corneal thickness (Including thinnest pachymetry) and maximum corneal power (K-Max).
- Provision:
 - To be provided by practitioner wishing to take part in WCLS2

Service: WCLS3

- Equipment:
 - Silt Lamp
 - Keratometer
- Provision:
 - To be provided by Health Board (HB) as currently stands
- Equipment:
 - Contact Lens Fitting Sets
- Provision:
 - To be provided by HB as currently stands

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- Equipment:
 - Corneal tomographer (*Essential for monitoring services*) - Tomographer recommended to be capable of assessing anterior/posterior corneal power; Corneal thickness (Including thinnest pachymetry) and maximum corneal power (K-Max).
- Provision:
 - To be provided by HB as currently stands
- Equipment:
 - Anterior Segment OCT
- Provision:
 - To be provided by the HB

Appendix 4: Proposed details for national service in primary care

Wales Contact Lens Service Level 1 (WCLS1): Aftercare service in primary care provided by any WGOS optometrist or contact lens optician in Wales.

Referral

All specialist contact lens patients are currently seen through the HES/commissioned service for their aftercare. WCLS1 would enable clinically determined patients to access their aftercare within primary care with appropriate information via a referral and patient management plan from the HES.

Referral to WCLS2 where refit or further expertise required.

The frequency of these checks should be based purely on the eye care practitioner's professional judgement of the patient's clinical needs, the type of contact lens worn, the modality of wear and the practitioner's structured judgement of the risk of adverse incidents.

Contact Lens Ordering

Where required, contact lenses are ordered and invoiced centrally. Contact lens replacement should be based upon the clinical needs of the individual. Most commonly this is 3- or 6-monthly for soft contact lenses, and annually for rigid lenses.

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All patients should pay the prevailing NHS rate of £57.00 for a contact lens unless exempt, in line with national eligibility guidance. The patients must pay for contact lens solutions. Payment should also be taken for contact lenses if one is lost, or a spare is required.

Practitioner Payments

To be discussed at tripartite negotiations between NHS Wales, WG and OW

Equipment

No additional equipment is required (Appendix 3).

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Wales Contact Lens Service Level 2 (WCLS 2): Fitting Service in Primary Care, Specialised Aftercare Service, Corneal Cross-Linking Referral Refinement and Monitoring

Specialist Contact Lenses

Referral

Referral from HES to primary care or from WGOS. Referral back to HES as required (See BCUHB example Figure 6-7).

Several appointments may be required to provide a successful contact lens fit for a specialised complex contact lenses and this is reflected in the primary care fitting fee and follow up fee, as is currently the case for most private specialist contact lens fitting fees. Aftercare appointments are also necessary at clinically agreed intervals to check whether the lens is fitting satisfactorily as the cornea of a patient with Keratoconus will progressively steepen over time. A new fitting is often required annually for Keratoconic patients. It should be mentioned that some patients may need to be seen every 3 months, others may need to be seen less frequently.

Contact Lens Ordering

This service aims to avoid secondary care visits by allowing WCLS2 practitioners to determine whether a patient is eligible for a Voucher 12. A Voucher 12 is to be issued by WCLS2 practitioners (Voucher 12 £57.00). This responsibility will need to be delegated by a consultant ophthalmologist.

Lens ordering to be discussed as part of implementation phase of this service. The patients are required to pay for contact lenses unless exempt in line with guidance. The patients are also required to pay for contact lens solutions. Cost to patient for lost or damage lenses needs to be considered and discussed further.

Practitioner Payments

To be discussed at tripartite negotiations between NHS Wales, WG and OW

Equipment

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Additional equipment will be required for this service and is expected to be provided by the practitioner (Appendix 3).

Corneal Cross-Linking Referral Refinement

Referral

Referral from WCLS1 and WGOS1. Referral to secondary care.

It is likely that at least two appointments will be necessary for corneal cross-linking, to determine whether or not a patient is suitable and whether there is progression of the condition. The patient is then referred on to secondary care, as required.

Expected number of patients 770 (see below).

Payments

To be discussed at tripartite negotiations between NHS Wales, WG and OW.

Equipment

Again, additional equipment will be required for this service (Appendix 3). To be provided by the practice/practitioner.

The numbers of existing patients for corneal cross-linking can be seen in the table below.

Health Board	No. of patients
ABUHB	*110
HDUHB	*110
PTHB	*110
BCUHB	*110
CTMUHB	41
CVUHB	*110
SBUHB	179
Average per HB	110
Total	770

Information provided by SBUHB (2022) and CTMUHB (2022).

*No figure available and therefore averaged.

Corneal Cross-Linking Monitoring

Referral

Referral from secondary care to WCLS2.

An appointment for monitoring of corneal cross-linking patients will usually be required annually, sometimes every 6 months.

Expected number of patients 770 (see above).

Payments

To be discussed at tripartite negotiations between NHS Wales, WG and OW.

Equipment

Again, additional equipment will be required for this service (Appendix 3). To be provided by the practice/practitioner.

Wales Contact Lens Service Level 3 (WCLS3): Specialist Hospital Eye Service

Referral

Referral to secondary care from WGOS or WCLS2.

Increased Practitioner capacity will be available to see more complex patients.

No additional training, above the current level of training, will be required for specialist practitioners delivering the service in secondary care.

Payments

No payments taken. From health board budget.

Equipment

Additional equipment required, provided by health board (Appendix 3).

Appendix 5: Training Considerations

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Level: Current

Training

Contact lens fitting and aftercare, of both soft and rigid lenses, form part of the core competencies for all optometrists.

Specialist contact lens practitioners also undergo in house training in secondary care and hands on experience. Both are essential to the specialist contact lens service. In addition, specialist contact lens practitioners may also receive training from manufacturers who supply specialist contact lenses and may attend additional courses, such as the course delivered by specialty contact lens practitioners from Moorfields Eye Hospital regarding specialist lenses including scleral lenses and ocular impressions.

Level: Current in BCUHB for shared care practitioners

Training

Ultravision training was used in BCUHB to provide primary care optometrists / Contact lens opticians with the skills required to perform specialist contact lens aftercares for shared care soft contact lens wearers.

Level: WCLS 1

Training

It is proposed that all practitioners can deliver this service as a minimum requirement under a new pan-WGOS accredited service. This training is equivalent to the level required for WGOS2. It would be appropriate for HEIW to assess any training requirements when the proposal details are finalised.

Level: WCLS 2

Training

Training as required for WCLS 1 as well as additional training. HEIW will assess any training requirements when the proposal details are finalised and may consider placements in secondary care to gain experience within specialist contact lens clinics and experience seeing corneal cases requiring contact lenses. The level of this training could be considered similar or equivalent to the training required for WGOS 4.



It is important that practitioners are also trained with an understanding of legislation and specialist contact lens eligibility criteria.

Level: WCLS 3

Training

As above for WCLS2 specialist contact lens practitioners or evidence of prior learning i.e. hospital optometrists/contact lens optician working in specialist contact lens clinic.

Appendix 6: Options for Contact Lens Procurement

Option 1: Practice to take payment and order lenses.

Strengths

- Ease of payment and ordering.
- No additional administration from Health Boards required.
- Could potentially be more attractive for practices.

Weaknesses

- Certain lenses may be more expensive to order and would then result in practice potentially being out of pocket for these.
- Potentially could result in less choice for patients as practitioners would be inclined to order lenses that are a cheaper cost price.

Option 2: Central Procurement

Strengths

- Previous experience and success with LVSW – could be based on a system such as this.
- Economies of scale could potentially reduce costs.
- NWSSP could facilitate procurement.
- No restriction on type of lenses required however may need to produce a list of preferred lenses to reduce variation and cost.

Weaknesses

- Requires additional administration to organise.
- Potentially less attractive for practices if no payment for contact lenses received.
- May potentially be a more convoluted process and more complex to obtain payment from patient. This is to be organised via the Health Board/NWSSP.

Option 3: Health Board Procurement

Strengths

- Practice takes payment for lenses, lenses ordered by secondary care contact lens service, and practices invoiced for Voucher payment.
- No significant change from current process of procurement.
- No restriction on type of lenses required, however HBs may need to produce a list of preferred lenses to reduce variation and cost.

Weaknesses

- Some additional administration.
- Potentially less attractive for practices if no payment for contact lenses received.
- More complex to obtain payment from patient.

References

- al, A. B. (2019). *Appraisal of CL Services in Wales*. Cardiff: WOC.
- BCUHB Contact Lens Department. (2024). Contact Lens Service Audit.
- CL Specialty Optometrist. (2024, April).
- CTMUHB HES Optom. (2024, May 1). Contact lens service at CTMUHB.
- CTMUHB Optometrist. (2024, May 16). Contact Lens Service Update.
- Daniel A. Godefrooij, R. G. (2016). Nationwide reduction in the number of corneal transplantations for keratoconus following the implementation of cross-linking. *Acta Ophthalmologica*, 675-678.
- Godefrooij DA, d. W. (2017). *Age-specific Incidence and Prevalence of Keratoconus: A Nationwide Registration Study*. Retrieved 09 2024, from 10.1016/j.ajo.2016.12.015. Epub 2016 Dec 28. PMID: 28039037
- Government, W. (2021, September 01). *NWSSP NHS Wales*. Retrieved from <https://nwssp.nhs.wales/ourservices/primary-care-services/primary-care-services-documents/ophthalmic-services-docs/letter-nhs-sight-test-fee-voucher-values-from-1-april-2021-incl-cet-claim-form/>
- Government, W. (2022, November 8). *A Healthier Wales*. Retrieved from <https://www.gov.wales/healthier-wales-long-term-plan-health-and-social-care>
- HES Optometrist ABUHB. (2024, May 16). Contact Lens Service Enquiry.
- Menicon. (2024). Speciality Hospital Contact Lens Price List. Northampton.
- Noel A. Brennan, Y. M. (2021). Efficacy in myopia control. *Progress in Retinal and Eye Research*, Volume 83.
- PTHB Optometric Advisor. (2024, April 22).
- StatsWales. (2022, August). *StatsWales*. Retrieved May 2024, from Population estimates by local health boards and age: <https://statswales.gov.wales/Catalogue/Population-and-Migration/Population/Estimates/Local-Health-Boards/populationestimates-by-lhb-age>

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Welsh Optometric
Committee

University, C. (2024, 09 18). *Anterior Segment - Clinical Examination and Management*. Retrieved 09 2024, from Cardiff University School of Optometry and Vision Sciences:

<https://www.cardiff.ac.uk/optometry-vision-sciences/courses/postgraduate-taught/modules/opt027-anterior-segment-clinical-examination-and-management>

University, C. (2024, 09 18). *OPT040 - Contact Lenses 1*. Retrieved 09 2024, from Cardiff University School of Optometry and Vision Sciences:

<https://www.cardiff.ac.uk/optometry-vision-sciences/courses/postgraduate-taught/modules/opt040-contact-lenses-1>

University, C. (2024, 09 18). *School of Optometry and Vision Sciences*.

Retrieved 09 2024, from OPT026: Cataract and Refractive Surgery:

<https://www.cardiff.ac.uk/optometry-vision-sciences/courses/postgraduate-taught/modules/opt026-cataract-and-refractive-surgery>

WOC. (2023). *Specialist Contact Lens Service Paper*. Cardiff.