***Dry Eye Guidelines for UHCW NHS Trust and CCG***

**This guideline has been modified for community optometrists to assist in identifying, grading, and advising on the management of dry eye disease. Initially advising non-pharmacological options and if necessary, eye drops / ointments in patients with levels 1 and 2. Level 3+ should be referred for specialist opinion and guidance.**

**Introduction**

The TFOS DEWS II report redefines dry eye as:

". . . a multifactorial disease of the ocular surface characterized by a loss of homeostasis of the tear film, and accompanied by ocular symptoms, in which tear film instability and hyperosmolarity, ocular surface inflammation and damage, and neurosensory abnormalities play etiological roles."

As Dry Eye Disease is a multifactorial disease, it also requires a variable treatment regime depending on the underling pathology, severity of clinical disease and its associated symptoms.

These guidelines are being produced to streamline a regime based on severity and to help the clinician make a stratified approach to treatments, rather than using passive memory and prescribing the commonly marketed or advertised medicine. Dry eye disease is becoming more prevalent and it is essential that there is cost-effective, efficacious treatment available for patients.

Change in practice with respect to expiry dates is also being introduced:

**Purpose of Guidance**

To revise and streamline the Trust wide and community wide usage of ocular lubricants used in treatment of DRY EYES.

**Who does it affect?**

*This Guidance Applies to:*

1. Patients with severe degrees of Dry Eyes.
2. Streamlines the Dry EYE treatment protocol based on severity of DRY EYES
3. Looks into the financial implication of dry eye products for UHCW and CCG.

**Summary**

*Summarise the key points of the guidance*

* Define Dry Eye Disease and accept its multifactorial causality
* Classify the Disease according to its severity
* Clinician to make a conscious effort to identify the severity of the disease
* Propose treatment regimens according to the disease severity
* Have a uniform treatment regime across the CCG and UHCW

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| **Definitions**  |
| ***DRY EYE*** *defined as* ". . . a multifactorial disease of the ocular surface characterized by a loss of homeostasis of the tear film, and accompanied by ocular symptoms, in which tear film instability and hyperosmolarity, ocular surface inflammation and damage, and neurosensory abnormalities play etiological roles."**Homeostasis** - describes a state of dynamic equilibrium in the body with respect to its various functions, and to the chemical composition of the fluids and tissuesADDE – Aqueous Deficient Dry Eyes EDE – Evaporative Dry Eyes MGD – Meibomian gland Dysfunction SSDE – Sjogren syndrome Dry Eye NSDE – Non Sjogren Dry EyeSDU – Single Dose UnitsPF – Preservative Free |
| **Guideline details**  |
| DISEASE SEVERITY LEVEL **The main three clinical signs are:*** Reduced tear break up time
* Increased tear osmolarity
* Ocular surface staining scores

Treatment recommendations are based on level of severity + OSDI Questionnaire **Level 1****BEFORE PRESRIBING ANY EYE DROPS PLEASE CONSIDER:****Measures which may be implemented to help reduce mild dry eye** * No treatment
* Use of hypoallergenic cosmetic products
* Increase water intake
* Environmental management (Use of Humidifiers)
* Psychological support
* Antihistamine Allergy drops
* Avoidance of oral drugs contributing to dry eyes if possible
* Self-management with OTC lubricants.

**Preserved Drops** * **Low viscosity** – **Hypromellose 0.3%** (Generic) 10ml

Manufacture In-use expiry 28 days * **Medium viscosity** - **Carbomer 980 0.2% gel** (Generic) 10g

 Manufacture In-use expiry 28 days **Preservative-free*** **Evolve Hypromellose** (Hypromellose 0.3%) 10ml multidose PF

Manufacture In-use expiry 3 months * **Evolve Carbomer** (Carbomer 980) 10g PF (for preservative allergy)

Manufacture In-use expiry 3 months  * **Cellusan light** (carmellose 0.5%) 10ml multidose PF

Manufacture In-use expiry 90 days  **LEVEL 2 (Level 1 +)****Additional measures which may be implemented to help reduce dry eye** * Unpreserved lubricant drops
* Seceretagogues
* Eye Gels
* Topical ocular steroids
* Eye Ointments
* Nutritional support (flaxseed/fatty acids)- Non formulary

**Preservative free unit dose** * **Celluvisc 0.5%** (Carmellose 0.5%) SDUs (short term use only)
* **Celluvisc 1%** (Carmellose 1%) SDUs (short term use only)

**Preservative free multidose*** **Cellusan light 0.5%** (Carmellose 0.5%) 10ml multidose PF

 Manufacturers In-use expiry 90 days* **Cellusan 1%** (Carmellose 1% ) 10ml multidose PF

Manufacturers In-use expiry 90 days* **Hydramed** (Sodium Hyaluronate 0.2%)10ml multidose PF

 Manufacturers In-use expiry 90 days **Lipid Formulation Drops** * **Systane Balance** (Lipid formulation) 10ml preserved

Manufacturers In-use expiry 6 months**Ointments*** **Xailin® Night** (Paraffin eye ointment, lanolin alcohols)

Manufacturers In-use expiry 60 days * **Hydramed Night** (retinol palmitate ,liquid paraffin, wool fat)

Manufacturers In-use expiry 90 days **LEVEL 3 and Above** **REFERRAL TO ANTERIOR SEGMENT CONSULTANTS FOR FURTHER MANAGEMENT IF ANY OF THE FOLLOWING TREATMENTS ARE REQUIRED (1-10)**1. Oral tetracyclines
2. Punctal plugs
3. Surgery
4. Punctal cautery
5. Oral anti-inflammatory
6. Topical acetylcysteine therapy
7. Contact lenses
8. Topical and Oral Ciclosporin
9. Other Systemic immunosuppression
10. Moisture goggles

**With Oil Preparations for Evaporative type Dry Eyes** * **EvoTears (**100% Perfluorohexyloctane) 3ml PF (280 drops)

Manufacturers In-use expiry 6 months **SPECIALIST CLINICS ONLY** * **Hylo-Dual** (Sodium Hyaluronate 0.05% and ectoin 2% ) 10ml multidose PF

Manufacturers In-use expiry 6 months  **SPECIALIST CLINICS ONLY*** **EyeZin XL** (HA 0.4% , levocarnitine, castor oil) 10ml multidose PF (contains phosphates)

Manufacturers In-use expiry 60 days  **SPECIALIST CLINICS ONLY** **Preservative free unit dose** * **Clinitas** (Sodium Hyaluronate 0.4%) SDUs (In-patients or short term use)

**SPECIALIST CLINICS ONLY** **Preservative free multidose*** **Hydramed Forte**  (Sodium Hyaluronate 0.4%) 10ml multidose PF

**SPECIALIST CLINICS ONLY** Manufacturers In-use expiry 90 days * **Thealoz DUO** (Sodium Hyaluronate 0.2% with Trehalose) 10ml multidose PF

 **SPECIALIST CLINICS ONLY** Manufacturers In-use expiry 90 days  * **VisuXL** (Sodium Hyaluronate 0.1% with Coenzyme Q10) 10ml multidose PF

**SPECIALIST CLINICS ONLY** for neurotrophic patients to support epi healing Manufacturers In-use expiry 60 days * **VisuXL gel** (cross linked Carmellose gel 0.4% with Coenzyme Q10 ) 10ml multidose PF

**SPECIALIST CLINICS ONLY** Manufacturers In-use expiry 6 months **Preserved Drops*** **Ilube 5%** (Acetylcysteine) 10 ml with dropper **(Specialist Only not for GP prescribing)**

**SPECIALIST CLINICS ONLY**Manufacturers In-use expiry 28 days   |

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| **Guideline References** |
| **CEBIS Evidence Summary** (NICE Guidelines, and other National Guidance. Other national guidance may include those issued by speciality college, patient safety agency, monitoring agencies, or other external governing bodies ) |
| *TFOS DEWS II REPORT* **References:** *[1] Nelson JD, Craig JP, Akpek E, Azar DT, Belmonte C, Bron AJ, et al. TFOS DEWS II introduction. Ocul Surf 2017;15:269e75.* *[2] Craig JP, Nichols KK, Akpek EK, Caffery B, Dua HS, Joo CK, et al. TFOS DEWS II definition and classification report. Ocul Surf 2017;15:276e83.**[3] Stapleton F, Alves M, Bunya VY, Jalbert I, Lekhanont K, Malet F, et al. TFOS DEWS II epidemiology report. Ocul Surf 2017;15:334e65.**[4] 2007 TFOS report of the international dry eye workshop (DEWS). Ocul Surf 2007:65e204.* *[5] Sullivan DA, Rocha EM, Aragona P, Clayton JA, Ding J, Golebiowski B, et al. TFOS DEWS II sex, gender, and hormones report. Ocul Surf 2017;15:284e333.* *[6] Institute of Medicine (US) Committee on Understanding the Biology of Sex and Gender Differences. Exploring the biological contributions to human health: does sex matter?. Washington, DC: The National Academies Press; 2001.* *[7] Bron AJ, dePaiva CS, Chauhan SK, Bonini S, Gabison EE, Jain S, et al. TFOS DEWS II pathophysiology report. Ocul Surf 2017;15:438e510.* *[8] Willcox MDP, Argüeso P, Georgiev G, Holopainen J, Laurie G, Millar T, et al. TFOS DEWS II tear film report. Ocul Surf 2017;15:366e403.* *[9] Belmonte C, Nichols JJ, Cox SM, Brock JA, Begley CG, Bereiter DA, et al. TFOS DEWS II pain and sensation report. Ocul Surf 2017;15:404e37.* *[10] Gomes JAP, Azar DT, Baudouin C, Efron N, Hirayama M, Horwath-Winter J, et al. TFOS DEWS II iatrogenic dry eye report. Ocul Surf 2017;15:511e38.* *[11] Wolffsohn JS, Arita R, Chalmers R, Djalilian A, Dogru M, Dumbleton K, et al. TFOS DEWS II diagnostic methodology report. Ocul Surf 2017;15:539e74.* *[12] Jones L, Downie LE, Korb D, Benitez-del-Castillo JM, Dana R, Deng SX, et al. TFOS DEWS II management and therapy report. Ocul Surf 2017;15:575e628.* *[13] Novack GD, Asbell P, Barabino B, Bergamini MVW, Ciolino JB, Foulks GN, et al. TFOS DEWS II clinical trial design report. Ocul Surf 2017;15:629e49.* |

**Appendix 1**

**TABULATED PRODUCT GUIDE**

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|  | **MILD LEVEL 1 All products suitable for eye casualty and wards** |
| **PRODUCT**  | **PRESERVED** | **EXPIRY** | **PRESERVATIVE FREE** | **EXPIRY** |
| Hypromellose 0.3% | Generic 10ml | 28 days | Evolve Hypromellose 10ml PF  | 3 months |
| Carbomer 980 gel 0.2%  | Generic 10g | 28 days | Evolve Carbomer gel 980 10g PF | 3 months |
| Carmellose 0.5% |  |  | Cellusan light 0.5% 10ml PF | 90 days |

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|  | **MODERATE LEVEL 2 (LEVEL1 +)**  |
| **PRODUCT**  | **PRESERVED** | **EXPIRY** | **PRESERVATIVE FREE** | **EXPIRY** |
| Carmellose 0.5% |  |  | Cellusan Light 0.5%10ml PF | 90 days |
|  |  |  | Celluvisc 0.5% SDU | Single use |
| Carmellose 1% |  |  | Cellusan 1% 10ml PF | 90 days |
|  |  |  | Celluvisc 1% SDU | Single use |
| Sodium Hyaluronate 0.2% |  |  | Hydramed 0.2% 10ml PF  | 90 days |
| **LIPID FORMULATION**  |  |  |  |  |
| Propylene glycol 0.6% 10ml | Systane Balance Contains POLYQUAD, EDTA, boric acid  | 6 months |  |  |
| Sodium Hyaluronate 0.05% and ectoin 2% 10ml PF |  |  | Hylo-DUAL preservativesand phosphates free | 6 months |
| **OINTMENTS**  |  |  |  |  |
|  Xailin Night Paraffin based and lanolin |  |  | Xailin Night Paraffin based and lanolin  | 60 days |
| Hydramed night retinol palmitate, liquid paraffin, wool fat |  |  | Hydramed night retinol palmitate, liquid paraffin, wool fat | 90 days |

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|  | **SEVERE LEVEL 3 (LEVEL 1 and 2 +) To be initiated by specialist ophthalmologists only.**  |
| **PRODUCT**  | **PRESERVED** | **EXPIRY** | **PRESERVATIVE FREE** | **EXPIRY** |
| Sodium Hyaluronate 0.2% SDU  |  |  | Blink Intensive SDU | Single use |
| Sodium Hyaluronate 0.4% SDU  |  |  | Clinitas 0.4% SDU | Single use |
| Sodium Hyaluronate 0.4%  |  |  | Hydramed Forte 10ml PF 0.4% | 90 days |
| Sodium Hyaluronate 0.2% with Trehalose  |  |  | Thealoz DUO 10ml PF  | 90 days |
| Sodium Hyaluronate 0.1% with Coenzyme Q10 |  |  | VisuXL 10ml PF | 60 days |
| Cross linked Carmellose gel 0.4% with Coenzyme Q10  |  |  | VisuXL GEL 10ml PF  | 6 months |
| Acetylcysteine 5%  | Ilube 5%  | 28 days |  |  |
| **LIPID PREPARATION** |  |  |  |  |
| 100% Perfluorohexyloctane  |  |  | Evotears 3ml PF (280 drops) | 6 months |
| HA 0.4%, levocarnitine, castor oil + Phosphates  |  |  | EYEZIN XL (Contains phosphates) | 60 days |
| **OINTMENTS**  |  |  |  |  |
|  Xailin Night Paraffin based and lanolin |  |  | Xailin Night Paraffin based and lanolin  | 60 days |
| Hydramed night retinol palmitate, liquid paraffin, wool fat |  |  | Hydramed night retinol palmitate, liquid paraffin, wool fat | 90 days |

**Who Does it Affect?**

*This Guidance Applies to:*

**Purpose of Guidance**