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Houston EMA/HSDA Ryan White Part A/MAI Service Definition **Vision Care** (Last Review/Approval Date: 6/3/16)	
HRSA Service Category Title: **RWGA Only**	**Ambulatory/Outpatient Medical Care**
Local Service Category Title:	**Vision Care**
Budget Type: **RWGA Only**	**Fee for Service**
Budget Requirements or Restrictions: **RWGA Only**	Corrective lenses are not allowable under this category. Corrective lenses may be provided under Health Insurance Assistance and/or Emergency Financial Assistance as applicable/available.
HRSA Service Category Definition: **RWGA Only**	***Outpatient/Ambulatory medical care*** is the provision of professional diagnostic and therapeutic services rendered by a physician, physician's assistant, clinical nurse specialist, or nurse practitioner in an outpatient setting. Settings include clinics, medical offices, and mobile vans where clients generally do not stay overnight. Emergency room services are not outpatient settings. Services includes diagnostic testing, early intervention and risk assessment, preventive care and screening, practitioner examination, medical history taking, diagnosis and treatment of common physical and mental conditions, prescribing and managing medication therapy, education and counseling on health issues, well-baby care, continuing care and management of chronic conditions, and referral to and provision of specialty care (includes all medical subspecialties). *Primary medical care* for the treatment of HIV infection includes the provision of care that is consistent with the Public Health Service's guidelines. Such care must include access to antiretroviral and other drug therapies, including prophylaxis and treatment of opportunistic infections and combination antiretroviral therapies. HRSA policy notice 10-02 states funds awarded under Part A or Part B of the Ryan White CARE Act (Program) may be used for optometric or ophthalmic services under Primary Medical Care. Funds may also be used to purchase corrective lenses for conditions related to HIV infection, through either the Health Insurance Premium Assistance or Emergency Financial Assistance service categories as applicable.
Local Service Category Definition:	**Primary Care Office/Clinic Vision Care** is defined as a comprehensive examination by a qualified Optometrist or Ophthalmologist, including Eligibility Screening as necessary. A visit with a credentialed Ophthalmic Medical Assistant for any of the following is an allowable visit: • Routine and preliminary tests including Cover tests, Ishihara Color Test, NPC (Near Point of Conversion), Vision Acuity Testing, Lensometry. • Visual field testing • Glasses dispensing including fittings of glasses, visual acuity testing, measurement, segment height. • Fitting of contact lenses is not an allowable follow-up visit.

Target Population (age, gender, geographic, race, ethnicity, etc.):	HIV-infected individuals residing in the Houston EMA/HSDA.
Services to be Provided:	Services must be provided at an eye care clinic or Optometrist's office. Services must include but are not limited to external/internal eye health evaluations; refractions; dilation of the pupils; glaucoma and cataract evaluations; CMV screenings; prescriptions for eyeglasses and over the counter medications; provision of eyeglasses (contact lenses are not allowable); and referrals to other service providers (i.e. Primary Care Physicians, Ophthalmologists, etc.) for treatment of CMV, glaucoma, cataracts, etc. Agency must provide a written plan for ensuring that collaboration occurs with other providers (Primary Care Physicians, Ophthalmologists, etc.) to ensure that patients receive appropriate treatment for CMV, glaucoma, cataracts, etc.
Service Unit Definition(s): **RWGA Only**	One (1) unit of service = One (1) patient visit to the Optometrist, Ophthalmologist or Ophthalmic Assistant.
Financial Eligibility:	Refer to the RWPC's approved *Financial Eligibility for Houston EMA/HSDA Services.*
Client Eligibility:	HIV-infected resident of the Houston EMA/HSDA.
Agency Requirements:	Providers and system must be Medicaid/Medicare certified to ensure that Ryan White Program funds are the payer of last resort to the extent examinations and eyewear are covered by the State Medicaid program.
Staff Requirements:	Vendor must have on staff a Doctorate of Optometry licensed by the Texas Optometry Board as a Therapeutic Optometrist.
Special Requirements: **RWGA Only**	Vision care services must meet or exceed current U.S. Dept. of Health and Human Services (HHS) guidelines for the treatment and management of HIV disease as applicable to vision care.

FY 2020 RWPC "How to Best Meet the Need" Decision Process

Step in Process: **Council**		Date: **06/13/19**
Recommendations:	Approved: Y:_____ No: _____ Approved With Changes:_____	If approved with changes list changes below:
1.		
2.		
3.		

Step in Process: **Steering Committee**		Date: **06/06/19**
Recommendations:	Approved: Y:____ No: _____ Approved With Changes:_____	If approved with changes list changes below:
1.		
2.		
3.		

Step in Process: **Quality Improvement Committee**		Date: **05/14/19**
Recommendations:	Approved: Y:____ No: _____ Approved With Changes:_____	If approved with changes list changes below:
1.		
2.		
3.		

Step in Process: **HTBMN Workgroup #1**	Date: **04/23/19**
Recommendations:	Financial Eligibility: 300%
1.	
2.	
3.	

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FY 2017 PERFORMANCE MEASURES HIGHLIGHTS

RYAN WHITE GRANT ADMINISTRATION

HARRIS COUNTY PUBLIC HEALTH (HCPH)

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Highlights from FY 2017 Performance Measures 1

Summary Reports for all Services

Vision Care 2

Highlights from FY 2017 Performance Measures

Measures in this report are based on the 2017 Houston Ryan White Quality Management Plan, Appendix B. HIV Performance Measures.

Vision Care

- During FY 2017, 1,584 clients were diagnosed with HIV/AIDS related and general ocular disorders. Among 636 clients with follow-up appointments, 590 (93%) clients had disorders that were either resolved, improved or had remained the same.

Ryan White Part A
HIV Performance Measures
FY 2017 Report

Vision Care
All Providers

HIV Performance Measures	FY 2017
75% of clients with diagnosed HIV/AIDS related and general ocular disorders will resolve, improve or stay the same over time	See ocular disorder table

Clinical Chart Review Measures*	FY 2015	FY 2016
100% of vision clients will have a medical health history (initial or updated) at least once in the measurement year	100%	100%
100% of vision clients will have a vision history (initial or updated) at least once in the measurement year	100%	100%
100% of vision clients will have a comprehensive eye exam at least once in the measurement year	100%	100%

* To review the full FY 2016 chart review reports, please visit:
http://publichealth.harriscountytx.gov/Services-Programs/Programs/RyanWhite/Quality

Ocular Disorder	Number of Diagnoses	Number with Follow-up	*Resolved		*Improved		*Same		*Worsened	
			#	%	#	%	#	%	#	%
Accommodation Spasm	2	0								
Acute Retinal Necrosis										
Anisocoria	9	6					6	100%		
Bacterial Retinitis										
Cataract	256	102			1	6%	82	80%	19	19%
Chalazion	1	1			1	100%				
Chorioretinal Scar	12	5					4	80%	1	20%
Chorioretinitis	1	1					1	100%		
CMV Retinitis - Active										
CMV Retinitis - Inactive										
Conjunctivitis	23	9	1	11%	3	33%	4	44%	1	11%
Covergence Excess										
Convergence Insufficiency										
Corneal Edema										
Corneal Erosion										
Corneal Foreign Body										
Corneal Opacity	57	15					15	100%		
Corneal Ulcer										
Cotton Wool Spots										
Diabetic Retinopathy	3	2			1	50%			1	50%
Dry Eye Syndrome	679	305			1	0%	296	97%	8	3%
Ecchymosis	1	0								
Esotropia	1	0								
Exotropia	10	5	1	20%			4	80%		
Glaucoma	8	4					2	50%	2	50%
Glaucoma Suspect	127	66	5	8%	16	24%	38	58%	7	11%
Iritis	3	1	1	100%						
Kaposi Sarcoma										
Keratitis	14	1	1	100%						
Keratoconjuctivitis										
Keratoconus	6	0								
Lagophthalmos	1	1					1	100%		
Macular Hole	1	0								
Meibomianitis										
Molluscum Contagiosum										
Optic Atrophy	15	1					1	100%		
Papilledema	1	0								

Ocular Disorder	Number of Diagnoses	Number with Follow-up	*Resolved		*Improved		*Same		*Worsened	
			#	%	#	%	#	%	#	%
Paresis of Accommodation										
Pseudophakia	9	3					3	100%		
Refractive Change/Transient										
Retinal Detachment	2	1							1	100%
Retinal Hemorrhage	1	0								
Retinopathy HTN	2	1					1	100%		
Retinal Hole/Tear	1	1					1	100%		
Suspicious Optic Nervehead(s)	1	0								
Toxoplasma Retinochoriochitis										
Thyroid Eye Disease										
Visual Field Defect	21	6					6	100%		
Vitreous Degeneration	2	1							1	100%
Other	314	98			5	5%	88	90%	5	5%
Total	**1,584**	**636 (40%)**	**9**	**1%**	**28**	**4%**	**553**	**87%**	**46**	**7%**

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Vision Care Chart Review Report FY 2017

Ryan White Part A Quality Management Program–Houston EMA

October 2018

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HCPH is the local public health agency for the Harris County, Texas jurisdiction. It provides a wide variety of public health activities and services aimed at improving the health and well-being of the Harris County community.

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Introduction

Part A funds of the Ryan White Care Act are administered in the Houston Eligible Metropolitan Area (EMA) by the Ryan White Grant Administration of Harris County Public Health. During FY 17, a comprehensive review of client vision records was conducted for services provided between 3/1/17 to 2/28/18.

The primary purpose of this annual review process is to assess Part A vision care provided to people living with HIV in the Houston EMA. Unlike primary care, there are no federal guidelines published by the U.S Department of Health and Human Services for general vision care targeting people living with HIV. Therefore, Ryan White Grant Administration has adopted general guidelines published by the American Optometric Association, as well as internal standards determined by the clinic, to measure the quality of Part A funded vision care. The Ryan White Grant Administration Project Coordinator for Clinical Quality Improvement (PC/CQI) performed the chart review.

Scope of This Report

This report provides background on the project, supplemental information on the design of the data collection tool, and presents the pertinent findings of the FY 17 vision care chart review. Also, any additional data analysis of items or information not included in this report can likely be provided after a request is submitted to Ryan White Grant Administration.

The Data Collection Tool

The data collection tool employed in the review was developed through a period of in-depth research conducted by the Ryan White Grant Administration. By researching the most recent vision practice guidelines, a listing of potential data collection items was developed. Further research provided for the editing of this list to yield what is believed to represent the most pertinent data elements for vision care in the Houston EMA. Topics covered by the data collection tool include, but are not limited to the following: completeness of the Client Intake Form (CIF), CD4 and VL measures, eye exams, and prescriptions for lenses. See Appendix A for a copy of the tool.

The Chart Review Process

All charts were reviewed by the PC/CQI, a Master's-level registered nurse experienced in identifying documentation issues and assessing adherence to published guidelines. The collected data for each site was recorded directly into a preformatted database. Once all data collection was completed, the database was queried for analysis. The data collected during this process is intended to be used for the purpose of service improvement.

The specific parameters established for the data collection process were developed from vision care guidelines and the professional experience of the reviewer on standard record documentation practices. Table 1 summarizes the various documentation criteria employed during the review.

Table 1. Data Collection Parameters	
Review Area	**Documentation Criteria**
Laboratory Tests	Current CD4 and Viral Load Measures
Client Intake Form (CIF)	Completeness of the CIF: includes but not limited to documentation of primary care provider, medication allergies, medical history, ocular history, and current medications
Complete Eye Exam (CEE)	Documentation of annual eye exam; completeness of eye exam form; comprehensiveness of eye exam (visual acuity, refraction test, binocular vision assessment, fundus/retina exam, and glaucoma test)
Ophthalmology Consult (DFE)	Performed/Not performed
Lens Prescriptions	Documentation of the Plan of Care (POC) and completeness of the dispensing form

The Sample Selection Process

The sample population was selected from a pool of 2,438 unduplicated clients who accessed Part A vision care between 3/1/17 and 2/28/18. The medical charts of 150 of these clients were used in the review, representing 6.2% of the pool of unduplicated clients.

In an effort to make the sample population as representative of the actual Part A vision care population as possible, the EMA's Centralized Patient Care Data Management System (CPCDMS) was used to generate the lists of client codes. The demographic make-up (race/ethnicity, gender, age) of clients accessing vision care services between 3/1/17 and 2/28/18 was determined by CPCDMS, which in turn allowed Ryan White Grant Administration to generate a sample of specified size that closely mirrors that same demographic make-up.

Characteristics of the Sample Population

The review sample population was generally comparable to the Part A population receiving vision care in terms of race/ethnicity, gender, and age. It is important to note that the chart review findings in this report apply only to those who receive vision care from a Part A provider and cannot be generalized to all Ryan White clients or to the broader population of people with HIV or AIDS. Table 2 compares the review sample population with the Ryan White Part A vision care population as a whole.

Table 2. Demographic Characteristics of FY 17 Houston EMA Ryan White Part A Vision Care Clients				
	Sample		**Ryan White Part A EMA**	
Race/Ethnicity	Number	Percent	Number	Percent
African American	75	50%	1,199	49%
White	73	49%	1,180	48%
Asian	1	<1%	29	1%
Native Hawaiian/Pacific Islander	0	0%	4	<1%
American Indian/Alaska Native	0	0%	9	<1%
Multi-Race	1	<1%	17	<1%
TOTAL	**150**		**2,438**	
Hispanic Status				
Hispanic	51	34%	871	36%
Non-Hispanic	99	66%	1,567	64%
TOTAL	**150**		**2,438**	
Gender				
Male	111	74%	1,807	74%
Female	37	25%	607	25%
Transgender Male to Female	2	1%	24	1%
Transgender Female to Male	0	0%	0	0
TOTAL	**150**		**2,438**	
Age				
<= 24	3	2%	122	5%
25 – 34	35	23%	565	23%
35 – 44	31	21%	563	23%
45 – 49	20	13%	364	15%
50 – 64	57	38%	751	31%
65+	4	3%	73	3%
TOTAL	**150**		**2,438**	

Findings

Laboratory Tests

Having up-to-date lab measurements for CD4 and viral load (VL) levels enhances the ability of vision providers to ensure that the care provided is appropriate for each patient. CD4 and VL measures indicate stage of disease, so in cases where individuals are in the late stage of HIV disease, special considerations may be required.

Patient chart records should provide documentation of the most recent CD4 and VL information. Ideally this information should be updated in coordination with an annual complete eye exam.

	2015	2016	2017
CD4	64%	91%	80%
VL	64%	91%	80%

Client Intake Form (CIF)

A complete and thorough assessment of a patient's health history is essential when caring for individuals living with HIV or anyone who is medically compromised. The agency assesses this information by having patients complete the CIF. Information provided on the CIF, such as ocular history or medical history, guides clinic providers in determining the appropriateness of diagnostic procedures, prescriptions, and treatments. The CIF that is used by the agency to assess patient's health history captures a wide range of information; however, for the purposes of this review, this report will highlight findings for only some of the data collected on the form.

Below are highlights of the findings measuring completeness of the CIF.

	2015	2016	2017
Primary Care Provider	50%	50%	81%
Medication Allergies	100%	100%	99%
Medical History	100%	100%	99%
Current Medications	100%	100%	99%
Reason for Visit	100%	100%	100%
Ocular History	100%	100%	99%

Eye Examinations (Including CEE/DFE) and Exam Findings

Complete and thorough examination of the eye performed on a routine basis is essential for the prevention, detection, and treatment of eye and vision disorders. When providing care to people living with HIV, routine eye exams become even more important because there are a number of ocular manifestations of HIV disease, such as CMV retinitis.

CMV retinitis is usually diagnosed based on characteristic retinal changes observed through a DFE. Current standards of care recommend yearly DFE performed by an ophthalmologist for clients with CD4 counts <50 cells/mm3 (2). Five clients in this sample had CD4 counts <50 cells/mm3, and all five had a DFE performed.

	2014	2016	2017
Complete Eye Exam	100%	100%	100%
Dilated Fundus Exam	95%	98%	98%
Internal Eye Exam	100%	100%	100%
Documentation of Diagnosis	100%	100%	100%
Documentation of Treatment Plan	100%	100%	100%
Visual Acuity	100%	100%	100%
Refraction Test	100%	100%	100%
Observation of External Structures	100%	100%	100%
Glaucoma Test	100%	100%	100%
Cytomegalovirus (CMV) screening	95%	98%	98%

Ocular Disease

Thirteen clients (8.7%) demonstrated ocular disease, including zoster keratitis, pinguecula, posterior synechiae, cataracts, and glaucoma. Four clients received treatment for ocular disease, three clients were referred to a specialty eye clinic, and six clients did not need treatment at the time of visit.

Prescriptions

Of records reviewed, 99% (95%-FY16) documented new prescriptions for lenses at the agency within the year.

Conclusions

Findings from the FY 17 Vision Care Chart Review indicate that the vision care providers perform comprehensive vision examinations for the prevention, detection, and treatment of eye and vision disorders. Performance rates are very high overall, and are consistent with quality vision care.

Appendix A—FY 17-Vision Chart Review Data Collection Tool

Mar 1, 17 to Feb 28, 18

Pt. ID # _____ Site Code:_____

CLIENT INTAKE FORM (CIF)

1. PRIMARY CARE PROVIDER documented: Y - Yes N - No
2. MEDICATION ALLERGIES documented: Y - Yes N - No
3. MEDICAL HISTORY documented: Y - Yes N - No
4. CURRENT MEDS are listed: Y - Yes N - No
5. REASON for TODAY's VISIT is documented: Y - Yes N - No
6. OCULAR HISTORY is documented: Y - Yes N - No

CD4 & VL

7. Most recently documented CD4 count is within past 12 months: Y - Yes N - No
8. CD4 count is < 50: Y - Yes N - No
9. Most recently documented VL count is within past 12 months: Y - Yes N – No

EYE CARE:

10. COMPLETE EYE EXAM (CEE) performed: Y - Yes N - No
11. Eye Exam included ASSESSMENT OF VISUAL ACUITY: Y - Yes N - No
12. Eye Exam included REFRACTION TEST: Y - Yes N - No
13. Eye Exam included OBSERVATION OF EXTERNAL STRUCTURES: Y - Yes N - No
14. Eye Exam included GLAUCOMA TEST (IOP): Y - Yes N - No
15. Internal Eye Exam findings are documented: Y - Yes N - No
16. Dilated Fundus Exam (DFE) done within year: Y - Yes N - No
17. Eye Exam included CYTOMEGALOVIRUS (CMV) SCREENING: Y - Yes N – No
18. New prescription lenses were prescribed: Y - Yes N - No
19. Eye Exam written diagnoses are documented: Y - Yes N - No
20. Eye Exam written treatment plan is documented: Y - Yes N - No
21. Ocular disease identified? Y - Yes N – No
22. Ocular disease treated appropriately? Y - Yes N - No
23. Total # of visits to eye clinic within year:_____

Revised March, 2013

Appendix B – Resources

1. Casser, L., Carmiencke, K.., Goss, D.A., Knieb, B.A., Morrow, D., & Musick, J.E. (2005). Optometric Clinical Practice Guideline—Comprehensive Adult Eye and Vision Examination. *American Optometric Association*. Retrieved from http://www.aoa.org/Documents/CPG-1.pdf on April 15, 2012.

2. Heiden D., Ford N., Wilson D., Rodriguez W.R., Margolis T., et al. (2007). Cytomegalovirus Retinitis: The Neglected Disease of the AIDS Pandemic. *PLoS Med* 4(12): e334. Retrieved from: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2100142/ on April 15, 2012.

3. International Council of Ophthalmology. (2011). *ICO International Clinical Guideline, Ocular HIV/AIDS Related Diseases.* Retrieved from http://www.icoph.org/resources/88/ICO-International-Clinical-Guideline-Ocular-HIVAIDS-Related-Diseases-.html on December 15, 2012.

4. Panel on Opportunistic Infections in HIV-Infected Adults and Adolescents. Guidelines for the prevention and treatment of opportunistic infections in HIV-infected adults and adolescents: recommendations from the Centers for Disease Control and Prevention, the National Institutes of Health, and the HIV Medicine Association of the Infectious Diseases Society of America. Available at http://aidsinfo.nih.gov/contentfiles/lvguidelines/adult_oi.pdf. Accessed July 25, 2013.

Medscape

Ocular Manifestations of HIV Infection

Updated: Nov 12, 2018
Author: Robert A Copeland, Jr, MD; Chief Editor: Hampton Roy, Sr, MD more...

OVERVIEW

Overview

Ocular manifestations of human immunodeficiency virus (HIV) infection have historically been common. While approximately 70-80% of HIV-infected patients have been treated for an HIV-associated eye disorder during the course of their illness, recently, these numbers have appeared to decrease with the development of increasingly efficacious HIV antiviral cocktails.

In general, the $CD4^+$ T-lymphocyte count has been used to predict the onset of certain ocular infections in patients who are HIV positive. A $CD4^+$ T-cell count below 500/mL is associated with Kaposi sarcoma, lymphoma, and tuberculosis. A $CD4^+$ T-cell count below 250/mL is associated with pneumocystosis and toxoplasmosis. A $CD4^+$ T-cell count less than 100/mL is associated with the following:

- Retinal or conjunctival microvasculopathy
- Cytomegalovirus (CMV) retinitis
- Varicella-zoster virus (VZV) retinitis
- *Mycobacterium avium* complex infection
- Cryptococcosis
- Microsporidiosis
- HIV encephalopathy
- Progressive multifocal leukoencephalopathy

The predictive value of the $CD4^+$ T-cell count for ocular complications in HIV infection has been called into question by reports of CMV retinitis in patients with $CD4^+$ cell counts higher than 200 cells/mL. These patients reportedly were taking highly active antiretroviral therapy (HAART). While such findings may argue against the protective effect of an increased $CD4^+$ cell count, the possibility that the CMV retinitis preceded the recovery of $CD4^+$ cell count was not ruled out. Thus, whether a reconstituted T-cell count will serve as a better predictor of specific ocular infection is

under active evaluation.

Despite these uncertainties, the $CD4^+$ cell count has remained the predicting parameter for the occurrence of specific ocular infection in patients who are HIV positive, at least until antigen-specific tests of T-lymphocyte function become widely available.

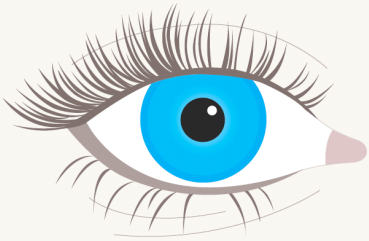
For other discussions of HIV infection, see HIV Disease, Pediatric HIV Infection, and Antiretroviral Therapy for HIV Infection.

For patient education information, see the Immune System Center and Sexually Transmitted Diseases Center, as well as HIV/AIDS.

Factsheet Sight problems

Key points

- Most people living with HIV don't experience eye problems related to HIV.
- Sight problems are more likely to occur in people with very low CD4 counts (below 50 cells/mm^3).
- Cytomegalovirus (CMV) is a serious eye disease that people with very weak immune systems can develop.



Most people do not experience any HIV-related problems affecting their sight. Taking HIV treatment will prevent the severe damage to the immune system that can lead to sight problems.

However, about 70% of people with HIV who have very weak immune systems develop serious eye diseases. These may lead to blindness if not treated promptly.

The most common of these conditions is HIV retinopathy. This is a condition where the retina is damaged, probably because uncontrolled HIV is damaging the blood vessels in the eye. It can eventually lead to blindness, but can be treated in the early stages. Having diabetes is another risk factor for retinopathy, a condition that is more common in people living with HIV, especially as they age.

Uveitis is the inflammation of an inner layer of the eye. The most common cause is a weakened immune system. It can be caused by toxoplasmosis (a parasite infection) or by the antibiotic rifabutin (used to treat other opportunistic infections), especially if you are taking other drugs that boost rifabutin levels. Like retinopathy, the sooner uveitis is treated, the less damage it will do.

The most serious eye disease is caused by cytomegalovirus (CMV). If your CD4 count is or has been below 50, CMV may cause retinitis – damage to the light-sensitive lining of the eye called the retina.

Other infections that can affect the eye include varicella zoster virus (VZV), herpes simplex virus (HSV), toxoplasmosis and a number of sexually transmitted infections, including syphilis, gonorrhoea, chlamydia and candidiasis.

Symptoms of eye diseases

HIV retinopathy causes 'cotton wool' spots and broken blood vessels in the eye.

Uveitis causes:

- redness
- a dull pain in the eye, particularly when focusing
- sensitivity to light
- new 'floaters' (tiny black specks that move around in your line of sight)
- blurred vision or loss of peripheral vision (being unable to see at the sides of your field of vision).

Early symptoms of CMV retinitis can include:

- blurred vision
- new 'floaters'
- a blind spot
- flashes of bright light.

If your CD4 count is or has been low you should take any of these symptoms seriously and consult your doctor, as the earlier CMV is treated, the less damage it is likely to do. If your CD4 count is higher, the problem is very unlikely to be CMV, but you should still tell your doctor about your symptoms. CMV can also cause a detached retina, which needs to be treated with surgery.

The central part of the retina where images are focused is known as the macula. It may only take a small area of damage to this central area to cause a substantial loss of sight. Damage to the retina outside the macula may cause no loss of sight or only the loss of some sight out of the corner of your eyes, but it will usually spread if left untreated.

> *"Sight problems can affect anyone, whether or not they have HIV."*

Treatment

The best way to prevent serious eye problems is to take HIV treatment to boost your immune system. In the UK, it is now recommended that people start HIV treatment as soon as they are diagnosed with HIV, whatever their CD4 cell count. However, some people only find out that they have HIV when they have a very low CD4 cell count. In these circumstances, HIV treatment can still increase CD4 cell count, protect against infections and lead to a longer and healthier life.

Sight loss due to CMV can't be corrected by glasses because the retina is permanently scarred. The aim of anti-CMV treatment is to try to prevent the damage to the retina from getting any worse. Drugs such as ganciclovir, foscarnet and cidofovir can slow down or prevent the CMV lesions from spreading. The drugs can be taken in a number of different ways, including tablets, intravenous infusions, injections into the eye and eye implants.

After CMV retinitis has been stabilised, maintenance therapy using lower doses of the same drugs or oral ganciclovir capsules has to be continued indefinitely to stop it reactivating. If you have experienced sight loss your clinic can refer you to social services that can help you adjust.

If you have a very low CD4 count or a blood test finds signs of CMV infection, you may be offered anti-CMV drugs to try to prevent CMV retinitis from developing.

If the sight problems are caused by a different infection, the appropriate treatment will be used, such as anti-viral drugs for varicella zoster virus, or antibiotics for toxoplasmosis. Uveitis is treated by stopping or reducing the dose of rifabutin, if that is the cause. The symptoms may be helped with anti-inflammatory treatments such as steroids.

Looking after your eyes

Sight problems can affect anyone, whether or not they have HIV. Common problems include short- and long-sightedness. It's a good idea to go for regular eye tests so that any problems can be identified early.

Many of the lifestyle changes that keep you generally healthy will help maintain the health of your eyes. Exercise, a healthy diet, and not smoking or drinking too much alcohol will all help, as will protecting your eyes from direct sunlight.

Checks and examinations

You can check your own eyesight for any distorted, blurred or obscured areas while reading a page of a newspaper. Eyesight can change temporarily after illness because of changes in the lens of the eye. It is recommended that all adults, whatever their HIV status, have their eyes checked at least every two years. It may be recommended you go more often, especially once you are over 40, if you have certain health conditions, or are from certain ethnic groups.

Cataracts – cloudy or blurred patches on the lens of the eye – are common in older people. There is some evidence that people with HIV are more likely to need surgery for the removal of cataracts than others. Having a regular eye test as you get older will allow cataracts to be spotted early. You can then be referred to an eye specialist to determine what treatment might be needed.

Eye examinations are usually done by optometrists, trained professionals in eye health.

They will ask detailed questions about your eyesight, lifestyle, health and any previous eye problems you or family members may have had. You should bring a list of any medication you take, along with your glasses if you use them, or a previous prescription for glasses. Then they will test what you can see, using a chart of symbols or letters.

Your usual optometrist can examine the back of your eye, although you may need to visit a specialist if problems are found.

They will also examine the health of your eyes, inside and out. You may be given eye drops to dilate the pupil of the eye, making it easier for the optometrist to see the interior. They may check the pressure in your eye and test your peripheral vision. They can give advice on eye health, and refer you for more specialist treatment if necessary.

Find out more

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