

## **DST-REM-102 Eye Assessment: Pediatric**

Nurses with Remote Nursing Certified Practice designation (RN(C)s) are able to manage the following eye conditions:

- Conjunctivitis in children **6 months of age and older**
- Minor corneal abrasion in children **2 years of age and older**

The following assessment must be completed and documented.

### **ASSESSMENT**

#### **History of Present Illness and Review of System**

##### **General**

The following characteristics of each symptom should be elicited and explored:

- Chronology
- Onset
- Current situation (improving or deteriorating)
- Location
- Radiation
- Quality
- Timing (frequency, duration)
- Severity
- Precipitating and aggravating factors
- Relieving factors
- Associated symptoms
- Effects on daily activities
- Previous diagnosis of similar episodes
- Previous treatments
- Efficacy of previous treatments

##### **Cardinal Signs and Symptoms**

In addition to the general characteristics outlined above, additional characteristics of specific symptoms should be elicited as follows:

##### **Vision**

- Recent changes
- Vision loss including loss of peripheral vision
- Blurring
- Halos around lights
- Floaters

##### **Other Associated Symptoms**

- Pain
- Sensation of pressure behind the eye
- Irritation
- Foreign-body sensation
- Photophobia

- Diplopia (observed squinting or keeping one eye closed in younger children)
- Lacrimation
- Itching
- Rubbing of eyes
- Eye discharge
- Ear pain
- Nasal discharge
- Sore throat
- Cough
- Nausea or vomiting
- Headache
- Urethral, vaginal or rectal discharge
- Pain or inflammation of the joints

### **Medical History (General)**

- Medical conditions and surgeries
- Allergies (seasonal as well as medication)
- Medication currently used (e.g., prescription, oral contraceptives, over the counter)
- Herbal preparations, vitamins, minerals, supplements and traditional therapies
- Birth and prenatal history if age appropriate
- Communicable diseases: measles, chickenpox (varicella), herpes simplex
- Immunization Status

### **Medical History (Specific to eyes)**

- Eye diseases, defects or injuries
- Eye surgery, including corrective
- Use of eyeglasses or contact lenses, corrective or cosmetic
- Change in type of contact lens or solution
- Concurrent infection of the upper respiratory tract
- Other infectious diseases (chicken pox, measles)
- Sexually Transmitted Infections (STIs)
- Immunocompromise
- Exposure to eye irritants (environmental or occupational)
- Current eye medications - homatropine, cyclogyl, steroids
- Systemic inflammatory disease (Inflammatory Bowel Disease, Reiter's syndrome, Juvenile Rheumatoid Arthritis)
- Diabetes mellitus
- Chronic renal disease
- Bleeding disorders

### **Family History**

- Visual disorders (i.e. glaucoma, blindness, etc.)
- Systemic inflammatory disease (i.e., arthritis conditions, lupus)
- Diabetes mellitus
- Others with eye infections

### **Personal and Social History (Specific to eyes)**

- Concerns reported by parent, caregiver or teacher about child's vision (i.e. squinting, headaches caused by reading)
- Use of protective eyewear for sports and other activities
- Exposure to irritants (chemicals, cigarette smoke, wood smoke)
- Exposure to ultraviolet radiation from the sun
- Housing and sanitation conditions
- School or day-care exposure to contagious organisms (e.g. conjunctivitis)
- Sexual activity, if applicable

## **PHYSICAL ASSESSMENT OF THE EYE**

### **Vitals**

- Temperature
- Pulse
- Respiration
- SpO<sub>2</sub>
- Blood pressure (BP)
- Pain

### **General**

- Apparent state of health
- Appearance of comfort or distress
- Colour
- Nutritional status
- State of hydration
- Hygiene
- Match between appearance and stated age
- Character of cry (in infants less than 6 months old)
- Activity level
- Mental status
- Degree of cooperation, consolability
- Emotional reaction to caregiver and examiner
- Difficulty with gait or balance

### **Inspection**

Test visual acuity, visual field

- Visual acuity in children greater than 3 yrs of age
- Using a tumbling E or picture chart for children over 3 yrs of age or who cannot read the alphabet
- Most infants are farsighted, gradually gaining acuity as they develop, attaining approximately 20/50 by one year of age, and 20/20 by 6-8 years of age
- Test visual field in older children if concern about glaucoma

### **Inspection**

- Bony Orbit: edema, lesions, bruising

- Lids and Lashes: ability to open and close, edema, erythema, crusting, eyelash position, tremors, foreign bodies, lesions. Evert upper lids as required.
- Lacrimal Apparatus: tearing, size
- Conjunctiva and Sclera: color, pattern of injection, discharge, edema, haemorrhage, pterygium, foreign body
- Cornea: clarity, abrasions or lacerations. Corneal cloudiness may be a sign of congenital cataracts, foreign body. Fluorescein stain to assess for corneal integrity.
- Pupil and Iris: color, size, shape, reactivity to light and accommodation
- Lens: transparency, opacities
- Fundi: red reflex, optic disc, retinal vasculature in older children
- Extraocular muscles: Extra ocular eye movements (EOEM), position and alignment of eyes (i.e., strabismus): use corneal light reflex test, cover-uncover test

### **Palpation**

Palpate the bony orbit, forehead, eyebrows, eyelids, lacrimal apparatus and pre-auricular lymph nodes for tenderness, swelling or masses

**Do not palpate globe if rupture injury is suspected or if the client has undergone recent eye surgery**

### **Associated Systems**

- An ENT examination, including the lymph nodes of the head and neck, should also be performed if there are symptoms of a systemic condition, such as viral URTI or an STI, (e.g. if gonorrhoea is suspected)
- Pre-auricular adenopathy might indicate chlamydial, viral or invasive bacterial infection of the eye (e.g., gonorrhoea)

### **Abdomen**

Assess liver for tenderness and enlargement if eye symptoms are associated with symptoms of an STI.

### **Genitourinary System and Rectal Area**

Assess for urethral, cervical or vaginal discharge if eye symptoms are associated with symptoms of an STI.

### **Musculoskeletal System and Extremities**

Examine the joints to assess for warmth, redness, pain or swelling.

### SYMPTOMS REQUIRING URGENT REFERRAL

The first step is to differentiate major or serious causes of red eye from minor causes.

The following signs and symptoms require urgent referral to a physician or nurse practitioner:

- Unilateral or bilateral eye pain
- Ocular pain
- Ocular injury of any kind
- Severe photophobia of unknown cause
- Persistent blurring of vision
- Recent onset of visual disturbances – light flashes, floaters (recent onset), halos, dimming, visual distortion, double vision, abnormal colour perception or loss of visual acuity.
- Visual field loss
- Reduced ocular movement
- Exophthalmos (proptosis)
- Ciliary flush
- Scleral icterus
- Hyphema
- Irregular cornea (epithelial defect or opacity, irregular corneal reflection of light)
- Non-reactive pupil
- Treatment failure after 3 days
- Worsening symptoms
- Compromised host (e.g., immuno-suppressed client)
- Signs of preseptal or orbital cellulitis
- Symptoms in conjunction with a communicable disease i.e. chickenpox
- Finger like (dendritic) projections noted on fluorescein stain (herpetic)

### DIAGNOSTIC TESTS

The RN(C) may consider the following diagnostic tests in the examination of the eye to support clinical decision-making:

- Swab drainage for Culture and Sensitivity (C&S) only if there is no resolution of symptoms after an empiric course of treatment.

### ADDITIONAL TESTING

- Apply fluorescein stain to test for corneal integrity if there is a possibility that a corneal abrasion has occurred.

## REFERENCES

More recent editions of any of the items in the Reference List may have been published since this DST was published. If you have a newer version, please use it.

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