

FLUORIDE VARNISH

General Information

- The bacteria associated with dental caries have been identified as *Streptococcus Mutans*. The presence of these bacteria along with food and saliva allow the process of decay to begin on the tooth surface. Untreated decay progresses through stages of tooth destruction. As the decay progresses, the affected area becomes larger.
- There has been a well-documented decline in dental caries in children in the United States, which has been attributed to widespread use of various forms of fluoride. With the use of fluoride varnish, a high-concentration of fluoride in a small amount is painted directly onto the teeth.
- Even people living in communities where water supplies are fluoridated benefit from exposure to fluorides found in toothpaste, mouth rinses, professionally applied fluorides, and in foods processed in cities where water supplies are fluoridated (i.e., the “halo” phenomenon).
- The use of topical fluoride supplements is one alternative means of providing protection to the teeth of children 0 months old to 21¹ years of age who are at risk for dental caries.
- Proper application technique reduces the possibility that a patient will swallow varnish during its application and limits the total amount of fluoride swallowed as the varnish wears off the teeth over several hours.
- A combination of various types of fluoride use (e.g. optimally fluoridated water, prescription fluoride supplements, and professionally applied topical fluoride) reduces dental caries significantly more than any one method alone.
- No published evidence indicates that professionally applied fluoride varnish is a risk factor for enamel fluorosis, even among children aged <6 years.
- Applying the fluoride varnish to any and all tooth surfaces reduces the risk of decay.
- A helpful tip for applying fluoride varnish to the teeth of young children is to sit knee-to-knee with parent or caregiver, and have child lay in the health care provider’s lap

¹ Topical application of fluoride varnish is safe for the prenatal patient

SUBJECTIVE

Age 0 – 21 years of age

Target population age 0 - 5 years

Mother requests application of dental varnish for child

Health care provider recommends application of dental varnish

OBJECTIVE

White spot lesions may or may not be present on any teeth in the child's oral cavity

ASSESSMENT

Need for dental varnish application

PLAN

Public Health Nurse to apply dental fluoride varnish application according to package instructions

Health Teaching:

Instruct parent/guardian on the correct care of child's teeth until the next day

Provide parent/guardian with appropriate information sheet for care of child's teeth following fluoride varnish application

Instruct parent or guardian on the need for additional applications of fluoride varnish

Counsel parent/guardian to closely supervise tooth brushing by young children in order to prevent their ingestion of fluoride toothpaste and to ensure that only very small quantities (pea-sized amounts) are used (so as to reduce the risk of dental fluorosis)

Counsel parent/guardian regarding the risks that contributes to dental decay

Instruct parent/guardian about proper diet and feeding habits, as well as the daily care of the child's teeth to contribute to the prevention of dental decay

Follow-Up:

Fluoride varnish should be applied two times annually or according to package instructions.

REFERENCE

Morbidity and Mortality Weekly Report, Recommendations and Reports, August 17, 2001, Vol. 50 No. RR-14; pages 18–19

Tenn. Code Ann. § 63-5-109

TUBERCULOSIS, CASE OR SUSPECT (INITIAL VISIT)

SUBJECTIVE

Symptoms may include the following:

Cough >2 weeks	Chills
Hemoptysis	Night sweats
Chest pain	Weight loss
Fever	Fatigue
Referral from physician	

OBJECTIVE

Productive cough	Respirations normal or labored
Thin, pale	Documented weight loss
HIV status	Jaundice, yellow eyes
Positive or negative tuberculin skin test (TST)	
Positive, negative or indeterminate IGRA (Indeterminate should be repeated)	
Positive or negative smear, cultures, or culture pending	
Abnormal chest X-ray	
Other diagnostic tests/results	

Baseline measurement from TB clinic to include CMP, CBC with platelets and differential, and HIV. (Routine laboratory monitoring for toxicity is generally not needed in individuals with normal baseline.)

Clinical information from other providers, hospital

ASSESSMENT

Tuberculosis suspect (culture report not available)

Tuberculosis case (culture report or nucleic acid amplification test result is positive, indicate site of infection)

Latent Tuberculosis Infection (LTBI)

PLAN

Have patient wear surgical mask if symptomatic; nurse must wear n-95 mask

Initial Nursing Assessment:

Face to face contact will be made within 24 hours of notification of new infectious (sputum smear positive or cavitory on chest x-ray) TB suspect/case; this contact may be in the home, office, hospital, or other facility

Explain contact investigation and begin identifying contacts

Face to face contact visit will be made within 3 working days of notification of a newly diagnosed case or suspect who is:

- sputum smear negative,
- culture pending or culture positive,
- abnormal chest x-ray non-cavitary

Records should be obtained within 24 hours of report of suspect

Conduct Home Assessment:

If the initial visit is not a home visit, nurse should make a home visit to assess the home environment within 3 working days from notification; preferably the home visit should be made prior to patient's discharge from hospital, but no later than 24 hours after discharge from a hospital (see TB Guidelines)

Nurse must ensure that no immunosuppressed persons or children <4 years of age are in the home if an infectious patient is being discharged home

Provide Screening Evaluation:

Consider psychosocial, cultural background, and language/literacy level

Provide interpreter services as needed

Complete TB/LTBI Risk Assessment Tool (if not done previously) and evaluate history, including onset and duration of symptoms and signs for TB (as listed above)

Evaluate for possible pregnancy

Screen for any contraindications to anti-tuberculosis drugs (using PH 2040, Screening and Monitoring Forms)

Observe patients and family's ability and availability of resources to cope, adherence to medications regimen, and compliance with follow-up

If being treated by private physician, obtain record of physical exam, chest X-ray report, significant lab tests (sputum cultures, liver functions, and WBC) and medication orders

Ascertain whether MD will follow or if Health Department to follow; if Health Department to follow, refer to TB Clinic

Assure that a focused physical exam and chest X-ray have been performed by TB clinic MD/NP; if not done, refer back to TB clinic

Begin contact investigation

If patient is hospitalized, notify hospital of isolation discharge requirements

If patient is discharged from hospital, obtain and send copy of all records (notes, lab, and radiology reports, physician orders, and medication sheets) to regional TB clinic

Obtain and Document the Following Information:

Physician referral of suspect, case, or orders for anti-TB drugs

Known contacts

HIV status/other TB risk factors

PPD skin test history (including measurement) or previous IGRA test (including dates and results)

Previous history of –

- Tuberculosis disease

- TB infection (LTBI)

- Administration of anti-TB medications

Symptoms including –

- Date of first symptom

- Weakness, weight loss, anorexia

- “Flu-like” episode, chills, fever

- Productive cough, chest pain, blood in sputum

- Night sweats

Other health problems including –

- HIV or immunosuppression

- Diabetes mellitus

- Liver or kidney disease

- History of alcohol or drug abuse

- Current medications (including OTCs and herbal medicines)

- LMP

- Allergies

- Other evaluation by private MD, other providers, or health care facility

- Special patient needs

Treatment:

Instruct on home isolation precautions until no longer infectious, or place patient on isolation if indicated

Measure height, weight, and vital signs initially.

Obtain weight and vital signs monthly

Directly observed therapy (DOT) is the standard of care for all TB cases

Issue anti-tuberculosis drugs as prescribed by TB clinic physician (only those medications approved by TB clinic MD may be issue)

If on ETHAMBUTOL perform visual acuity (Snellen chart) and Red/Green color discrimination monthly; if patient wears glasses, check vision with glasses and note this in record

If STREPTOMYCIN or an AMINOGLYCOSIDE (Capreomycin, Amikacin) is to be used, obtain BUN and creatinine; patient should be questioned at baseline and monthly about possible hearing loss or tinnitus, and monitor vestibular function using the Romberg at baseline and monthly

At treatment initiation, if not drawn in TB clinic, draw CMP, CBC with platelets and differential

and HIV (if not known); all labs to be reviewed by the TB physician
 Issue 3 sputum containers, dated and numbered (if pulmonary TB or to rule out pulmonary TB)
 with instructions for collecting in AM
 Collect first sputum specimen in clinic in person by sputum induction using 3% sodium
 chloride.
 Issue patient 2 pre-labeled and dated cans for use the next 2 consecutive days for natural sputum
 collection
 Complete all required fields on lab requisition
 DOT worker should pick up sputums at home on the day of collection for mailing to the lab from
 the local health department

Perform Contact Investigation (see TB Guidelines)

All high-risk contacts should be tested within 7 working days
 Completion of initial medical assessments of high-risk contacts should be completed within 10
 working days of contact identification.
 Document all contact information on PH 1631, "TB Contact Record"

NOTE: IGRA test is preferred for baseline testing for contacts ≥ 5 years of age.
 All contacts should receive an IGRA or TST if they have a documented negative PPD or IGRA
 history.

All high-risk contacts (from all environments) that have a positive IGRA or Positive TST are to
 have a chest X-ray and evaluation by an MD or APN.
 Contacts that have an initial negative TST or IGRA but are at risk of progression to active TB
 (i.e., children < 4, immunosuppressed persons, pregnant women, dialysis patients, HIV+, etc.)
 are to have a chest X-ray and evaluation by an MD or APN as soon as possible.

All contacts with an initial negative IGRA or TST should have a repeat IGRA or TST at 8-10
 weeks after contact is broken (last exposure) with the suspect/case; only one IGRA or TST is
 needed if contact has been broken for more than 10 weeks when initially tested.

NOTE: Use consistent method of testing for evaluation of a contact

Example:

- if IGRA is drawn initially, then at 8-10 weeks, IGRA will be repeated
- if Tubersol PPD is placed initially, then at 8-10 weeks, a second PPD will be placed
 using Tubersol
- if Aplisol PPD is placed initially, then at 8-10 weeks, a second PPD will be placed
 using Aplisol

Any contact that has an **indeterminate** IGRA is to be retested within 1-2 weeks.

Consult with regional TB nurse/physician for preventative therapy on ALL children who are
 close contacts of infectious or potentially infectious cases of TB, regardless of skin test results.

Document on contact record (PH 1631).

When contact investigation is completed, send a copy of PH 1631 to Regional TB office.

Provide Follow-up

If patient is being followed by Health Department TB physician, schedule monthly return appointments to TB clinic.

If patient is being followed by a private provider, schedule monthly visit with PHN to issue medication(s) and document any medication side effects.

Obtain monthly office visit medical record notes from private provider prior to monthly PHN visit at health department.

For patients with active TB:

- Ensure DOT as ordered by physician until regimen is completed
- Assess for side effects each time DOT is given
- Weigh at every TB clinic visit
- Ensure baseline labs and sputum culture results are in chart
- Report any symptoms suggesting toxicity promptly to the treating physician and obtain appropriate lab specimens as ordered
- If on ETHAMBUTOL, perform monthly vision checks including visual acuity and color red/green discrimination
- If on STREPTOMYCIN or an AMINOGLYCOSIDE (Capreomycin, Amikacin), perform monthly Romberg and hearing evaluation (see TB Guidelines)
- Repeat liver testing if indicated (underlying liver disease, alcohol use symptoms) or as ordered by physician
- Issue sputum containers (set of 3) at least monthly but should be more frequently if patient is infectious; three sputum cultures must be obtained at one month and two months as ordered by physician (document reason if unable to obtain and notify Regional TB clinic), remind physician to order at 2 months if not done
- Sputum cultures must be done every month until patient has 3 consecutive negative cultures for 2 consecutive months
- When culture sent to outside labs, contact private provider or lab to ensure culture and sensitivity are ordered and that culture isolate is sent to state lab
- Send a copy of completed drug monitoring sheet to the regional TB clinic monthly
- Ensure TB clinic is aware of all culture and sensitivity results

Provide Referral:

- Current medication intolerance and/or adverse reactions
- Abnormal laboratory findings
- Pregnancy
- Non-adherence

REFERENCES

- CDC. Core curriculum on TB: What the Clinician Should Know, 5th Ed., 2011.
- CDC. [Guidelines for the Investigation of Contacts of Persons with Infectious Tuberculosis: Recommendations from the National Tuberculosis Controllers Association and CDC](#) *MMWR* 2005; 54 (No. RR-15, 1-37)
- CDC. [Guidelines for Using the QuantiFERON–TB Gold Test for Detecting *Mycobacterium tuberculosis* Infection, United States](#) *MMWR* 2005; 54 (No. RR–15, 1–37)
- CDC. Mantoux Tuberculosis Skin Testing Facilitator Guide.
<http://www.cdc.gov/tb/education/Mantoux/part2.htm>
- CDC. Targeted tuberculin testing and treatment of latent tuberculosis infection. *MMWR* 2000;49:1-51.
- CDC. [Updated Guidelines for Using Interferon Gamma Release Assays to Detect *Mycobacterium tuberculosis* Infection — United States, 2010](#) *MMWR* 2010; 59 (RR-5); 1-25
- Reichman LB, and Hershfield ES, eds. Tuberculosis: A Comprehensive International Approach, 2000; Vol. 144.
- Report of the Committee on Infectious Diseases.* Elk Grove Village, IL
- Tennessee Department of Health Tuberculosis Guidelines, 2004