

LIVE ATTENUATED SEASONAL INFLUENZA VACCINE (LAIV) (FluMist® by MedImmune)

GENERAL INFORMATION

General Recommendations for Influenza Vaccination:

Seasonal influenza vaccine comes in two forms: trivalent inactivated vaccine (TIV) administered by injection and trivalent live-attenuated, intranasally-administered vaccine (LAIV). See TIV protocol for persons who prefer it or who are ineligible for LAIV.

It is recommended that all persons aged 6 months and up be vaccinated each influenza season. No preference between TIV and LAIV is expressed for persons eligible to receive either.

New this season: During the 2012-2013 season, **all** children aged 6 months through 8 years *who have not received 2 or more doses of influenza vaccine since July of 2010, or are not sure* should receive *2 doses this season*, regardless of previous influenza vaccination history, in order to assure adequate immunity to the 2009 H1N1 strain of influenza. (see recommended schedule)

The 2012-2013 seasonal vaccine has 2 new strains compared to the 2011-12 vaccine (only the H1N1 strain is the same): an A/California/7/2009 (H1N1) pdm09-like virus; an A/Victoria/361/2011 (H3N2)-like virus; a B/Wisconsin/1/2010-like virus (from the B/Yamagata lineage of viruses).

Begin vaccinating patients as soon as vaccine arrives for the season; delaying vaccination **is not** recommended.

Seasonal LAIV indication:

LAIV is approved by the Food and Drug Administration (FDA) for use in healthy persons aged 24 months through 49 years who are not known to be pregnant.

Special situations:

LAIV may be co-administered with any other vaccine at the same visit. Live vaccines that are not given on the same day (e.g., varicella, MMR) should be administered at least 4 weeks apart when possible.

LAIV may be given to breastfeeding women, and close contacts of pregnant women, infants and contacts of persons with mild to moderate immunocompromise. It should not be administered to close contacts of severely immunocompromised persons who reside in a protective environment (such as a bone marrow transplant unit).

Because influenza antiviral medications (such as oseltamivir or zanamavir) reduce replication of influenza viruses, LAIV should not be given until 48 hours after stopping influenza antiviral

therapy and influenza antiviral medications should not be administered for 2 weeks after receipt of LAIV, unless medically necessary.

Contraindications:

People under 2 years of age or age 50 years or older

Persons with a history of a severe allergic reaction (anaphylaxis) to a previous dose of influenza vaccine or to any component of LAIV, including egg protein.

Children or adolescents on long term aspirin therapy

Precautions (use TIV or refer):

Persons with egg allergy [may be eligible for TIV, see TIV protocol]

People with any medical condition that places them at high risk for complications from influenza [e.g., any chronic heart or lung disease, asthma, recent wheezing episode, reactive airways, diabetes, kidney disease, hemoglobinopathy (e.g., sickle cell), women known to be pregnant, or persons with a weakened immune system]. Use TIV

Children under 5 years whose parent answers “yes” when asked “In the past year, has a healthcare provider ever told you your child had wheezing or asthma?” Use TIV

People with a history of Guillain-Barré syndrome within 6 weeks following a previous dose of influenza vaccine (a precaution, refer)

Common Side Effects (>10% of patients)

Mild, transient symptoms of influenza: nasal congestion, sore throat, headache, fever in young children

PLAN

Have recipient, parent, or guardian read Vaccine Information Statement (VIS)

Counsel regarding benefits, side effects, and management

Administer vaccine intranasal spray (0.1 ml in each nostril) according to manufacturer's recommendation

Remind that seasonal influenza vaccine is recommended annually. Advise the parent or guardian of recipients less than 9 years of age to return for a second dose in 4 weeks if the child has not previously received at least 2 doses of seasonal influenza vaccine since July 2010.

Advise that recipient should not use an antiviral medication within 2 weeks after LAIV administration unless medically necessary.

Advise to wait in clinic 20 minutes after intranasal administration

Record manufacturer and lot number of the vaccine administered, date, name, address, and title of person administering vaccine

Instruct patient to contact Health Department if adverse reaction occurs (complete appropriate VAERS form: <http://vaers.hhs.gov>)

Recommended Schedule and Dosage of LAIV (FluMist®):

Age Group	Influenza Vaccination Status	Dosage Schedule
Children 24 months through 8 years	Has not had at least 2 seasonal influenza vaccine doses since July 2010 or not sure	2 doses (each dose 0.1ml per nostril) given at least 4 weeks apart*
	Has had 2 or more seasonal influenza vaccine doses since July 2010**	1 dose (0.1 ml per nostril)
Other persons aged 9 through 49 years	n/a	1 dose (0.1 ml per nostril)

*TIV or LAIV may be used interchangeably for either dose, if appropriate.

**This is the simplest screening option. If a child is known to have had 2 doses of any seasonal influenza vaccine *and* at least 1 dose of any vaccine containing the 2009 H1N1 strain (the 2009 pandemic vaccine, or either 2010-11 or 2011-12 seasonal vaccines), such a child needs only one dose of seasonal vaccine this season.

Referral Indicators:

Persons with history of severe allergic reaction to components of vaccine (gelatin, gentamicin, arginine, egg protein) or who have had a severe allergic reaction to a previous dose of influenza vaccine.

Persons who report egg allergy. Evaluate them for administration of TIV using the assessment tool in the TIV protocol.

Persons with history of Guillain-Barré syndrome within 6 weeks of a previous dose of influenza vaccine.

Persons having moderate to severe acute febrile illness or illnesses with significant nasal congestion (until illness resolves)

REFERENCES

CDC. Epidemiology and Prevention of Vaccine Preventable Diseases, 12th Ed. May 2012;151-171.

CDC. Prevention and Control of Influenza with Vaccines: Recommendations of the Advisory Committee on Immunization Practices (ACIP) — United States, 2012–13 Influenza Season. MMWR 2012;61:613-618.

FluMist® Influenza Vaccine, Live Intranasal Vaccine Prescribing Information for 2012-2013 (MedImmune). http://www.medimmune.com/pdf/products/flumist_pi.pdf. Last accessed August 19, 2011.

TRIVALENT INACTIVATED SEASONAL INFLUENZA VACCINE (TIV)

GENERAL INFORMATION

General Recommendations for Influenza Vaccination:

Seasonal influenza vaccine comes in two forms: trivalent inactivated vaccine (TIV) administered by injection and live-attenuated, intranasally-administered vaccine (LAIV). See LAIV protocol for healthy persons 24 months and up who choose LAIV, where available.

It is recommended that all persons aged 6 months and up be vaccinated each influenza season.

New this season: During the 2012-2013 season, **all** children aged 6 months through 8 years *who have not received 2 or more doses of influenza vaccine since July of 2010 or are not sure* should receive *2 doses this season*, regardless of previous influenza vaccination history, in order to assure adequate immunity to the 2009 H1N1 strain of influenza. (see recommended schedule)

The 2012-2013 seasonal trivalent influenza vaccine has 2 new strains compared to the 2011-12 vaccine (only the H1N1 strain is the same): an A/California/7/2009 (H1N1) pdm09-like virus; an A/Victoria/361/2011 (H3N2)-like virus; a B/Wisconsin/1/2010-like virus (from the B/Yamagata lineage of viruses).

Begin vaccinating patients as soon as vaccine arrives for the season; delaying vaccination **is not** recommended.

Licensed TIV and LAIV formulations available by manufacturer (not all available in health departments):

Manufacturer	Trade Name	How Supplied	Mercury Content (mcg Hg/0.5 mL dose)	Age Group
CSL Biotherapies (Distributed by Merck Vaccines)	Afluria	0.5 mL (single-dose syringe)	0	9 years & older
GlaxoSmithKline (GSK)	Fluarix	0.5 mL (single-dose syringe)	0	36 months & older
ID Biomedical Corporation of Quebec (Distributed by GlaxoSmithKline)	FluLaval	5.0 mL (10-dose vial)	25	18 years & older
MedImmune	FluMist	0.2 mL (single-use sprayer)	0	2 through 49 years
Novartis Vaccines	Fluvirin	0.5 mL (single-dose syringe)	≤1	4 years and older
		5.0 mL (10-dose vial)	25	
	Agiflu	0.5 mL (single-dose syringe)	0	18 years & older
sanofi pasteur	Fluzone	0.25 mL (single-dose syringe)	0	6 through 35 months
		5.0 mL (multi-dose vial)	12.5	6 through 35 months
		0.5 mL (single-dose syringe)	0	36 months & older
		0.5 mL (single-dose vial)	0	36 months & older
		5.0 mL (multi-dose vial)	25	6 months & older
	Fluzone High-Dose	0.5 mL (single-dose syringe)	0	65 years & older
Fluzone Intradermal	0.1 mL (single-dose microinjection system)	0	18 through 64 years	

Centers for Disease Control and Prevention (CDC) recommendations:

CDC recommends annual influenza vaccine for ALL persons without medical contraindications, aged 6 months or older.

Persons who should not receive the influenza vaccine include the following:

(See Referral Indicators for precautions)

Persons with a severe allergy (i.e., anaphylactic allergic reaction) to a previous dose of influenza vaccine or its components

Children less than 6 months of age

PLAN

Have recipient, parent, or guardian read Vaccine Information Statement (VIS)

Counsel regarding benefits, side effects, and management (see figure below for assessment of persons who report egg allergy)

Administer vaccine injection according to manufacturer's recommendation

Remind that seasonal influenza vaccine is recommended annually. Advise the parent or guardian of recipients less than 9 years of age to return for a second dose in 1 month if the child has not previously received at least 2 doses of seasonal influenza vaccine since July 2010.

Advise to wait in clinic 20 minutes after injection

Record manufacturer and lot number of the vaccine administered, date, name, address, and title of person administering vaccine

Instruct patient to contact Health Department if adverse reaction occurs (complete appropriate VAERS form)

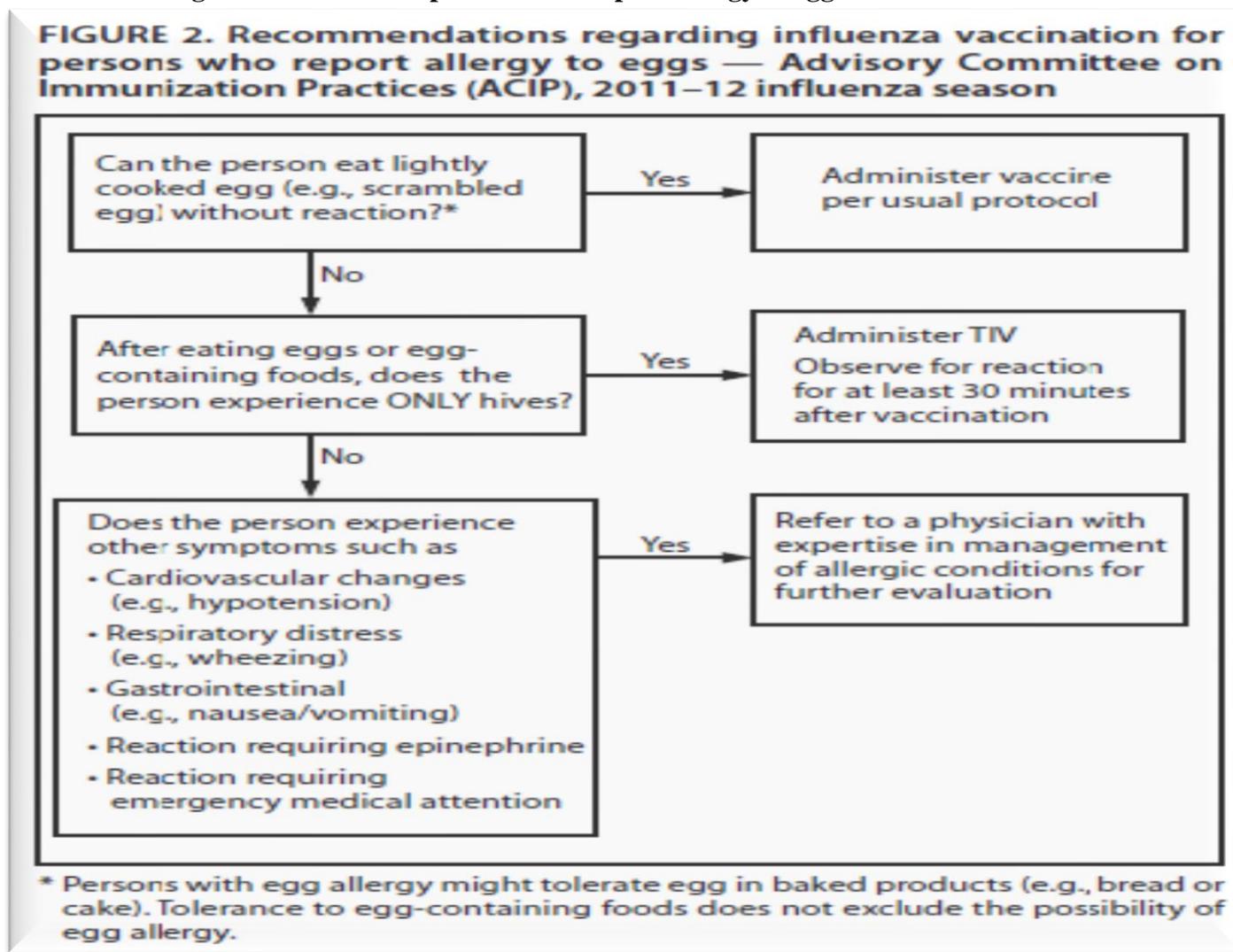
Recommended Schedule and Dosage of Seasonal Trivalent Inactivated Vaccine (TIV):

Age Group	Influenza Vaccination Status	Dosage Schedule
Children 6 months through 35 months	Has not had at least 2 seasonal influenza vaccine doses since July 2010 or not sure	2 doses (each dose 0.25 ml, IM) at least 4 weeks apart*
	Has had 2 or more seasonal influenza vaccine doses since July 2010**	1 dose (0.25 ml, IM)
Children 36 months through 8 years	Has not had at least 2 seasonal influenza vaccine doses since July 2010 or not sure	2 doses (each dose 0.5 ml, IM) at least 4 weeks apart*
	Has had 2 or more seasonal influenza vaccine doses since July 2010**	1 dose (0.5 ml, IM)
All others 9 years and up	Not relevant	1 dose (0.5 ml, IM)

*TIV or LAIV may be used interchangeably for either dose, if appropriate.

**This is the simplest screening option. If a child is known to have had 2 doses of any seasonal influenza vaccine *and* at least 1 dose of any vaccine containing the 2009 H1N1 strain (the 2009 pandemic vaccine, or either 2010-11 or 2011-12 seasonal vaccines), such a child needs only one dose of seasonal vaccine this season.

Use the following table to screen all patients who report allergy to egg:



Referral Indicators:

Persons with severe allergy to eggs (not only hives, as defined in the figure above) or components of vaccine (see prescribing information)

Persons with history of Guillain-Barré syndrome

Persons having moderate to severe acute febrile illness (until illness resolves)

REFERENCES

CDC. Epidemiology and Prevention of Vaccine Preventable Diseases, 12th Ed. May 2012;151-171.

CDC. Prevention and Control of Influenza with Vaccines: Recommendations of the Advisory Committee on Immunization Practices (ACIP) — United States, 2012–13 Influenza Season. MMWR 2012;61:613-618.

GONORRHEA

SUBJECTIVE

Symptoms may include:

FEMALES- (a large percentage of infected women are asymptomatic in the early stages of disease)

Early Symptoms

- Dysuria
- Leukorrhea, change in vaginal discharge
- Unilateral labial pain and swelling
- Lower abdominal discomfort
- Pharyngitis

Later Symptoms

- Purulent, irritating vaginal discharge
- Fever (possibly high)
- Rectal pain and discharge
- Abnormal menstrual bleeding
- Increased dysmenorrhea
- Nausea, vomiting
- Lesions in genital area
- Joint pain and swelling
- Upper abdominal pain

MALES -

Early Symptoms

- Dysuria with increased frequency
- Whitish discharge from penis
- Pharyngitis

Later Symptoms

- Yellowish/greenish discharge from penis
- Epididymitis
- Proctitis

“A friend told me to come in”

Pain, tenderness in pelvic organs

Sexual contact to confirmed or suspected case of gonorrhea

Private physician or other health care provider referral

OBJECTIVE

Purulent discharge from urethra or cervix noted on exam

Laboratory positive for *Neisseria gonorrhoeae*

ASSESSMENT

Confirmed or suspected case of *Neisseria gonorrhoeae*

Contact to confirmed or suspected case of *Neisseria gonorrhoeae*

Last menstrual period

Assess sites exposed (vaginal, oral, rectal, and urethral)

PLAN

Screen¹ for chlamydia and gonorrhea using currently available test; refer to “*Laboratory Policies and Procedures Manual for Local Health Departments*” for information on specimen storage and mailing.

Draw blood for syphilis serology.

Consider need for hepatitis B vaccination and provide (if available) or refer as indicated

Offer HIV counseling and literature for all clients; offer testing for high-risk individuals or those requesting service.

Interview patient for sexual contacts and encourage all contacts to obtain treatment:

Obtain name, address, phone number, age, sex, race, and date of exposure of all contacts within the last 60 days; do not write the information in the patient’s record; if a contact to confirmed case, **do not write the original case name in the contact’s chart.**

Notify the public health representative of the original positive case name and contact information Counsel, examine, and test all persons exposed.

TREATMENT

It is recommended that all patients being treated for gonorrhea receive dual treatment for both gonorrhea and chlamydia.²

Treatment for Gonorrhea and Chlamydia (regardless of site of infection)**Non-Allergic Adult/Adolescent:**

Ceftriaxone 250 mg IM as a single dose

PLUS ONE OF THE FOLLOWING:

Azithromycin 1 gm orally as a single dose

OR

Doxycycline 100 mg orally BID x 7 days^{3,4}

Non-allergic Pregnant Adult/Adolescent or Breastfeeding Mothers:

(if unprotected coitus since LMP, suspect pregnancy and treat accordingly):

Ceftriaxone 250 mg IM as a single dose

PLUS ONE OF THE FOLLOWING:

Azithromycin 1 gm orally as a single dose

OR

Amoxicillin 500 mg orally TID x 7 days⁴

¹ Several studies of different test technologies have shown various post-treatment intervals wherein a false positive test result may occur. Repeat testing for *N. gonorrhoeae* should not be performed less than 1 week after appropriate treatment, and repeat testing for *C. trachomatis* should not be performed less than 3 weeks after appropriate treatment. Patients that have been exposed to an infected person within these intervals treatment should be re-treated, but not re-tested.

² Dual treatment is recommended because patients infected with *N. gonorrhoeae* frequently are co-infected with *C. trachomatis*. Additionally, the use of a second antimicrobial is recommended for use with ceftriaxone to theoretically improve treatment efficacy and delay emergence and spread of resistance to *N. gonorrhoeae* to cephalosporins.

³ Doxycycline is contraindicated in pregnancy and nursing mothers.

⁴ Because of resistance concerns among Gonococcal Isolate Surveillance Project isolates, the use of azithromycin as the second antimicrobial is preferred to doxycycline (and, among pregnant or nursing mothers, to amoxicillin).

Allergic Adult/Adolescent (regardless of pregnancy or breastfeeding status):

Azithromycin 2 grams (tablet only) orally as a single dose

PLUS

Test-of-cure in 1 week

If the patient has no clinical symptoms of persistent infection, the DNA-Probe specimen collection may be used for testing.

OR

If the patient has persistent symptoms, a culture plate with antimicrobial susceptibility should be performed.

The decision to re-treat at the test-of-cure visit will be based on nursing judgment and/or consultation with the APN or physician.

DILUENT- Use 1% lidocaine solution, sterile water for injection, or 0.9% sodium chloride solution and document accordingly (if allergic to lidocaine, mix with sterile water or normal saline). Lidocaine allergy includes allergies to local anesthesia such as Nupercaine®, Xylocaine®, Carbocaine®, Marcaine® or Atanert®; there has been no cross sensitivity shown to para-aminobenzoic derivatives such as procaine, tetracaine, and benzocaine.

Penicillin or Cephalosporin Allergies: Ceftriaxone is the drug of choice for gonorrhea. If the patient alleges an allergy to penicillin or cephalosporins, the nurse should take a thorough history of allergic response to determine if there is a history of a severe reaction such as anaphylaxis or Stevens Johnson syndrome. If the history indicates a non-anaphylactic reaction, (i.e. mild to moderate rash, itching, etc.), the patient should be treated with ceftriaxone.⁵ If history indicates a severe reaction such as anaphylaxis, or the nurse is unable to gain a reliable history consistent with a non-anaphylactic reaction, the patient should be treated with azithromycin 2 grams followed by a test-of-cure 1 week after treatment.

Health Teaching

Offer condoms and encourage use during any sexual activity.

Encourage all sexual contacts to obtain care.

Stress completion of all medicines and advise to avoid intercourse until patient and their sex partner(s) have completed treatment including 7 days after single-dose therapy or completion of 7 or 14-day treatment regimen.

Warn patient that until medication is completed and all sex partners are treated, gonococcal infection may be transmitted and reinfection is likely.

If using oral contraceptive, encourage use of barrier method until two weeks following completion of treatment. Offer condoms.

Discuss HIV and STD prevention.

Encourage voiding before and after intercourse.

Increase water intake with medications.

⁵ Studies indicate that only 10% of patients alleging an allergy to PCN are actually allergic when testing is done. Only 5-10% of patients allergic to PCN will have a cross reaction/sensitivity to cephalosporins; therefore, only 0.5-1% of patients that allege an allergy to PCN would actually be allergic to a cephalosporin. With a thorough history taken on those patients alleging PCN allergy, a risk of an allergic reaction to ceftriaxone will be extremely rare.

Avoid antacids and exposure to sun when taking doxycycline.
Stress hygiene, including wearing cotton underwear, loose clothing, avoidance of underpants while sleeping, wiping from front to back and avoid feminine hygiene sprays and deodorants.
Stress need for follow-up exam if symptoms persist, recur, or exacerbate.

Referral Indicators

Pregnant individuals with **significant** medical issues (consultation with private physician or Health Officer prior to treatment)
Prepubertal children as indicated (refer to HSA Child Abuse Policy)
No response to treatment
Dyspareunia and/or moderate to severe abdominal pain
Complications (i.e. PID, postpartum infection, abnormal Pap)

Follow-Up

Counsel all infected clients, regardless of treatment regimen, to return 1 week after treatment **if they experience persistent clinical symptoms**.
In the absence of persistent clinical symptoms, counsel all infected patients to return for retesting of gonorrhea 3 months after completion of treatment or 1 week after treatment if not treated with ceftriaxone. If this does not occur, retest all persons treated for infection if they present for care within 12 months following treatment.
Treatment failure should be considered in all patients with clinical or laboratory evidence of persistent infection after treatment. In all cases of suspected treatment failure, consult with nurse practitioner or physician and obtain a culture with antimicrobial susceptibility testing on specimens from relevant anatomic sites.
Suspected treatment failures should be reported within 24 hours.
Report all cases to Sexually Transmitted Disease Program representative.

REFERENCE

Centers for Disease Control and Prevention Update to CDC's Sexually Transmitted Diseases Treatment Guidelines, 2010: Oral Cephalosporins No Longer a Recommended Treatment for Gonococcal Infections. MMWR 2012; 61(31);590-594.

Centers for Disease Control and Prevention Sexually Transmitted Diseases Treatment Guidelines, 2010. MMWR 2010; 59 (No. RR-12).

Lyss SB, Kamb ML, Peterman TA, et al. *Chlamydia trachomatis* among patients infected with and treated for *Neisseria gonorrhoeae* in sexually transmitted disease clinics in the United States. Ann Intern Med 2003;139:178–85.

Sathia L, Ellis B, Phillip S, et al. Pharyngeal gonorrhoea—is dual therapy the way forward? Int J STD AIDS 2007;18:647–8.

Golden M, Kerani R, Shafii T, Whittington W, Holmes K. Does azithromycin co-treatment enhance the efficacy of oral cephalosporins for pharyngeal gonorrhoea? Presented at: 18th International Society for STD Research (ISSTD) Conference, London, UK, June 2009.

Gonorrhea and Chlamydia Treatment Decision Tree

