**Vaccine CONSIDERATIONS IN PEDIATRIC POPULATIONS**

Contributing SPD members: Mumtaz Ashraf Munshi, Yvonne Chiu, and Jenna Streicher

Committee reviewers: Esteban Fernandez-Faith and Irene Lara-Corrales

WHAT ARE VACCINES?

Your immune system helps to protect you against illnesses and infections. One way your immune system works is by making proteins called antibodies to fight infections. Vaccines help your immune system to make antibodies to prevent illnesses from infections. After getting vaccinated, you are less likely to get sick from an infection. Vaccines are one of the safest and most effective ways to prevent infectious diseases.

WHEN SHOULD MY CHILD GET VACCINES?

The vaccine schedule for children depends on their age. Children should start getting vaccines at birth and continue receiving them during childhood. Depending on where you live, the vaccine schedule may be different. An example of a vaccine schedule can be found on the Center for Disease Control (CDC) website (<https://www.cdc.gov/vaccines/schedules/hcp/imz/child-adolescent.html>).

Children need to get their vaccines on time. Some vaccines require multiple doses to get full protection from disease. By following the schedule, you can make sure that your child will be best protected. This can prevent potentially life-threatening diseases.

WHAT IF MY CHILD MISSED A VACCINE DOSE DURING ITS RECOMMENDED TIME?

It is very important to know if your child is missing a vaccine. Bring this to the attention of your doctor as soon as possible. If your child is only missing a single dose, you do not have to restart the whole series. Your child’s doctor can give the missing dose as soon as possible. There are catch up recommendations on any missed vaccines. An example can be found on the CDC website.

**SPECIAL CONSIDERATIONS**

CAN MY CHILD STILL GET VACCINES IF THEY ARE IMMUNOCOMPROMISED?

Yes, vaccines are especially important in children with weak immune systems (immunocompromised). These children are at a higher risk of getting infectious diseases. There are special schedules for immunocompromised patients. These might include additional vaccines. Immunocompromised children **should not** receive any live vaccines. Examples of live vaccines include rotavirus, Measles-Mumps-Rubella, and varicella vaccines. There are other live vaccines as well. It is important to ask about the type of vaccine your child is receiving. Inactivated or killed vaccines are safe in immunocompromised patients.

WHAT IF MY CHILD IS ON IMMUNOSUPPRESSIVE MEDICATION?

Your child’s dermatologist may recommend medications to treat severe skin diseases that weaken their immune system (immunosuppressive medications). These medications can lower the ability to fight infections. It is important to work with your child’s dermatologist and primary care physician to make sure your child is up to date on all vaccines. If your child is missing any vaccines, these vaccines should ideally be given before starting these medications. Once your child starts taking the medicine, live vaccines should be avoided.

Some immunosuppressive medications may affect the way your child’s body responds to vaccines. Your doctor may suggest a blood test to make sure the vaccine worked. This will measure the antibody levels. If the levels are not high enough, there might be a need to repeat the vaccine.

SHOULD MY CHILD GET THE FLU SHOT EVERY YEAR?

The flu vaccine should be given to all children six months and older every year. The flu vaccine comes in two forms: live (given through the nose) and inactivated (given as a shot). The live version should not be given if your child is immunocompromised or on immunosuppressive medication. The inactivated vaccine is safe to give.

DO HOUSEHOLD MEMBERS ALSO NEED TO BE FULLY VACCINATED?

If your child is immunocompromised or on immunosuppressive medicines, all household members should be up to date on vaccines. This reduces the risk of spreading infections to your child. It is safe for healthy household members to receive most live vaccines but check with your doctors for each vaccine.

ARE ADDITIONAL VACCINES NEEDED IF WE ARE TRAVELING ABROAD?

Additional vaccines may be needed when traveling. Specific vaccines may be recommended depending on the destination of your trip. Children should be up to date on the vaccine schedule. They should receive any travel vaccines at least one month before traveling. The most commonly recommended vaccines for travelling are hepatitis A and yellow fever.

**COVID-19 VACCINATION**

COVID-19 vaccines can currently be given to children ages 12 years and older in certain countries. However, the vaccine eligibility age is quickly expanding to include younger children. Clinical trials are currently enrolling children as young as six months. It is highly recommended that your child receives the COVID-19 vaccine when eligible. If your child is on immunosuppressive medications, please talk to your doctor for specific advice about the COVID-19 vaccine. COVID-19 vaccine development and research are rapidly changing. Please check with your doctor for the latest recommendations.

**LIVE VACCINES:**

Intranasal influenza

Measles-Mumps-Rubella (MMR)

Varicella

Rotavirus

Oral polio virus

Smallpox