



Pediatric Clips

NURSING

Respiratory Syncytial Virus (RSV)

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Pediatric Nursing Clips by Pediatric Advanced Practice Nurses at Dayton Children's provides quick reviews of common pediatric conditions.

The Children's Medical Center of Dayton is the region's pediatric referral center for a 20-county area. As the only facility in the region with a full-time commitment to pediatrics, Dayton Children's offers a wide range of services in general pediatrics as well as in 35 subspecialty areas for infants, children and teens. We welcome your inquiries about services available – call 937-641-3666 or e-mail marketing@childrensdayton.org.

Experts you trust, caring for the children you love.

WHAT IS RSV AND HOW IS IT SPREAD?

RSV is a viral illness and the most common cause of pneumonia and bronchiolitis among infants and children under the age of 1 year. The illness begins with cold-like symptoms, and the majority of children hospitalized with RSV infection are under 6 months of age. Recovery is usually in 8 to 15 days.

RSV is an unstable virus, which survives only a few hours on environmental surfaces. It is spread via respiratory secretions and is highly contagious.

Close contact with infected persons or contaminated surfaces is the most common mode of transmissions. RSV is readily inactivated with soap and water and disinfectants. It is important to encourage good hand washing among all family members at all times. Children enjoy using waterless hand cleaners and compliance is increased when they are available. RSV is typically identified in nasal secretions collected by doing a nasal wash and aspirating the return. A rapid diagnostic test is usually available.¹

WHEN IS RSV SEASON?

Typically the season begins when the health department in the county has had reports of a predetermined number of cases. In this region the season is usually from November until April. The severity and timing vary annually.

RSV PROPHYLAXIS

Antibiotics are only effective against bacteria and RSV is a virus; therefore, they are not effective in the treatment of RSV. Synagis (Palivizumab) is a prophylaxis (antibody to work specifically against the RSV virus) given to decrease susceptibility. Synagis is not an immunization and does not prevent RSV. The dose is 15 mg/kg/dose administered intramuscularly.³ If an

infant does get RSV, the illness will probably be less severe if receiving the series of Synagis injections. Hospitalization may still be necessary, but severity of the illness is shown to be improved.

Synagis clinics are operated by many local health departments and hospital/health clinics. This is a more cost effective method of administration since the medication is expensive. The infant's primary care provider must make a referral to the clinic.

During RSV season, the first dose of Synagis should be given to eligible infants before discharge from the hospital. Subsequent doses should be given every 28 days throughout the entire RSV season. Those very premature or chronically ill infants may be eligible for a second course of Synagis the following year.

Every 28-day dosing throughout RSV season increases the blood level of the drug and decreases susceptibility. Stressing the importance of the monthly injections and encouraging compliance is an important part of health and wellness counseling for caregivers.

WHO IS A CANDIDATE FOR RSV PROPHYLAXIS?

Generally, premature infants and those with chronic health issues are candidates for RSV prophylaxis for at least the first RSV season of their life. Some infants may be candidates for a second season. This is dependent upon how premature they were or what chronic health issues they continue to have.

The following groups meet the criteria for RSV prophylaxis (age at the start of RSV season):

- Very premature infants with no chronic lung disease, 28 weeks gestation or less at birth and less than or equal to 12 months.

- Slightly less premature infants with no chronic lung disease, 29-32 weeks gestation at birth and less than or equal to 6 months (born in April or later that year).
- Older premature infants with no chronic lung disease, 33-35 weeks gestation at birth and less than or equal to 6 months (born in April or later that year).
- Older premature infants must also have at least two of the following risk factors to be eligible for RSV prophylaxis: school-age siblings, attending daycare in the presence of 2 or more unrelated children for 4 or more hours per week, exposure to environmental air pollutants, severe neuromuscular disease, congenital abnormalities of the airways, low birth weight (less than 2500g at birth), crowded living conditions, multiple birth or family history of asthma.
- Any infant with chronic lung disease who is 2 years or under, or if any of the following were required in the 6 months before the start of RSV season: supplemental oxygen, bronchodilators, diuretics, corticosteroids.
- Infants with any hemodynamically significant cyanotic or acyanotic congenital heart disease that are 2 years or under.
- Infants with serious immune function disorders or compromised pulmonary conditions other than prematurity and are 2 years or under.²

HOSPITALIZATION FOR RSV

Some infants and young children may require hospitalization for RSV. Oxygen and medications help open the airways and IV fluids may be necessary for those who are unwilling or

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unable to take oral feedings. If symptoms are severe, intubation with ventilator support may be required.

Stressing the importance of good hand washing practices in all families and compliance with monthly RSV prophylaxis for those infants who are candidates will go a long way in decreasing the severity of RSV.

REFERENCES

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2. Respiratory Syncytial Virus. In: Peter G, ed. 1997 Red Book: Report of the Committee

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FEATURED NURSE SPECIALISTS



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Neonatal Nurse Practitioners (NNP's) in the neonatology department at The Children's Medical Center of Dayton. Collectively, they have 67 years of experience as Newborn Intensive Care Unit (NICU) nurses and 25 years of experience as NNP's. The NNP's are responsible for the day-

to-day medical management of NICU patients in collaboration with the neonatologist. They coordinate complex discharges and oversee referrals for follow up of NICU patients to Synagis and other specialty clinics.

The NNP's are adjunct faculty at Wright State University Boonshoft School of Medicine and are responsible for much of the resident clinical education in the NICU. The NNP's provide education to the NICU staff, outreach education at referral hospitals and are clinical instructors for NNP students.

NEWBORN INTENSIVE CARE UNIT AT DAYTON CHILDREN'S

The Level III Regional Newborn Intensive Care Unit (NICU) at Dayton

Children's receives infants from a 20-county referral base in Ohio. The goal is to provide family-centered care to the youngest and most fragile patients and their families. The calm, home-like atmosphere provides a perfect setting for optimal growth and healing of critically ill infants. The entire staff focuses on the developmental needs of the infants and the emotional needs of their families to provide support for all. Tours can be arranged for parents-to-be with a prenatal diagnosis that will necessitate admission to the NICU. For more information about the NICU, call 937-641-3040

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The Specialty Care Center will bring Dayton Children's pediatric specialists, laboratory and medical imaging services to the children of Warren and Butler counties.

The Specialty Care Center will be located at 100 Campus Loop Road, Suite A, Franklin, Ohio, 45005, on the Premier Health campus near the new Atrium Medical Center.



For further information about The Children's Medical Center of Dayton or its nursing program contact the nursing recruiter at 937-641-3666 or marketing@childrensdayton.org.



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