Tatum Lee

**Question:**

Which anatomical difference would determine if transitioning older infants should receive NRP or PALS when needed?

**Summary:**

When it comes down to the differences of neonatal resuscitation and pediatric advanced life support there is not much. Neonatal resuscitation is generally used for delivery rooms while as pediatric advanced life support tends to focus on a broader range of cardiopulmonary events. Currently there is not an exact protocol in place for infants that have been hospitalized for an extended amount of time on when they should transition to PALS. In the late 80s the NRP was designed for infants transitioning from intrauterine to extrauterine life while the PALS guidelines outline the use of medications during cardiac arrest. The NRP algorithm follows the sequence of airway, breathing, and circulation that mostly prioritizes ventilation. Chest compressions are not started until the neonates heart rate remains less than 60 beats per min even with adequate ventilation. Infants and children needing PALS often need CPR in response to a primary respiratory cause such as shock, acidosis, hypoxemia, hypercapnia and then bradycardia which then results in cardiac arrest. Compressions are started for patients whose heart rate is less than 60 beats per minute with signs of poor perfusion and have no pulse. While receiving PALS the patient is connected to a monitor to assess for a shockable rhythm. Some studies have shown that it doesn't matter the gestation of the kid but which ICU they are currently admitted in and the preference of the provider on whether or not NRP or PALS will be utilized.

**Conclusion:**

In conclusion, after reading many journals over NRP and PALS I find there is a lack of scientific data on the mortality and neurological outcome of older infants who receive NRP outside of the delivery room. There is no set standard or protocol for these children in these gray areas. This causes many institutions to lack clarity and therefore can not make a hospital wide guideline. It is believed that each person should be treated as their own individual self with different needs. Each infant or kid is going to require a different type of resuscitation and nothing should solely be based on anatomical differences amongst them. A two day old NICU baby could come back to the hospital in a few days and then be admitted to the PICU where they still possibly might need NRP or a freshly born NICU baby could need cardiac assistance which would lean more towards PALS. More research is needed into the development of a plan for these hospitals and how they are going to go about care for an individual in need of life saving measures.

**Citations:**

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Secondary: Harer, M. W., Konkol, L. J., & Limjoco, J. J. (2022). Transitioning from NRP to a combined PALS-NRP resuscitation model at a level IV NICU. *Journal of Perinatology*, *42*(11), 1533–1534. https://doi.org/10.1038/s41372-022-01416-3

Tertiary: Handley, S. C., Passarella, M., Raymond, T. T., Lorch, S. A., Ades, A., & Foglia, E. E. (2021). Epidemiology and outcomes of infants after cardiopulmonary resuscitation in the

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