99 RESULTS: There were 181 admissions for RSV (all ages and gestations), mostly in previously healthy term and late preterm infants. Two hundred twenty-six infants, gestational age 29-32 weeks and eligible for prophylaxis by both CPS and AAP guidelines were followed: 41 (18%) were eligible and received PVZ according to BC guidelines: There were six admissions in this group, but five contracted RSV prior to receiving PVZ. There were four admissions from the remaining 185 infants who did not receive PVZ.

CONCLUSIONS: Most admissions for RSV would not have received prophylaxis by any published guidelines. For the 29-32 week group, our re-admission rate for BC-ineligible infants of 2.2% [95% CI: 0.65-5.6%] was similar to Canadian Registry data [1.25%]. A risk factor approach appears to be effective in discriminating infants at this gestational age to either low or high chance for readmission with RSV. Optimal results require all eligible infants to receive prophylaxis at season start. Subgroup selection based on risk factors may be applicable to other newborn categories at higher risk for RSV admission.

64 ROBOTICS IN HEALTH CARE: REDUCING CHILD DISTRESS DURING FLU VACCINATION

*T Beran, A Ramirez-Serrano, S Kuhn, O Vanderkooi
Medical Education and research, University of Calgary, Calgary, Alberta

BACKGROUND: Distress (combination of pain and anxiety) during vaccination is common among children, reported at a rate as high as 50% (Jacobson et al 2001). Methods of reducing distress during vaccinations are clearly desirable for children, their families, and health care professionals.

OBJECTIVES: Our goal was to determine whether children’s interaction with a pre-programmed robot, compared to no robot interaction, could decrease their distress and increase coping during administration of a flu vaccination.

DESIGN/METHODS: Recruitment was conducted through physician referral and posters placed at various hospital clinics informing parents that they can obtain their child’s yearly flu vaccination at the infectious diseases clinic within the hospital. Fifty-seven children (29 male, 28 female; mean age = 6.87 years, SD = 1.34) were randomly assigned to: (1) the robot condition consisted of a three-foot tall humanoid robot NAO (Aldebaran Robotics) sitting on a bed facing each child and using distractions such as music, talking about movies, picking up toys, and asking the child to blow during the vaccination; (2) comparison condition consisted of minimal distractions given by a nurse (e.g., “I’m going to count to five.”). All children were accompanied by at least one parent and were vaccinated by a pediatric nurse. Sessions were videotaped and coded using the Behavioral Approach-Avoidance Distress Scale. It consists of two subscales with scores ranging from 1-5. Higher scores indicate more distress on one subscale and more coping behaviours on the other subscale. Intraclass correlation coefficients are 0.78 for and 0.89, respectively, indicating good inter-rater reliability from two raters of all 57 videos.

RESULTS: A multivariate analysis of variance was conducted using researcher ratings of distress and coping. Results indicate that distress was significantly lower for the robot (M = 1.71, SD = 0.96) than the comparison condition (M = 2.47, SD = 1.18). P(1, 50) = 6.42, p<0.05. Also, coping was significantly higher for the robot condition (M = 3.58, SD = 0.78) than the comparison condition (M = 3.03, SD = 1.17). P(1, 50) = 3.86, p<0.05. The effect sizes are moderate.

CONCLUSIONS: Children’s interaction with a robot during a vaccination provides an effective distraction which significantly reduces distress and may be beneficial for children during other painful medical procedures.