NU-001. PERIPHERALLY INSERTED CENTRAL VEINOUS CATHETER (PICC) IN PEDIATRIC HEMATOLOGY-ONCOLOGY UNIT: A SINGLE CENTRE EXPERIENCE
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OBJECTIVE: To determine common complications in peripherally inserted central catheters (PICCs) among pediatric oncology patients in a developing world scenario. METHODS: Retrospective analysis of data of patients in whom PICC line was inserted at our centre from January 2011 to July 2013. RESULTS: A total of 82 PICCs were inserted in our cohort over the study period among 286 treated patients at our unit. 10 patients had PICCs inserted twice and 2 of them thrice. 49 patients were males (72%) and 19 were females (28%) with a median age of 5.7 years (range: 0-14.8 years). 36 (46.6%) had hematolymphoid malignancies, (ALL 42 out of 82) was most common (4.8%) had solid Diamorphine, basilica (4) was most common. The basilic vein was used most frequently (n = 75; 91.2%) for PICC placement. The commonest indication for PICCs was chemotherapy and majority were inserted during induction- phase chemotherapy. The total duration in-situ for the 82 PICC in our cohort was 3,560 catheter-days (median-time 71.5 days; range: 1-195 days). PICC-associated blood-stream infection, in 28 PICCs was the most common complication in these patients (34.1%, n = 82; 7.8 episodes/1,000 catheter-days) with Gram-positive organisms isolated in 40% cases. Gram-negative organisms in 32% and fungi in 28% cases. Well-recognized hospital-acquired pathogens like Stenotrophomonas, Pseudomonas, Enterococci, Acinetobacter, Candida and Penicillium constituted >30% of isolated organisms. Other complications noted were catheter-occlusion (6%), accidental displacement (4.8%) and catheter-associated venous thrombosis (4.8%). No mortality attributable to PICCs was noted. CONCLUSIONS: Despite significant complications, PICCs are a relatively safe and cost-effective method of establishing long-term central venous access in pediatric-oncology patients. Catheter associated blood-stream infection (CABSI) remains a major morbidity in this patient cohort, often necessitating catheter removal. Pain relief was the major benefit and a tradeoff for increased risk of infection.

NU-002. NURSE LED PALLIATIVE CARE AT HOME FOR CHILDREN WITH BRAIN TUMOURS-WEST OF SCOTLAND EXPERIENCE
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PURPOSE: Yorkhill Hospital’s four Paediatric Oncology Nurse Specialist (POONS) provide a 24/7 palliative care on-call service for Glasgow and the West of Scotland. 67% of palliative families of children with brain tumour wished home to be the place of death for their child did the service facilitate this? METHOD: A retrospective analysis of numbers, place of death and families choice was performed using the notes kept by the POONS. When a child or young person is deemed to be palliative, options for care-Home, Children’s Hospice, Ward, Teenage Cancer Trust unit or a combination of all are discussed. On disease progression a Just-in-case Box is placed in the house containing l.v. Cyctine, Levomepromazine, Diamorphine, Midazolam; necessary sundries and a McKinley Syringe Driver. An individualised symptom care guideline & Prescription ensure timely interventions. The family is given the POONS mobile phone numbers and on call rota. Daily visits, distances permitting are arranged depending on the child’s condition, need for parental support, changes in medication and input from the community services. If the family wish the POON attends at the time of death. Is there direct Consultant back-up throughout. RESULTS: The unit sees about 18-20 new brain tumour patients a year. Over the last 6 years 110 patients were treated of which 32 died (29%). Of the 30 planned palliative families (excluding 2 on treatment and sudden, ICU deaths) 20(66.7%) families chose home as their preferred place of death for their child. Of (13.3%) families chose hospice and 6 (20%) families chose ward as the place of death. POONs facilitated the death at home for all the 20 families (100%) who had wished so. CONCLUSIONS: POONs led palliative care facilitated, with continuity and familiarity, specialist palliative care for children with brain tumour that enabled 100% of families their first choice of place of death at home.

NU-003. PARENTAL EXPERIENCES OF LIFE AFTER CNS-TUMOUR IN A CHILD
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BACKGROUND: The majority of children with CNS-tumours will survive the illness but there is a long term risk of late effects as well as relapse of disease. PURPOSE: The purpose of this study is to describe the parental experiences of life when having a child undergoing recurrent follow-up after CNS-tumour. METHOD: As part of a masters degree, a qualitative study was performed with parents of children who where regularly undergoing MRI. Open-ended, in dept interviews with six parents took place. Interviews where taped and written in a transcript. TRANSFORMATIVE APPROACH: We used open-ended interviews and allowed data to shape the research. A qualitative approach to data collection and analysis was used. RESULTS: We found that parents faced a number of worries that co-exist. 40% of parents talked about the worries that developed on tumour control, 25% of parents talked about the worries that developed on their child’s future, 25% of parents talked about the worries that developed on their family’s future, 25% of parents talked about the worries that developed on their child’s future, 25% of parents talked about the worries that developed on their family’s future and 25% of parents talked about the worries that developed on their child’s future. CONCLUSIONS: Our study shows that parents experience a number of worries that co-exist. Four description categories where identified. A life in cycle; Everyday life where family and balance in life are important. An everyday life with complications; Late complications becomes the main reason for concern for parents as see how their child is in need of extra support from family, healthcare and society. An unsecure future; They conceive a worry of what will become of their child. DISCUSSION: Parents use a wide range of coping strategies to cope with their lives and how they use different coping strategies over time. Findings in the study highlight aspects important to consider to understanding the needs and worries of parents during the period of follow-up.

NU-004. RETROSPECTIVE ANALYSIS OF SPEECH AND LANGUAGE ABILITIES FOLLOWING CEREBELLAR MUTISM SYNDROME
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INTRODUCTION: Brain tumours are the second most common disease in children. A lesion in the posterior fossa (PF) region of the brain may result in a dysarthria, likely ataxic, affecting coordination of oral motor movements and the synchronization of respiration and phonation. 25% of children who undergo surgery for a PF tumour will develop Cerebellar mutism syndrome (CMS). Although long term speech effects have been observed previously, little has been considered regarding the relations between duration and severity of acute CMS symptoms, the impact of subsequent speech/language difficulties and whether there is a significant difference between duration and severity of mutism symptoms and their relationship to later speech/language difficulties is critical for creating a framework to inform both future research questions as well as clinical approaches to care.

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Karen Marshall, and Anne Clarkin; Royal Hospital for Sick Children, Toronto ON, Canada; 2Holland Bloorview Kids Rehabilitation Hospital, Toronto ON, Canada

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NU-005. NEUROONCOLOGY ALLIED HEALTH RESIDENCY
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Children’s Hospital Colorado, University of Colorado, Aurora, CO, USA

Nurses, nurse practitioners, and physician assistants are requesting focused
education in pediatric neuro-oncology. Based on the need expressed by newer
programs in the United States, our center has developed a one week informal
residency for nurses and advanced practice providers in the continuum of care
of children with brain tumors. Content areas include: taking an appropriate
history, neurologic assessment, pathology, current treatments, and basic inter-
pretation of MRIs. The unique role requires fostering interaction between multi-
ple services such as neuro-oncology, neurosurgery, radiation oncology,
general oncology, rehabilitation, neuroradiology, endocrinology, neurology,
and neuropathology. Interpersonal skills communicating with the multidiscip-
lineary team are taught and strengthened. Care coordination tools for these
complex patients include treatment roadmap templates, family education
materials on specific brain tumors and treatments, symptom management
guidelines, supportive care tips, and palliative care/end of life strategies.
Following the residency, continued mentoring via phone and email is pro-
vided. Written tools and residency curriculum will be provided for centers
to adapt and develop to their needs.

NU-006. HOW TO DO MORE WITH LESS: OUTPATIENT
CHEMOTHERAPY
Jennifer R. Madden1, Molly S. Hemenway1, Nicholas K. Foreman1, and
Sarah Z. Rush2; 1Children’s Hospital Colorado, University of Colorado,
Aurora, CO, USA; 2Akron Children’s Hospital, Akron, OH, USA

Current trends in healthcare strive to reduce cost while improving quality
and patient satisfaction. In addition, countries with limited resources may
have to adapt treatment regimens to be less complex. Outpatient chemother-
apy with home care intravenous hydration may be appropriate for pediatric
brain tumor patients. In our experience, home care intravenous fluid (IVF)
post-hydration for chemotherapy in this population is feasible and well-
tolerated. Our retrospective data for the subset of standard risk medulloblas-
toma patients shows no difference in long-term survival, serum creatinine
levels, high frequency hearing loss; yet reduced healthcare costs. With appro-
priate nurse teaching and monitoring, almost all chemotherapies can be
administered in the outpatient setting which potentially improves patient sat-
isfaction. Although survival of pediatric brain tumors continues to rise, chil-
dren with a poor prognosis deserve to spend less time in the hospital.
Emerging countries could provide life-saving platinum based therapies for
children with brain tumors without admission to the hospital. Templates
for administration of outpatient chemotherapy are easily adapted to
almost all regimes. Future work should prospectively gather data on the
patient experience and quality of life receiving chemotherapy outside of the
hospital setting.

NU-007. NURSING PERSPECTIVE: DEVELOPMENT OF A
NEUROFIBROMATOSIS TYPE I MULTIDISCIPLINARY
PROGRAM
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For two years, Children’s Hospital Colorado (CHCO) held a quarterly
Neurofibromatosis Type I (NF1) Multidisciplinary Clinic (MDC) to
provide patients comprehensive clinical care. In 2012, the NF1 MDC grew
with the significant assistance of a new nurse coordinator position. The
nurse coordinator facilitated increasing the clinic from quarterly to
monthly. The coordinator met with multiple team members and other multi-
disciplinary clinics in the hospital to determine the goals and purpose of each
monthly clinic, additional needs for the clinic, and infrastructure necessary to
implement the goals. Two levels of MDC exist to provide comprehensive
care for patients with NF1. The full MDC includes providers from neu-
rology, oncology, neuropsychology, genetics, rehabilitation, and ophthalmo-
logy and is designed for patients who are complex with severe symptoms from
NF1. The mini MDC has providers from neurology, oncology, neuropsych-
ology, genetic counseling, and ophthalmology and meets the needs of mod-
erate symptom patients who need to see at least three of the five providers.
The nurse coordinator created a shared patient list for all providers to
track patients, facilitate team member meetings, accept referrals and assure
that patients are seen in the appropriate clinic in a timely manner. She
improved website content at both the hospital and national foundation
level for increased awareness and easier access to the NF1 MDC program,
and improved provider and public knowledge about what this great
program offers. As a result, there is a significant increase in appropriate refer-
als being made to the program. Further progress is needed to ensure proper
follow-up for patients, educate families, improve clinic flow, and improve
EMR feasibility for the multidisciplinary team. The nurse coordinator role
is crucial in developing and improving a NF1 MDC within a large tertiary
care center.