

severe side-effects. Cognitive impairment after chemotherapy is a reported concern of BC patients, but evidence remains inconclusive. The present aim was to examine the effect of chemotherapy on subjective cognitive dysfunction in BC patients (1), and to find psychosocial predictors of subjective cognitive dysfunctioning (2).

**Material and Methods:** Sixty-five women with BC who receive chemotherapy and 41 women with a benign breast problem (BBP) participated in the study. Before chemotherapy started (T1) and three months after ending chemotherapy (and at equal moments for the BBP group) (T2) women completed questionnaires concerning frequency of cognitive complaints, satisfaction with cognitive functioning, fatigue, stress, anxiety, and depression.

**Results:** No differences in the total score of the frequency of cognitive complaints ( $p=0.753$ ) and the facets Forgetfulness ( $p=0.963$ ), Absent-mindedness ( $p=0.832$ ), and Social recklessness ( $p=0.763$ ) were found between BC patients and BBP patients. In both groups, a significant increase in the frequency of cognitive complaints and the facets Forgetfulness and Absent-mindedness between T1 and T2 was found ( $p<0.004$ ). However, social recklessness did not increase significantly ( $p=0.089$ ). No interaction effect was found ( $p>0.165$ ). An interaction effect was found in the satisfaction with cognitive functioning ( $p=0.001$ ). BC patients were less satisfied with their cognitive functioning at T2 compared to their satisfaction at T1. BBP Patients were stable in their satisfaction with cognitive functioning. A higher score on depressive symptoms at T1 was predictive for higher scores on the frequency of cognitive complaints at T2 ( $p=0.003$ ), and of the satisfaction with subjective cognitive functioning at T2 ( $p=0.018$ ). Diagnosis did not predict subjective cognitive functioning.

**Conclusions:** BC Patients do not report more cognitive complaints compared to BBP patients before or after treatment. Both BC and BBP patients experience an increase in cognitive complaints over time. Satisfaction with subjective cognitive functioning decreases over time in BC patients. Depressive symptoms predict the frequency of cognitive complaints and the satisfaction with subjective cognitive functioning. This information can facilitate health care professionals to identify and support women who are at risk for developing cognitive complaints.

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ORAL

#### Using Mobile Phone Technology to Assess Symptoms in Patients Receiving Palliative Care – The Advanced Symptom Management System (ASyMS®-P)

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**Background:** The use of Telehealth can help to empower individuals experiencing life-limiting illnesses, and their carers, by facilitating the provision of real time communication between patients and health care providers. The ASyMS® system has been developed by the authors as an innovative, nurse-led initiative to improve patient outcomes and enable nurses to deliver a high quality, evidence based, multi-professional model of care to people with advanced disease. This study aimed to test the ASyMS system for the management of symptoms in patients receiving palliative treatment at home and assess the feasibility and acceptability of the system within palliative care practice.

**Materials & Methods:** The study followed a prospective design and incorporated a mixed methods approach, advocated for the evaluation of new technologies within healthcare (May et al, 2003). This was a 2 phase study: Phase 1 – the development of intervention incorporated; literature review, focus groups; interviews with patients, carers and clinicians; Phase 2 involved, development of assessment tool, risk alert system and self care advice; software developed and incorporated into mobile phone; testing of system with purposive sample of patients and HCP's in 2 health board areas of Scotland. To assess the suitability of outcome measures for use in a future RCT, 4 standard outcome measures were used; POS; Self care efficacy scale; state trait anxiety and FACIT-Pal. Throughout one month of care (once a day), patients completed the symptom questionnaire using the mobile phone and this 'real time' symptom information sent to the study server. The risk model developed in phase 1 of the study was incorporated into the study server identified symptom reports of concern.

**Results** indicate that ASyMS®-P is acceptable and useable to patients; All patients found the individualised self care advice helpful, and patients reporting better communication with their health professional. However professionals perception data revealed that they found the tool less helpful. The assessment tool employed in ASyMS®-P has been shown to be reliable and valid; the alert system allows for early intervention:

Patients and HCP's valued the content and delivery of the self care advice.

**Conclusion** ASyMS®-P is acceptable and useable with patients and enables accurate patient centred symptom assessment to be undertaken and patients to receive useful individualised self care advice on their symptoms.

## Poster Presentations

### Nursing Oncology – Advanced Nursing Roles

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POSTER

#### Trends in the English Cancer Nurse Specialist Workforce (2007–2010)

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**Background:** The English Cancer Clinical Nurse Specialist (CNS) workforce has grown sharply in the last forty years. However, a lack of specialist workforce planning created a vacuum, which hospitals filled by developing and recruiting CNS posts in an enthusiastic, but relatively uncoordinated manner.

Financial cutbacks in the English public sector, including the NHS, have meant that those responsible for funding services have had to examine the value of these roles. The perception that the CNS role is an expensive luxury rather than an essential service provider has dominated the issue. A weakness in the argument for the value of these posts has centred around the lack of robust empirical data on this workforce.

To counter this lack of data, a national census of the CNS workforce was carried out in 2007, 2008 and subsequently in 2010 (the last commissioned by the National Cancer Action team (NCAT) and supported by the Workforce Review Team (WRT)).

**Objective:** To identify any themes highlighted by the data and to determine if the data captured by the censuses has been used proactively to support workforce planning.

**Method:** A comparable analysis of the CNS data recorded between 2007 and 2010.

**Results:** The data shows that despite national policy there is a wide variance in CNS provision by both locality and pathology. This implies a lack of equality in access to a CNS for patients. The information captured reveals a plethora of different specialist titles. There appears to be an increase in some CNS posts from 2007–2010 in particular the rarer cancers. This intelligence has informed cancer policy and been used by the voluntary sector. Some cancer networks have used the CNS data to support commissioning.

**Conclusions:** It is clear that carrying out a national census of the specialist cancer workforce has been extremely valuable, as a result other parts of the cancer nursing workforce are being mapped. Management and responsibility of the census has now been taken up centrally and plans are in development to carry it out bi-annually.

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POSTER

#### Nurse-led Clinics Benefit Patients on Adjuvant Herceptin

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**Background:** The introduction of adjuvant Trastuzumab (Herceptin) in 2006 demonstrated a clear reduction in the recurrence of breast cancer, however this has placed increasing demands on existing clinical services.

**Material and Methods:** In 2007 nurse-led clinics were set up in one large cancer centre in the UK to streamline the clinical management of patients on adjuvant Trastuzumab, improve continuity and monitor cardiac safety. The nurses were able to prescribe independently and undertake breast/cardiac examinations, thus providing a fully autonomous nurse-led service. Two separate clinical audits were conducted to evaluate cardiac issues and patient satisfaction.

**Results:** The nurse-led service has developed over the years in line with clinical evidence/changes to cardiac guidelines and clinical trials. Nurse clinicians extended their scope of practice to prescribe supportive cardiac medication for patients if the Left Ventricular Ejection Fraction fell below 50%, which meant that a greater number of patients were able to complete all 18 cycles of Herceptin.

A combination of clinic and telephone consultations have been designed to improve services for patients, yet maintain safety. Two audits resulted in 225 completed patient questionnaires. Patient satisfaction increased from 88% to 97% and patient concerns about cardiac issues reduced from 26% to 14%. In addition, cardiac safety improved alongside developments in nurse-led cardiac monitoring.

**Conclusions:** The development of nurse-led clinics has shown consistent improvements over four years in the clinical management of patients on adjuvant Herceptin. This has provided clear benefits for patients by developing fully autonomous nurse-led clinics, including continuity for patients, high levels of patient satisfaction, improved cardiac safety and an increase in the number of patients completing the full course of Herceptin. Having both clinics and telephone consultations provides flexibility and increased choice for patients, whilst maintaining safety and cost-effective services.