

Development and Implementation of an Advanced Practice Nurse in Lung Cancer within a Swiss Multidisciplinary Thoracic Cancer Team

In recognition of the complex health needs of patients with lung cancer the Lausanne University Hospital (CHUV) aimed to integrate an Advanced Practice Nurse in Lung Cancer (APNLC) within the specialized Multidisciplinary Team (MDT) of the Thoracic Cancer Center. Introducing a new Advanced Practice Nursing (APN) role is a complex process and the full integration of this role depends both on successful role development and implementation. International recommendations for developing APN roles recommend pilot testing to assess the feasibility and acceptability of novel APN roles prior to formally assessing the effectiveness of these roles for patients, providers and organizations.

This doctoral thesis aimed to 1) develop and implement an APNLC role within the context of the CHUV Thoracic Cancer Center, 2) explore the acceptability of the new APNLC role from the perspective of a multidisciplinary health care team (MDT) and patients cared for by the APNLC, 3) assess the feasibility of the APNLC consultations and the ability to collect patient-reported outcome measures (PROMs) during first-line treatment, 4) explore the relative contribution of the APNLC interventions in relation to changes in i) perceived self-efficacy for managing lung cancer-related symptoms, ii) symptom intensity/burden and iii) unmet supportive care needs of lung cancer patients during first-line treatment.

To develop and implement the APNLC role we employed the first seven phases of the “The Participatory, Evidence-based, Patient-focused process for APN role development, implementation, and evaluation” (PEPPA framework). Focus groups were conducted with nurses (n=5) and physicians (n=6) to explore the acceptability of the APNLC role. Additionally, semi-structured interviews were conducted with lung cancer patients (n=4) and the APNLC to gain additional insights. In order to assess the feasibility of the APNLC consultations and the ability to collect PROMs, an exact single-stage phase II design was applied. The study was considered as feasible if at least 55% of patients received all the scheduled APNLC-led consultations and completed PROMs assessments at the three time-points [Baseline, T1 (between day 4-50) and T2 (between day 71-95)]. Descriptive statistics and mixed effect models were applied to explore the relative contribution of the APNLC intervention to changes in perceived self-efficacy for managing lung cancer-related symptoms, symptom intensity/burden and unmet supportive care needs during first-line treatment.

Following the first seven phases of the PEPPA framework, the APNLC role was designed based on consensus of key stakeholders within the MDT. The APNLC role focused on providing psychological support, enhancing symptom self-management as well as providing therapeutic education and information about disease/treatments to patients and families. The designed APNLC-led intervention included four systematic, alternate face-to-face/telephone consultations with lung cancer patients during first-line treatment. Three main themes emerged describing the acceptability of the APNLC role: “role identification”, “role-specific contributions” and “providing flexible service”. Physicians and patients alike clearly recognized the APNLC role and emphasized the contribution to continuity of care, providing psycho-social support and enabling symptom self-management. Oncology nurses perceived the APNLC role as overlapping with their own role. Flexibility in providing care was seen as strength of the APNLC role yet this also posed organizational challenges. Among the 46 patients enrolled in the feasibility study, 35 met the feasibility criteria receiving the four APNLC consultations (76%, 95% CI: 0.61-0.87) and 26 completed PROMs assessments (56%, 95% CI: 0.41-0.71). These initial findings were promising for the feasibility of the study. Unfortunately, recruitment was stopped prior to reaching the target enrolment (n=71) due to limited resources and staffing issues. Longitudinal analysis of patient outcomes showed a trend towards improved patient self-efficacy for managing symptoms between baseline and T1, which remained stable until T2. Notably, the intensity of predominant symptoms increased over time yet unmet information needs decreased significantly between baseline and T2 (OR= 0.15 [95% CI: 0.03-0.68] $p<0.01$).

In light of the current political and economic debate regarding Swiss healthcare and the evolving roles of APNs in Switzerland, we posit that this doctoral thesis might provide guidance for future investigations assessing the clinical impact of the APN roles as part of MDTs in cancer care and possibly other chronic diseases.