**S2 Table: Key components of existing interventions and intervention protocols on palliative care and symptom management for end-stage COPD patients based on explorative literature search**

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| --- | --- |
| **Key component** | **Explanation** |
| Advance care planning | Incorporating advance care planning was done by training general practitioners in proactive care planning1 or by testing the effectiveness of written advance directives on decision-making about future preferences, where health caregivers received information about each patient’s and surrogate’s preferences in the medical record2. A study trained respiratory nurses in structured advance care during 2-day sessions, focusing on reflection of patient’s goals, values and beliefs, understanding current and future medical situations, possible treatments, outcomes, and communication skills3.  |
| Pulmonary rehabilitation and respiratory services | Guëll4 compared home-based and hospital based pulmonary rehabilitation where the patients attended two informative sessions about the disease and four physical therapy sessions. The home-based patients then performed at home low intensity exercises without supervision, while the hospital-based patients carried out a structured exercise programme. Cockcroft5 evaluated monthly visits to COPD patients by a respiratory nurse, who gave education and support focused on health according to individual needs. They followed a model identifying problems in activities of daily living and setting goals to increase independence in these activities. Higginson tested a breathlessness support service, being a short-term, single point of access service integrating PC, respiratory medicine, physiotherapy, and occupational therapy6. |
| Specialised palliative care  | The study of Weber7 integrated early palliative care consultations (one per month for one year by a palliative care professional) into standard care, focusing on symptom management, understanding of illness and coping with the disease, anticipation, relatives support, social support, spiritual support, coordination of the health professionals. The intervention of Duenk8 let patients meet with a specialised palliative care team (who received special training for palliative care in COPD) within one week after enrolment and at least monthly thereafter in the outpatients setting for at least one year or until death, in the presence of the main informal caregiver. |
| Trained professional caregivers | Some interventions involved training general practitioners, such as a five hour course on early identification of patients in need of PC and on structuring anticipatory PC planning, an individual coaching session by phone with a physician specialised in PC, and peer group sessions on patient-general practitioner communication regarding the initiation of PC1. Another protocol provided training for general practitioners on educating patients to use the right inhalation techniques with their inhalers9.  |
| Educating COPD patients | An intervention by Fan et al10The patient was given education on COPD over four individual and one group sessions, an action plan for identification and treatment of exacerbations, and scheduled proactive telephone calls for case management11. Another trial incorporated the Living Well with COPD programme and an educational module on end-of-life care and decision making in an intervention which was delivered in the patient’s home over four to eight weeks12. Lastly, a study is currently testing the impact of a psycho-educative session (focused on cognitive restructuring) in the patient’s home in combination with a telephone booster session where patients learned to interpret and react to physical and psychological symptoms that are related to dyspnea and associated anxiety13. |
| Self-management of patients with COPD | One trial used telemonitoring as a way for patients to report their symptoms daily using an electronic diary14. Another focused on managing breathlessness by developing a breathlessness intervention service which included among other things a relaxation CD, a hand-held fan and a wellbeing journal for increasing personal wellbeing 15,16, while Buckingham developed a respiratory nurse-led intervention with an action plan on proactive holistic assessment of physical, psychological, social and spiritual needs17. |

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