

**Table S1.** Characteristics of studies focusing on nurse-led COPD interventions.

Study	Country	Period	N.	Design	Population	Intervention vs comparison	Outcome variables
<b>Abad Corpa et al. 2013</b>	Spain	24 weeks	143 GI: 56 GC: 87	Quasi-experimental study with a control group, pseudo-random by services	- Patients admitted with a main diagnosis of COPD greater than 18 months.	- Home visits by hospital and primary care nurse coordinated in a team with telephone calls + extra intervention - Hospital evaluation knowledge about COPD and individualized care plan of relative and patient for 5 days vs. - Telephone calls without extra intervention	- Level of satisfaction with nursing care: LOPSS12. - Use of health service after discharge - N. of days admitted after discharge - Assessment health status: Apache II Severity Index - Medication compliance: Morinsky–Green test - Social situation: Gijón scale. - Knowledge therapeutic regimen: Nursing Outcomes Classification (NOC) - Cognitive state: Mini mental. - Severity level: severity index. - Physical disability scale: from Red Cross. - Fragility index of: Katz - Quality of life: SGRQ - Quality of life: MRC, CAT, EQ 5D, PHQ 9 - Satisfaction with inhaler use: - ISF-10
<b>Ahn et al. 2020</b>	South Korea	6 months 2018-2019	261	Prospective cohort study	- Age >40 years. - Diagnosis of COPD with minimum inhaler use for 1 month	- 3 visits in 6 months after discharge by a nurse specialized in inhalation therapy	- Satisfaction with inhaler use: - ISF-10

Akinci et al. 2011	Turkey	3 months 2005- 2007	32 GI:16 GC:16	RCT Randomized controlled trial	<ul style="list-style-type: none"><li>- GOLD III, IV.</li><li>- No history of infections or exacerbation of respiratory symptoms.</li><li>- No medication changes preceding 2 months.</li><li>- No myocardial infarctions preceding 4 months.</li><li>- No serious congestive heart disease</li><li>- No serious problems of hypertension, diabetes mellitus</li><li>- With complications and muscle and joint problems.</li><li>- GOLD III, IV.</li></ul>	to train, educate and clarify patient's doubts.	
						vs. <ul style="list-style-type: none"><li>- Usual therapy</li><li>- Efficacy of nurse-led home pulmonary rehabilitation</li></ul> vs. <ul style="list-style-type: none"><li>- Absence of rehabilitation program.</li></ul>	-Pulmonary function: <ul style="list-style-type: none"><li>- Forced expiratory volume in First second (FEV1 % predictive-value)</li><li>- FEV1 /FVC.</li><li>- Arterial blood gases:<ul style="list-style-type: none"><li>- ABL 700 series.</li><li>- American Thoracic Society's criteria.</li></ul></li><li>- Quality of life (SGRQ).</li><li>- Dyspnea level: BDI.</li><li>- Functional capacity:<ul style="list-style-type: none"><li>- 6-minute walk test (6MWT)</li></ul></li></ul>

<b>Al-Kalaldeh et al. 2016</b>	Jordan	8 months 2015	121	Quasi-experimental study	<ul style="list-style-type: none"> <li>- Age &gt; 18 years.</li> <li>- Diagnosed COPD &gt; 2 years with inhaler &gt; 6 months.</li> <li>- Exclusion: <ul style="list-style-type: none"> <li>- Lung disorders other than COPD.</li> <li>- Dementia, psychosis, or profound deafness</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- Health education about inhalers: <ul style="list-style-type: none"> <li>- Purposes, action and adverse effects.</li> <li>- Assessment of correct use of Inhaler.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- Knowledge inhalers: <ul style="list-style-type: none"> <li>- Inhaler Proficiency Schedule (IPS).</li> <li>- Behavior before use of Inhaler: <ul style="list-style-type: none"> <li>- Patient Reported Behavior (PRB)</li> </ul> </li> </ul> </li> </ul>
<b>Ansari et al. 2020</b>	Australia	1 1/2 year 2015-2016	44	Experimental study of a single group.	<ul style="list-style-type: none"> <li>- Patients with COPD.</li> <li>- Age 40 &lt; 84 years.</li> <li>- At least one other chronic condition or coexisting comorbidity.</li> <li>- No cognitive impairment.</li> <li>- Knowledge of English language.</li> </ul>	<ul style="list-style-type: none"> <li>- Patients with COPD activated through personalized self-care support that recognizes implications of comorbidities, generating: <ul style="list-style-type: none"> <li>- Improved health behavior regarding COPD.</li> <li>- Improve knowledge and self-management of COPD.</li> <li>- Increased self-efficacy in empowerment in general health management.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- Perception of multimorbidity burden: Multimorbidity Illness Perceptions Scale (MULTIPLES).</li> <li>- Patient Activation: Patient Activation Measure (PAM 13).</li> <li>- Impact of COPD on patient's life: - COPD Assessment Test (CAT); COPD Knowledge: - COPD Knowledge Questionnaire (COPDQ).</li> </ul>

<b>Bal Özkaptan et al. 2016</b>	Turkey	12 months 2012-2013	106 GI:53 GC:53	Randomized clinical trial	<ul style="list-style-type: none"> <li>- Patients with COPD for at least 1 year.</li> <li>- No difficulty communicating.</li> <li>- No disease except diseases related to COPD.</li> <li>- Resident in city center.</li> </ul>	<ul style="list-style-type: none"> <li>- Home nursing care with self-efficacy self-care model of patients with COPD</li> <li>- Guidelines given on first visit, then 4 visits in 3 months vs.</li> <li>- Home nursing care with self-efficacy self-care model of patients with COPD,</li> <li>- Guidelines given during visit</li> </ul>	<ul style="list-style-type: none"> <li>- Dyspnea:</li> <li>- MRC</li> <li>- COPD self-sufficiency:</li> <li>- COPD Self-efficacy scale</li> <li>- CSES</li> </ul>
<b>Benzo et al. 2019 (7)</b>	USA	12 months	215 GI:108 GC:107	Randomized controlled trial	<ul style="list-style-type: none"> <li>- COPD patients</li> <li>- Ability to communicate by phone</li> </ul>	<ul style="list-style-type: none"> <li>- Post-discharge nurse training with home visits and phone calls</li> </ul>	<ul style="list-style-type: none"> <li>- N. hospitalizations</li> <li>- No. of deaths from COPD</li> <li>- Quality of life (SGRQ).</li> </ul>
<b>Billington et al. 2014</b>	United Kingdom	12 weeks	71 GI: 34 GC: 37	Randomized controlled trial	<ul style="list-style-type: none"> <li>- Patients with COPD</li> <li>- Previous spirometry results of FEV1/FVC ratio of 70% or less.</li> <li>- Knowing how to read and speak English.</li> </ul>	<ul style="list-style-type: none"> <li>- Plan with telephone nursing support (intervention) vs.</li> <li>- Self-care plan only (usual care)</li> </ul>	<ul style="list-style-type: none"> <li>- Impact of COPD on quality of life:</li> <li>- CAT</li> <li>- Number of exacerbations</li> <li>- Service satisfaction</li> <li>- Hospital visits</li> </ul>

<b>Bischoff et al. 2012</b>	Holland	24 months 2004-2006	165 GI:55 GC:55 Gx:55	RCT Randomized controlled trial	<ul style="list-style-type: none"> <li>- Patients with COPD.</li> <li>- Age &gt; 35 years.</li> <li>- FVC &lt; 0.7.</li> <li>- Exclusion</li> <li>- FEV1 &lt;30%</li> <li>- Therapy with a respiratory doctor</li> <li>- With serious comorbid conditions</li> <li>- Reduced life expectancy</li> <li>- Inability to communicate in Dutch</li> <li>- Objections to mode of management of disease used in study</li> </ul>	<ul style="list-style-type: none"> <li>- Usual care + self-management vs.</li> <li>- Usual care + routine monitoring by a primary care nurse</li> </ul>	<ul style="list-style-type: none"> <li>- Frequency and management of exacerbations</li> <li>- Exacerbation assessment telephone system. (TEXAS).</li> <li>- Dyspnea level: MRC.</li> <li>- Quality of life assessment of people with COPD: CRQ.</li> <li>- COPD self-sufficiency scale: CSES</li> </ul>
<b>Cai et al. 2020 (10)</b>	China	12 months 2018	120 GI: 60 GC: 60	Retrospective study	<ul style="list-style-type: none"> <li>- Patients with moderate COPD.</li> <li>- FEV1/FVC &lt;70%</li> <li>- 50% &lt; FEV1 &lt; 80%</li> </ul>	<ul style="list-style-type: none"> <li>- Bi-directional quality feedback nursing model vs.</li> <li>- Conventional nursing intervention</li> </ul>	<ul style="list-style-type: none"> <li>- Quality of life:</li> <li>- World Health Organization</li> <li>- Quality of Life Scale Abbreviated</li> <li>- Version WHOQOL-BREF.</li> </ul>
<b>Cameron-Tucker et al. 2016</b>	Australia	8- 12 weeks	65 GI: 35 GC: 30	Randomized clinical trial with parallel groups	<ul style="list-style-type: none"> <li>- Patients with COPD.</li> <li>- Age &gt; 18 years.</li> <li>- Present an exacerbation at least 2 months before data collection.</li> <li>- Excludes cognitive impairment</li> </ul>	<ul style="list-style-type: none"> <li>- Tele-rehabilitation vs.</li> <li>- Usual care</li> </ul>	<ul style="list-style-type: none"> <li>- Physical capacity: 6MWD.</li> <li>- Impact of COPD on quality of life:</li> <li>- CAT</li> <li>- Health Behavior: SNAPPS</li> </ul>

<b>Chau et al. 2012</b>	China	2 months	40 GI:22 GC:18	Randomized unblinded parallel group study	<ul style="list-style-type: none"> <li>- Age &gt; 60 years.</li> <li>- Patients with moderate or severe COPD.</li> <li>- Patients admitted to hospital at least once due to exacerbation during previous year.</li> <li>- Excluding those with cognitive impairment, illiterate or unable to use tele-assistance technological instrument</li> </ul>	<ul style="list-style-type: none"> <li>- Use of telecare system with community nurse and.</li> <li>- Usual care</li> </ul>	<ul style="list-style-type: none"> <li>- Satisfaction questionnaire.</li> <li>- Quality of life assessment of people with COPD: CRQ.</li> <li>- Lung function: FEV1 and FVC.</li> <li>- Access to emergency service</li> <li>- Or hospital admissions</li> </ul>
<b>Cumming et al. 2010</b>	Australia	12 months	36 GI: 17 GC: 19	RCT Randomized controlled trial	<ul style="list-style-type: none"> <li>- Patient with COPD.</li> <li>- Age &gt; 45 years.</li> <li>- Patients with at least one exacerbation during previous year.</li> <li>- Mini-mental scale &gt; 21</li> <li>- No palliative patient or with other respiratory diseases</li> <li>- Owning a telephone</li> <li>- Able to give informed consent</li> </ul>	<ul style="list-style-type: none"> <li>- Use of electronic monitoring techniques and tutoring by community nurses</li> <li>vs.</li> <li>- Usual care</li> </ul>	<ul style="list-style-type: none"> <li>- Use of monitoring diary.</li> <li>- Hospital admissions.</li> <li>- Stanford Chronic Disease Management Scale</li> </ul>

<b>De San Miguel et al. 2013</b>	Australia	6 months	71 GI:36 GC:35	RCT Randomized controlled trial	<ul style="list-style-type: none"> <li>- Patients with COPD.</li> <li>- Patients with O2 at home.</li> <li>- Speaking English.</li> </ul> <p>Exclusion:</p> <ul style="list-style-type: none"> <li>- Patients with dementia</li> <li>- Palliative care</li> <li>- No telephone</li> <li>- Cognitive impairment</li> </ul>	<ul style="list-style-type: none"> <li>- Remote monitoring of vital parameters with a telemedicine team assisted by a nurse.</li> </ul> <p>vs</p> <ul style="list-style-type: none"> <li>- Nursing assistance data collection of vital parameters only</li> </ul>	<ul style="list-style-type: none"> <li>- N. visits to general practitioner</li> <li>- N. specialist medical visit</li> <li>- N. access to Emergency Department</li> <li>- N. hospital admissions</li> <li>- N. days admitted</li> </ul>
<b>Deng et al. 2013</b>	China	6 months 2010-2011	64 GI:32 GC:32	RCT Randomized controlled trial	<ul style="list-style-type: none"> <li>- Patients with COPD.</li> <li>- FEV1: 60-25% post bronchodilator</li> <li>- Speaking Mandarin</li> </ul> <p>Exclusion.</p> <ul style="list-style-type: none"> <li>- Severe disability caused by other diseases</li> </ul>	<ul style="list-style-type: none"> <li>- Non-pharmacological therapy to better manage dyspnea by a nurse:</li> </ul> <p>psychological, cognitive-behavioral, physical-functional</p> <p>vs</p> <ul style="list-style-type: none"> <li>- Usual therapy</li> </ul>	<ul style="list-style-type: none"> <li>- Dyspnea level:</li> <li>- MRC.</li> <li>- MFI-20</li> </ul>
<b>Doğan et al. 2017</b>	Turkey	5 months 2015	63 GI: 32 GC: 31	Quasi-experimental study	<ul style="list-style-type: none"> <li>- Patients with COPD.</li> <li>- Patients &gt; 18 years old.</li> <li>- Patients with prescription of oxygen concentrator with ATS and ERS criteria.</li> </ul>	<ul style="list-style-type: none"> <li>- Health education given by nurses to COPD patients on daily use of oxygen concentrator</li> </ul> <p>vs.</p> <ul style="list-style-type: none"> <li>- Absence of this training</li> </ul>	<ul style="list-style-type: none"> <li>- Spirometry.</li> <li>- SaO2</li> <li>- pH</li> <li>- PaO2</li> <li>- FEV1</li> <li>- N. exacerbations in 3 months</li> <li>- N. hospitalizations in 3 months.</li> </ul>

- Level of satisfaction in use of O2 concentrator

<b>Early et al. 2017</b>	United Kingdom	9 months 2012-2013	14 G1:8 G2:6	Case control study	<ul style="list-style-type: none"> <li>- Patients with COPD</li> <li>- FEV1 &lt; 50%</li> <li>- FVC &lt; 0.7</li> <li>- GOLD III, IV</li> <li>- 2 COPD exacerbations related to hospital admissions in last year.</li> <li>- Age &gt;18 years</li> <li>- Without pulmonary rehabilitation in last year.</li> </ul>	<ul style="list-style-type: none"> <li>- Internet-based standard program, TPP and support from nurse advisers (Group 1 focused on getting fit and staying out of hospital) vs.</li> <li>- Internet-based standard program, TPP and nurse-advisor support (focused on daily activities and slowing COPD progression).</li> </ul>	<ul style="list-style-type: none"> <li>- Assessment of quality of life for People with COPD:</li> <li>- CRQ.</li> <li>- Hospital Anxiety and Depression Scale: HADS.</li> <li>- Need for patient information:</li> <li>- Lung Information Needs Questionnaire LINQ</li> </ul>
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<b>Efil et al. 2020</b>	Turkey	12 months 2016-2017	59 GI:29 GC:30	Case control study	<ul style="list-style-type: none"> <li>- Patients with COPD.</li> <li>- Use of inhalers for at least 6 months.</li> <li>- GOLD II, III Exclusive</li> <li>- Patients with deafness, blindness or alcohol or drug dependence</li> </ul>	<ul style="list-style-type: none"> <li>- Inhaler training (oral explanation and a demonstration) vs.</li> <li>- Lack of training on inhalers</li> </ul>	<ul style="list-style-type: none"> <li>- Medication adherence: Morisky Medication Adherence Scale (MMAS-8).</li> <li>- Quality of life (SGRQ).</li> <li>- Impact of COPD on quality of life: CAT</li> <li>- FEV1</li> </ul>
<b>Heslop-Marshall et al. 2018</b>	United Kingdom	12 months	236 GI:115 GC:121	Randomized controlled trial	<ul style="list-style-type: none"> <li>- Patients with COPD FEV1/FVC &lt; 70%</li> <li>- Patients with HADS – anxiety subscale scores of 8. ≥</li> <li>- Agree to attend a minimum of two and a maximum of six CBT sessions. (Therapy)</li> </ul>	<ul style="list-style-type: none"> <li>- Cognitive behavioral therapy vs.</li> <li>- Regular intervention</li> </ul>	<ul style="list-style-type: none"> <li>- Quality of life related to health: EQ5D</li> <li>- Anxiety and depression scale: HADS</li> </ul>
<b>Iniesta Sánchez et al. 2016</b>	Spain	24 weeks 2007-2008	143 GI:56 GC:87	Quasi-experimental study pseudo random	<ul style="list-style-type: none"> <li>- Patients with COPD</li> </ul>	<ul style="list-style-type: none"> <li>- Care plan with taxonomies vs</li> <li>- Regular hospital care.</li> </ul>	<ul style="list-style-type: none"> <li>- Evaluation and evolution of NOC</li> <li>- Knowledge of therapeutic regimen</li> </ul>
<b>Ingadottir et al. 2010</b>	Iceland	18 months 2006-2008	42	Pre-post intervention study.	<ul style="list-style-type: none"> <li>- GOLD II, III, IV</li> <li>- Hospitalized in last few months.</li> <li>- Important change in health before and after hospitalization.</li> </ul>	<ul style="list-style-type: none"> <li>- Nursing intervention based on helping and improving life of patients with COPD and their families vs.</li> </ul>	<ul style="list-style-type: none"> <li>- SGRQ quality of life.</li> <li>- HADS Hospital Anxiety and Depression Scale.</li> <li>- Body mass index BMI</li> <li>- N. Hospital admissions</li> <li>- Ability to use inhaler correctly</li> </ul>

					- Be autonomous at home	- Regular intervention	
<b>Jolly et al. 2018</b>	United Kingdom	12 months	516 GI:239 CI:277	Randomized controlled trial	- COPD patients - MRC 1/2 scale in primary care	- Telephone intervention of health training given by nurses: - Smoking cessation. - Increase physical activity - Pharmacological management - Action planning vs. - Intervention usually alone	- Quality of life (SGRQ). - EQ- 5D-5L - HADS anxiety - HADS depression - MRC dyspnea - Hospital admissions - Access to Emergency service - Access to primary care service - Smoking cessation - IQR therapeutic adherence
<b>Jurado Gámez et al. 2012</b>	Spain	1 year 2010-2011	71 GI:36 GC:35	Randomized controlled trial	- Patients with COPD - Age < 75 years - Belonging to study health area Excluded: - Severe comorbidity - No phone line	- Nursing home visit 48-72 hours after hospital discharge vs. - Usual care	- Arterial blood gases - FEV1 - Borg scale - Charlson index - N. hospital admissions

<b>Karasu et al. 2020</b>	Turkey	8 months 2017	160 GI: 80 GC:80	Randomized controlled trial	<ul style="list-style-type: none"> <li>- Diagnosed COPD for at least 6 months or more.</li> <li>- No communication problems.</li> </ul>	<ul style="list-style-type: none"> <li>-Home care following Health Promotion Model + interventions according to demands</li> <li>vs.</li> <li>-No additional nursing care</li> </ul>	<ul style="list-style-type: none"> <li>- ASA scale (self-care)</li> <li>- Life Attitude Profile (LAP)</li> </ul>
<b>Khoshkesht et al. 2015</b>	Iran	3 months 2010-2011	66 GI:34 GI:32	Randomized controlled trial	<ul style="list-style-type: none"> <li>- Patients &gt; 65 years.</li> <li>- Patients with moderate or severe COPD.</li> <li>- Not participating in any respiratory exercise group in previous year.</li> <li>- Excludes cognitive, cardiological and musculoskeletal impairment.</li> <li>- Able to read and write Persian.</li> </ul>	<ul style="list-style-type: none"> <li>- Pulmonary rehabilitation applying Bandura technique self-efficacy theory</li> <li>vs</li> <li>- Routine nurse visits with weekly phone calls.</li> </ul>	<ul style="list-style-type: none"> <li>- CSES self-efficacy scale</li> </ul>
<b>Lamers et al. 2010</b>	Holland	20 months 2003-2005	119 GI:58 GC:61	Randomized controlled trial	<ul style="list-style-type: none"> <li>- Patients &gt; 60 years.</li> <li>- Patients with COPD or emphysema or chronic bronchitis</li> <li>- Excludes major depression</li> </ul>	<ul style="list-style-type: none"> <li>- Nursing management of the (MPI) minimal psychological intervention</li> <li>vs</li> <li>- Standard nursing treatment</li> </ul>	<ul style="list-style-type: none"> <li>- BDI (Beck Depression Inventory).</li> <li>- SCL (Symptom Checklist-90)</li> <li>- SGRQ (Saint George Quality of Life)</li> </ul>

<b>Lavesen et al. 2016</b>	Denmark	1 year 6 months 2010-2012	178 GI:101 GC:77	Randomized controlled trial	COPD patients with acute pneumonia Exacerbation. Excluded: - Cognitive impairment, dementia. - Deafness. - Not speaking Danish.	- Phone follow-up by a nurse to empower patient vs - Usual treatment	- Mortality rate. - Patient assessment of COPD Management (%)
<b>Lee et al. 2015</b>	South Korea	6 months 2010-2011	151 GI:78 GC:73	Randomized controlled trial	- Patient with COPD - Age 40-80 years - Life expectancy > 6 months	- Nurse-led problem-solving therapy vs. - Usual care	- EPOC Self-Efficacy Scale (CSES). - Jalowiec Coping Scale (JCS) - Depressive symptoms (CES-D Radloff)
<b>Li et al. 2014</b>	China	6 months 2008-2009	112 GI: 56 GC:56	Case control study	- Patients diagnosed with COPD. - FEV1/FVC < 70% - FEV1% < 80% - Capacity for self-care during established period	- Usual care + 3 months follow-up vs. - Usual care	- Quality of life: Saint George respiratory questionnaire (SGRQ) - Anxiety, depression: Goldberg's General Health Questionnaire (GHQ-28) - Body Mass Index (BMI)
<b>Li et al. 2015</b>	China	19 months 2012-2013	61 GI:31 GC:30	Randomized controlled trial	- Patients with COPD - FEV1 / FVC < 70% - No change in preceding 4 weeks of pharmacological or symptomatic therapy - Ability to speak Mandarin or	- Education in management of disease by an expert hospital nurse. vs - Usual care	- Quality of life: - Seattle Obstructive Lung Disease Questionnaire - COPD Self Efficacy Scale - Frequency of exacerbations - Frequency of emergency hospitalizations

					Cantonese - Ability to use mobile phone.		
<b>Li et al. 2020</b>	China	4 months 2017	70 GI:35 GC:35	Randomized controlled trial	<ul style="list-style-type: none"> <li>- Patients with COPD.</li> <li>- GOLD I, II, III or IV</li> <li>- Exposure to risk factors of different types</li> <li>- FEV1/ FVC &lt; 70%</li> <li>- Ability to communicate in Chinese.</li> <li>- Capable of completing questionnaires and participating in interviews.</li> <li>- Access to use of a mobile phone</li> </ul>	<ul style="list-style-type: none"> <li>- Nursing care based on Information theory,</li> <li>- Knowledge, Attitude and Practice IKAP vs.</li> <li>- Standard nursing care.</li> </ul>	<ul style="list-style-type: none"> <li>- Quality of life:</li> <li>- Saint George Respiratory Questionnaire (SGRQ)</li> </ul>
<b>Mohammadi et al. 2015</b>	Iran	4 months	40 GI:20 GC:20	Control case study	<ul style="list-style-type: none"> <li>- Patients with COPD.</li> <li>- GOLD II, III</li> <li>- Not having other chronic diseases.</li> <li>- No use of oxygen when performing daily activities</li> <li>- No use of tranquilizers or antidepressants.</li> </ul>	<ul style="list-style-type: none"> <li>- Home rehabilitation of three x one-hour sessions of individual face-to-face training vs.</li> <li>- Absence of this service</li> </ul>	<ul style="list-style-type: none"> <li>-Fatigue level: fatigue severity scale (FSS).</li> <li>- Capacity for activities of daily living:</li> <li>- Barthel index.</li> <li>- QOL quality of life</li> </ul>

Nguyen et al. 2009	USA	6 months	17 Trained Assig.: 9 Monit.:8	Randomized exploratory study	<ul style="list-style-type: none"> <li>- Patients with COPD.</li> <li>- Severe condition according to GOLD criteria.</li> <li>- FEV1/FVC&lt;70%</li> <li>- FEV1% &lt; 80%</li> <li>- Patients receiving supplemental oxygen were acceptable if their O2 saturation was maintained at 88% on 6 L/min nasal oxygen during six-minute walk test (6MW);</li> <li>- Age &gt; 40 years.</li> </ul>	<ul style="list-style-type: none"> <li>- Exercise via mobile (Long-term exercise support mobilization) alone vs.</li> <li>- Exercising using a mobile phone (Support mobilization for long-term exercise) with help of a nurse</li> </ul>	<ul style="list-style-type: none"> <li>- For exercise regulation: Self-Regulation Questionnaire-Exercise [SRQ-E]) and Patient Activation Measure (PAM).</li> <li>- Self-efficacy to overcome of barriers to exercise: <ul style="list-style-type: none"> <li>- Barrier effectiveness scale.</li> <li>- General perception of support for exercise: Likert scale</li> </ul> </li> <li>- Functional capacity: 6-minute walk test (6MWT).</li> <li>- Free-living ambulatory physical activity using a Stepwatch activity (buckled to ankle).</li> <li>- Health-related quality of life (HRQoL)</li> <li>- Quality of life: Saint George respiratory questionnaire (SGRQ)</li> </ul>
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<b>Padilla-Zárate et al. 2013</b>	Mexico	1 year	60 GI: 35 GC: 25	Randomized controlled trial	-Patients with COPD, -GOLD I, II, III or IV	- Medical care and IEBCP (nursing-intervention based on personalized counseling) vs. - Medical care	- Self-care. - Quality of life: St. George respiratory questionnaire and quality of life questionnaire in respiratory disease (CQR). - Oximetry: oximeter. - Relationship between expired volume maximum in first second of forced expiration and forced vital capacity: spirometer. - Dyspnea: Medical Research Council dyspnea scale. - Adherence to intervention.
<b>Saleh et al. 2014</b>	Norway	1 year 2010-2011	56	Retrospective cohort study	- Patients with COPD - Age> 40 years - Not having other serious illnesses with a life expectancy of less than 12 months. - Ability to communicate	- Impact of use of video consultations on hospital readmission for exacerbations and patient satisfaction	- Number of re-admissions due to exacerbations - Frequency and duration of these hospitalizations - Patient satisfaction

<b>Scheerens et al. 2020</b>	Belgium	6 months	25 GI: 13 GC: 12	Randomized controlled trial	<ul style="list-style-type: none"> <li>- Patients with COPD</li> <li>- Oxygen dependent.</li> <li>- Three or more hospitalizations for COPD in last three years</li> <li>- CAT scale</li> <li>- Scale 4 dyspnea according to MRC.</li> <li>- Intubation in last year</li> <li>- Non-invasive ventilation in last year</li> <li>- BMI = 18</li> <li>- NYHA functional classification 3</li> </ul>	<ul style="list-style-type: none"> <li>- Integrated palliative home care (COPD pre-inclusion support training, monthly visits, brochures on coping mechanisms, a protocol on symptom management and support, action plan and care plan, integration of project and care through complaint and communication mechanisms)</li> </ul> <p>vs.</p> <ul style="list-style-type: none"> <li>- Usual care</li> </ul>	<ul style="list-style-type: none"> <li>-Health-related quality of life: HRQOL</li> <li>-Mood and anxiety: Hospital Anxiety and Depression Scale (HADS)</li> <li>- Impact of COPD on quality of life: CAT</li> <li>- Number of exacerbations, primary care interventions, hospitalizations and living will decisions, measured with patient-reported Health records.</li> <li>- Evaluation of care received: Dutch Patient Assessment of Chronic Illness Care (PACIC)</li> <li>- Place of death: medical care involved.</li> </ul>
<b>Shany et al. 2017 (37)</b>	Australia	1 year 2009-2010	29 GI:11 GC:18	Randomized controlled trial	<ul style="list-style-type: none"> <li>- Patients with COPD</li> <li>- Sydney resident patients treated by Blacktown Hospital.</li> <li>- At least one hospital admission for a COPD exacerbation in previous year</li> </ul>	<ul style="list-style-type: none"> <li>- Monitoring of oximetry, temperature, pulse, electrocardiogram, blood pressure, spirometry and weight with telephone support and home visits</li> </ul> <p>vs.</p>	<ul style="list-style-type: none"> <li>- Quality of life: Saint George Respiratory questionnaire (SGRQ)</li> <li>- Mood and anxiety: Hospital Anxiety and Depression Scale (HADS)</li> <li>- Number of hospital admissions and length of stay.</li> </ul>



						- Only telephone support and home visits	
<b>Sorknæs et al. 2011</b>	Denmark	1 year 2008-2009	100 GI:50 GC:50	Randomized controlled trial	- Patients with COPD - Exacerbations with dyspnea, cough and/or sputum. - Need to increased medication.	- Use of tele-consultations between COPD patients and respiratory nurses	- Health-related quality of life: EQ- 5D - Body mass index: BMI - Dyspnea: MRC - FEV1/FVC, FVC and FEV1: spirometry
<b>Sorknaes et al. 2013</b>	Denmark	1 year	242 GI: 121 GC:121	Randomized controlled trial	- Patients with COPD by spirometry FEV1/FVC <70% - Admitted with exacerbations (defined by increased need for medication and increased dyspnea, increased volume of expectoration or increased cough) - Age<40 years	- Daily teleconsultations in real time for one week between hospital nurses specialized in respiratory diseases and patients with severe COPD discharged after an acute exacerbation vs. - Usual care	- Re-admissions to hospital - Length of hospital stay - Body mass index - Dyspnea: MRC - Spirometry - Spanish health questionnaire: SF-36 - Need for home care - Mortality

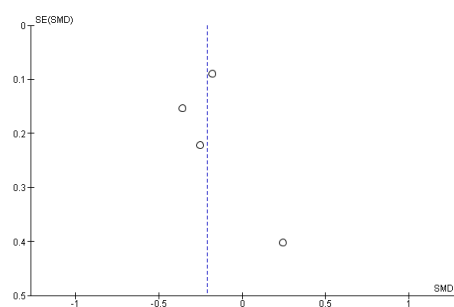
<b>Utens et al. 2012</b>	Holland	3 months	125 GI:63 GC:52	Randomized controlled trial	<ul style="list-style-type: none"> <li>- Patients with COPD</li> <li>- Minimum GOLD I</li> <li>- 10 packs smoked per year</li> <li>- Hospitalized for exacerbations.</li> <li>- Age &lt; 40 years</li> </ul>	<ul style="list-style-type: none"> <li>- Discharge assisted by community nurses (after hospitalization for exacerbations)</li> <li>vs.</li> <li>- Usual hospital care</li> </ul>	<ul style="list-style-type: none"> <li>- Change in health status: Clinical COPD Questionnaire (CCQ).</li> <li>- Health-related quality of life: HRQL</li> <li>- Mortality</li> <li>- Readmissions</li> <li>- Treatment failures</li> </ul>
<b>Utens et al. 2014</b>	Holland	3 months	125 GI:63 GC:52	Randomized controlled trial	<ul style="list-style-type: none"> <li>- Patients with COPD</li> <li>- Age &lt; 40 years</li> <li>- Hospitalized for exacerbations</li> </ul>	<ul style="list-style-type: none"> <li>- Hospital care at home</li> <li>vs.</li> <li>- Usual hospital care</li> </ul>	<ul style="list-style-type: none"> <li>- Change in health status: Clinical COPD Questionnaire (CCQ).</li> <li>- Caregiver stress: Caregiver Stress Index (CSI).</li> <li>- Caregiver satisfaction: a series of questions</li> <li>- Preference of users</li> </ul>
<b>Wang et al. 2014</b>	China	3 months	88 GI:42 GC:46	RCT Randomized controlled trial	<ul style="list-style-type: none"> <li>- Patients with COPD</li> <li>- Age &lt; 45 years</li> <li>- FEV1 /FVC: 70%</li> <li>- FEV1 between 30-80%</li> <li>- Not participating in any other research or habilitation program.</li> <li>- Being able to communicate in Chinese</li> </ul>	<ul style="list-style-type: none"> <li>- Model of beliefs in health after hospitalization</li> <li>vs.</li> <li>- Routine nursing care</li> </ul>	<ul style="list-style-type: none"> <li>- Dyspnea: MRC</li> <li>- Ability to perform basic activities of daily life: Barthel.</li> <li>- Pulmonary functions: FEV1 and FVC</li> <li>- Exercise Tolerance: 6MWT</li> <li>- Self-efficacy of patients with COPD: COPD Self-Efficacy Scale (CSES)</li> </ul>

<b>Wang et al. 2018</b>	China	1 year 2016 - 2017	120 GI: 60 GC: 60	Randomized controlled trial	- Patients diagnosed with COPD.	- Humanistic nursing care vs. - Regular nursing care	- Degree of anxiety and depression: - Zung Self-Assessment Scale for Depression (SDS) and Zung Self-Assessment Anxiety Scale (EAA) - Pulmonary function: FVC, MMF and FEV1. - Nursing degree of satisfaction: self-designed questionnaire
<b>Wang et al. 2020</b>	China	1 year	154 GI:77 GC:77	Randomized controlled trial	- Patients with COPD - GOLD and II, III or IV - Patients hospitalized for acute exacerbation of COPD	- Nurse-led self- management program vs. - Usual care	- Exercise Tolerance: 6MWT - Number of hospitalizations, length of stay and visits to emergency ward. - Quality of life: Saint George respiratory questionnaire (SGRQ) - Patient satisfaction: COPD Transitional-Care Patient Satisfaction Questionnaire (CTCPSQ)
<b>Wood-Baker et al. 2012</b>	Australia	12 months	69 GI: 36 GC:33	Randomized controlled trial	- Patients with COPD - Patients with acute exacerbation - Living in designated areas - Age > 45 years. - History of smoking. 10 pack-years. - FEV1 /FVC: 0.7	- Program to increase self-care behaviors taught by community health nurses vs. - Usual care.	- Health-related quality of life: SF-36 - Patient self-efficacy: Stanford Self-Efficacy scale - Number of medications at discharge and comorbidity: geriatric index of comorbidity. -Weight.

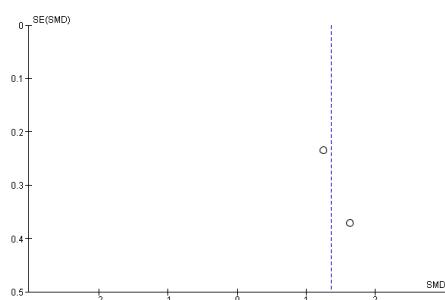
					- At least one COPD exacerbation in previous 12 months - Meeting requirements of study (Mini-Mental score greater than 21) - Access to computer and telephone.		
<b>Yu et al. 2014</b>	China	1 year 2011-2012	84 GI: 42 GC: 42	Quasi-experimental study	- Patients with COPD - FEV1 <70% - Age > 40 years - Able to read and write Chinese - Lucid and oriented - Able to use phone	- Self-management of education vs. - Usual care without additional education	- Quality of life: Saint George Respiratory questionnaire (SGRQ)
<b>Zakrisson et al. 2016</b>	Sweden	3 years	64 GI:40 GC:24	Quasi-experimental study	- Patients with COPD - GOLD II, III - Age 60-75 years	- Training at home by a nurse to quit smoking vs - Usual care without additional education	- Exercise Tolerance: 6MWT - Quality of life: Saint George respiratory questionnaire (SGRQ) - No COPD exacerbations
<b>Zakrisson et al. 2020</b>	Sweden	1 year 2015-2016	202 GI:94 GC:108	Randomized controlled trial	- Patients with COPD	- Usual care + informative self-management support vs. - Usual care only	- Quality of care: Patient's Perspective questionnaire (QPP) - Impact of COPD on patient's life: COPD Assessment Test (CAT)

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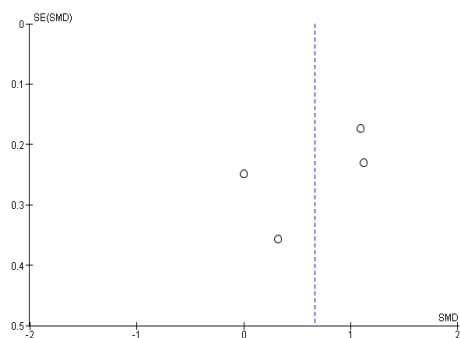
### HAD Anxiety



### Barthel Score



### 6 MWT Test



**Figure S1.** Assessment of publication bias. Funnel Plots.

	Random sequence generation (selection bias)	Blinding of participants and personnel (performance bias)	Blinding of outcome assessment (selection bias)	Incomplete outcome data (attrition bias)	Selective reporting (reporting bias)	Allocation concealment (selection bias)	Other bias
Abad-Corpa et al 2013	●	●	●	●	●	●	●
Ahn et al 2020	?	?	?	●	●	●	?
Akinci et al 2011	●	●	●	●	●	●	●
Al-Kalaldeh et al 2016	?	?	?	●	●	●	?
Ansari et al 2020	?	?	?	●	●	●	?
Bal Ozpaptan et al 2016	●	●	●	●	●	●	●
Benzo et al 2019	●	●	●	●	●	●	●
Billington et al 2015	●	●	●	●	●	●	●
Bischoff et al 2012	●	●	●	●	●	●	●
Cai et al 2020	●	●	●	●	●	●	●
Cameron-Tucker et al 2016	●	●	●	●	●	●	●
Chau et al 2012	●	●	●	●	●	●	●
Cumming et al 2010	●	●	●	●	●	●	●
Deng et al 2013	●	●	●	●	●	●	●
De San Miguel et al 2013	●	●	●	●	●	●	●
Dogan et al 2017	●	●	●	●	●	●	●
Early et al 2017	●	●	●	●	●	●	●
Efil et al 2020	●	●	●	●	●	●	●
Heslop-Marshall et al 2018	●	●	●	●	●	●	●
Ingadottir et al 2010	?	?	?	●	●	●	?
Iniesta Sánchez et al 2016	●	●	●	●	●	●	●
Jolly et al 2018	●	●	●	●	●	●	●
Jurado-Gamez et al 2013	●	●	●	●	●	●	●
Karasu et al 2020	●	●	●	●	●	●	●
Khoshkesht et al 2015	●	●	●	●	●	●	●
Lamers et al 2010	●	●	●	●	●	●	●
Lavesen et al 2016	●	●	●	●	●	●	●
Lee et al 2015	●	●	●	●	●	●	●
Li et al 2014	●	●	●	●	●	●	●
Li et al 2015	●	●	●	●	●	●	●
Li et al 2020	●	●	●	●	●	●	●
Mohammadi et al 2015	●	●	●	●	●	●	●
Nguyen et al 2009	●	●	●	●	●	●	●
Padilla-Zarate et al 2013	●	●	●	●	●	●	●
Saleh et al 2014	?	?	?	●	●	●	?
Scheerens et al 2020	●	●	●	●	●	●	●
Shany et al 2017	●	●	●	●	●	●	●
Sorknaes et al 2011	●	●	●	●	●	●	●
Sorknaes et al 2013	●	●	●	●	●	●	●
Utens et al 2012	●	●	●	●	●	●	●
Utens et al 2014	●	●	●	●	●	●	●
Wang et al 2014	●	●	●	●	●	●	●
Wang et al 2018	●	●	●	●	●	●	●
Wang et al 2020	●	●	●	●	●	●	●
Wood-Baker et al 2012	●	●	●	●	●	●	●
Yu et al 2014	●	●	●	●	●	●	●
Zakrisson et al 2016	●	●	●	●	●	●	●
Zakrisson et al 2020	●	●	●	●	●	●	●

**Figure S2.** Risk of bias of all selected studies.