Supplementary Online Content


eMethods. Systematic review literature search strategies

eTable 1. Quality assessment criteria

eTable 2. Scoring details for externally validated prescreening questionnaires

This supplementary material has been provided by the authors to give readers additional information about their work.
eMethods. Systematic Review Literature Search Strategies

Cochrane Database of Systematic Reviews

#1 "chronic obstructive pulmonary disease":ti,ab,kw
#2 "chronic obstructive airway disease":ti,ab,kw
#3 "chronic airflow limitation":ti,ab,kw
#4 "chronic obstructive respiratory disease":ti,ab,kw
#5 "obstructive lung" next disease*:ti,ab,kw
#6 "chronic bronchitis":ti,ab,kw
#7 COPD:ti,ab,kw or COAD:ti,ab,kw
#8 spirometry:ti,ab,kw
#9 bronchspirometry:ti,ab,kw
#10 #1 or #2 or #3 or #4 or #5 or #6 or #7 or #8 or #9 from 2008 to 2013, in Cochrane Reviews (Reviews only)

Database of Abstracts of Reviews of Effects (via CRD)

1 (((COPD) OR (COAD) OR (chronic obstructive pulmonary disease) OR (obstructive lung disease) OR (chronic obstructive airway disease) OR (chronic airflow limitation) OR (chronic obstructive respiratory disease) OR (chronic bronchitis))) IN DARE FROM 2008 TO 2013
2 (spiromet*) OR (bronchospiromet*) IN DARE FROM 2008 TO 2013
3 #1 OR #2

Health Technology Assessment (via CRD)

1 (((COPD) OR (COAD) OR (chronic obstructive pulmonary disease) OR (obstructive lung disease) OR (chronic obstructive airway disease) OR (chronic airflow limitation) OR (chronic obstructive respiratory disease) OR (chronic bronchitis))) IN HTA FROM 2008 TO 2013
2 (spiromet*) OR (bronchospiromet*) IN HTA FROM 2008 TO 2013
3 #1 OR #2

PubMed

<table>
<thead>
<tr>
<th>Search</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>#14</td>
<td>Search #9 OR #13 Filters: Publication date from 2008/01/01 to 2013/12/31; English</td>
</tr>
<tr>
<td>#13</td>
<td>Search #12 AND systematic[sb]</td>
</tr>
<tr>
<td>#12</td>
<td>Search #10 OR #11 AND (publisher[sb] OR inprocess[sb] OR pubmednotmedline[sb])</td>
</tr>
<tr>
<td>#11</td>
<td>Search spirometry[tiab] OR bronchspirometry[tiab]</td>
</tr>
<tr>
<td>#9</td>
<td>Search #8 AND systematic[sb] Filters: English</td>
</tr>
<tr>
<td>#8</td>
<td>Search #1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7</td>
</tr>
<tr>
<td>#7</td>
<td>Search spirometry[title] OR bronchspirometry[title]</td>
</tr>
<tr>
<td>#</td>
<td>Search Query</td>
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<td>-----</td>
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<td>#4</td>
<td>Search &quot;Spirometry&quot;[Majr:NoExp]</td>
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<td>#3</td>
<td>Search &quot;Lung Diseases, Obstructive&quot;[Majr:NoExp]</td>
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<tr>
<td>#2</td>
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</tr>
<tr>
<td>#1</td>
<td>Search &quot;Pulmonary Disease, Chronic Obstructive&quot;[Majr:NoExp]</td>
</tr>
</tbody>
</table>
Search Strategies to Identify Relevant Literature for Key Questions

**CINAHL** – all Key Questions

S32 (S16 OR S31)  
S31 (S26 OR S30)  
S30 (S10 AND S22 AND S29) Limiters - English Language  
S29 (S27 OR S28)  
S28 TI ((influenza or flu or pneumococcal) N5 (vaccinat* or immuniz* or shot*)) OR AB ((influenza or flu or pneumococcal) N5 (vaccinat* or immuniz* or shot*))  
S27 (MH "Immunization") OR (MH "Immunization Programs") OR (MH "Influenza Vaccine") OR (MH "Pneumococcal Vaccine")  
S26 (S10 AND S22 AND S25) Limiters - Published Date: 20120101-20151231; English Language  
S25 (S23 OR S24)  
S24 TI (smok* N10 (cessation or quit* or stop* or abstain* or abstinence)) OR AB (smok* N10 (cessation or quit* or stop* or abstain* or abstinence)) OR TI (cigarette* N10 (cessation or quit* or stop* or abstain* or abstinence)) OR AB (cigarette* N10 (cessation or quit* or stop* or abstain* or abstinence))  
S23 (MH "Smoking Cessation") OR (MH "Smoking Cessation Programs")  
S22 S17 OR S18 OR S19 OR S20 OR  
S21 TI ((biofeedback or feedback)) OR AB ((biofeedback or feedback))  
S20 TI "health assessment" OR AB "health assessment" OR TI "risk assessment" OR AB "risk assessment"  
S19 TI "respiratory function" OR AB "respiratory function" OR AB "lung function"  
S18 TI spiromet* OR AB spiromet* OR TI bronchospriromet* OR AB bronchospriromet*  
S17 (MH "Respiratory Function Tests")  
S16 S9 AND S15 Limiters - Published Date: 20000101-20151231; English Language; Exclude MEDLINE records  
S15 (S10 OR S11 OR S12 OR S13 OR S14)  
S14 (TI longitudinal OR AB longitudinal OR TI "follow up" OR AB "follow up" OR TI followup OR AB followup)  
S13 (TI database* OR AB database*) OR (TI registry OR AB registry) OR (TI registries OR AB registries)  
S12 TX cohort OR TX observational OR TX nonrandom* OR TX non-random*  
S11 (MH "Prospective Studies") OR (MH "Concurrent Prospective Studies") OR (MH "Nonconcurrent Prospective Studies") OR (MH "Correlational Studies")  
S10 (MH "Meta Analysis") OR (MH "Control Group") OR (MH "Single-Blind Studies") OR (MH "Double-Blind Studies") OR (MH "Triple-Blind Studies") OR (MH "Randomized Controlled Trials") OR (MH "Clinical Trials") OR (MH "Random Assignment") OR (TX clinical n1 trial*) OR (TX controlled n1 trial*) OR (PT Clinical trial) OR (PT randomized controlled trial)  
S9 (S1 OR S2 OR S3 OR S4 OR S5 OR S6 OR S7 OR S8)  
S8 (TI "copd" OR AB "copd") OR (TI "coad" OR AB "coad")  
S7 TI "chronic bronchitis" OR AB "chronic bronchitis"  

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S6  TI "obstructive lung disease*" OR AB "obstructive lung disease*"
S5  TI "chronic obstructive respiratory disease*" OR AB "chronic obstructive respiratory disease*"
S4  TI "chronic airflow limitation*" OR AB "chronic airflow limitation*"
S3  TI "chronic obstructive airway disease*" OR AB "chronic obstructive airway disease*"
S2  TI "chronic obstructive pulmonary disease*" OR AB "chronic obstructive pulmonary disease*"
S1  (MH "Pulmonary Disease, Chronic Obstructive") OR (MH "Bronchitis, Chronic") OR (MH "Lung Diseases, Obstructive")

CENTRAL – All Key Questions

ID    Search Hits
#1    "chronic obstructive pulmonary" next disease*:ti,ab,kw
#2    "chronic obstructive airway" next disease*:ti,ab,kw
#3    "chronic airflow" next limitation*:ti,ab,kw
#4    "chronic obstructive respiratory" next disease*:ti,ab,kw
#5    "obstructive lung" next disease*:ti,ab,kw
#6    "chronic bronchitis":ti,ab,kw
#7    COPD:ti,ab,kw or COAD:ti,ab,kw
#8    #1 or #2 or #3 or #4 or #5 or #6 or #7
#9    (prescreen* or pre-screen* or screen*):ti,ab,kw
#10   (early or earlier):ti,ab,kw near/3 (identif* or test* or detect*):ti,ab,kw
#11   (spiromet* or bronchspiromet*):ti,ab,kw
#12   (respiratory or lung):ti,ab,kw near/3 test*:ti,ab,kw
#13   ("peak flow" or "peak expiratory flow"):ti,ab,kw
#14   questionnaire*:ti,ab,kw
#15   (famil* near/3 histor*):ti,ab,kw
#16   #9 or #10 or #11 or #12 or #13 or #14 or #15
#17   #8 and #16 Publication Year from 2000 to 2014, in Trials
#18   (treat* or therap*):ti
#19   bronchodilator*:ti,ab,kw
#20   anticholinergic*:ti,ab,kw
#21   beta*:ti,ab,kw near/3 (agonist* or adrenegenic or adrenoceptor):ti,ab,kw
#22   (SABA or LABA):ti,ab,kw
#23   Albuterol:ti,ab,kw
#24   Salbutamol:ti,ab,kw
#25   Fenoterol:ti,ab,kw
#26   Levalbuterol:ti,ab,kw
#27   Xopenex HFA:ti,ab,kw
#28   Pirbuterol:ti,ab,kw
#29   Maxair Autohaler:ti,ab,kw
#30   Terbutaline:ti,ab,kw
#31   Spiriva:ti,ab,kw
#32   Arformoterol:ti,ab,kw
#33   Brovana:ti,ab,kw

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<table>
<thead>
<tr>
<th>#</th>
<th>Drug Name</th>
<th>ti, ab, kw</th>
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<tbody>
<tr>
<td>#34</td>
<td>Formoterol</td>
<td>ti, ab, kw</td>
</tr>
<tr>
<td>#35</td>
<td>Foradil</td>
<td>ti, ab, kw</td>
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<td>#36</td>
<td>Indacaterol</td>
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<td>#37</td>
<td>Onbrez breezhaler</td>
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<td>#38</td>
<td>Arcapta</td>
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<tr>
<td>#39</td>
<td>Salmeterol</td>
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<tr>
<td>#40</td>
<td>Serevent diskus</td>
<td>ti, ab, kw</td>
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<tr>
<td>#41</td>
<td>Olodaterol</td>
<td>ti, ab, kw</td>
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<td>Vilanterol</td>
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<td>#43</td>
<td>(muscarin* next antagonist*):ti, ab, kw</td>
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<td>#44</td>
<td>antimuscarin*:ti, ab, kw</td>
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<td>(anti next muscarin*):ti, ab, kw</td>
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<td>Tudorza Pressair</td>
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<td>Glycopyrronium bromide</td>
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<td>Seebri breezhaler</td>
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<td>#52</td>
<td>Tiotropium</td>
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<td>Respimat</td>
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<td>#57</td>
<td>Beclomethasone</td>
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<td>Qvar</td>
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<td>Pulmicort flexhaler</td>
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<td>Ciclesonide</td>
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<td>Alvesco</td>
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<td>Formoterol</td>
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<td>#65</td>
<td>Symbicort</td>
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<td>#66</td>
<td>Flunisolide</td>
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<td>Aerobid</td>
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<td>Fluticasone</td>
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<td>#69</td>
<td>Flovent</td>
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<tr>
<td>#70</td>
<td>Mometasone</td>
<td>ti, ab, kw</td>
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<tr>
<td>#71</td>
<td>Asmanex</td>
<td>ti, ab, kw</td>
</tr>
<tr>
<td>#72</td>
<td>Triamcinolone</td>
<td>ti, ab, kw</td>
</tr>
<tr>
<td>#73</td>
<td>(dry next powder* next inhaler*):ti, ab, kw</td>
<td></td>
</tr>
<tr>
<td>#74</td>
<td>(metered next dose* next inhaler*):ti, ab, kw</td>
<td></td>
</tr>
<tr>
<td>#75</td>
<td>(breath next actuated* next inhaler*):ti, ab, kw</td>
<td></td>
</tr>
<tr>
<td>#76</td>
<td>Accuhaler</td>
<td>ti, ab, kw</td>
</tr>
<tr>
<td>#77</td>
<td>Turbohaler</td>
<td>ti, ab, kw</td>
</tr>
<tr>
<td>#78</td>
<td>Diskhaler</td>
<td>ti, ab, kw</td>
</tr>
<tr>
<td>#79</td>
<td>(nebulizer* or nebuliser*):ti, ab, kw</td>
<td></td>
</tr>
</tbody>
</table>

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#80 {or #18-#79}  
#81 #8 and #80 Publication Year from 2010 to 2014, in Trials  
#82 (smok* or cigarette*):ti,ab,kw near/5 (stop* or cessat* or cease or abstin* or abstain* or control* or quit*):ti,ab,kw  
#83 (influenza or flu or pneumococcal):ti,ab,kw near/5 (vaccinat* or immuniz* or shot*):ti,ab,kw  
#84 (spiromet* or bronchspiromet*):ti,ab,kw  
#85 (respiratory or lung):ti,ab,kw next (function* or test*):ti,ab,kw  
#86 (health or risk):ti,ab,kw next assessment:ti,ab,kw  
#87 (biofeedback or feedback):ti,ab,kw  
#88 {or #84-#87}  
#89 #82 and #88 Publication Year from 2012 to 2014, in Trials  
#90 #83 and #88 in Trials  
#91 #17 or #81 or #89 or #90

Medline

KQ1 - Screening

1  Pulmonary Disease, Chronic Obstructive/
2  Bronchitis, Chronic/
3  Lung Diseases, Obstructive/
4  chronic obstructive pulmonary disease$ti,ab
5  chronic obstructive airway disease$ti,ab.
6  chronic airflow limitation$ti,ab.
7  chronic obstructive respiratory disease$ti,ab
8  obstructive lung disease$ti,ab.
9  chronic bronchitis.ti,ab.
10  copd.ti,ab.
11  coad.ti,ab.
12  1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11
13  Mass screening/
14  Spirometry/
15  Bronchspirometry/
16  Respiratory Function Tests/
17  screen$.ti,ab.
18  spiromet$.ti,ab.
19  bronchspiromet$.ti,ab.
20  ((respiratory or lung) adj2 function test$).ti,ab.
21  13 or 14 or 15 or 16 or 17 or 18 or 19 or 20
22  12 and 21
23  Pulmonary Disease, Chronic Obstructive/di [Diagnosis]
24  Bronchitis, Chronic/di
25  Lung Diseases, Obstructive/di
26  22 or 23 or 24 or 25

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KQ2 – Targeted screening/risk stratification

Search Strategy:

1 Pulmonary Disease, Chronic Obstructive/
2 Bronchitis, Chronic/
3 Lung Diseases, Obstructive/
4 chronic obstructive pulmonary disease$ti,ab.$
5 chronic obstructive airway disease$ti,ab.$
6 chronic airflow limitation$ti,ab.$
7 chronic obstructive respiratory disease$ti,ab.$
8 obstructive lung disease$ti,ab.$
9 chronic bronchitis$ti,ab.$
10 copd$ti,ab.$
11 coad$ti,ab.$
12 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11
13 Risk Assessment/
14 Risk factors/
15 risk factor$ti,ab.$
16 (risk adj3 assess$).ti,ab.$
17 (risk adj3 identif$).ti,ab.$
18 ((high or increase$ or elevated) adj3 risk).ti,ab.$
19 at risk$ti,ab.$
20 13 or 14 or 15 or 16 or 17 or 18 or 19
21 Mass screening/
22 Questionnaires/
23 Genetic predisposition to disease/
24 screen$ti,ab.$
25 prescreen$ti,ab.$
26 pre screen$ti,ab.$
27 questionnaire$ti,ab.$
28 (famil$ adj3 histor$).ti,ab.$
29 ((early or earlier) adj3 (identif$ or test$ or detect$)).ti,ab.$
30  21 or 22 or 23 or 24 or 25 or 26 or 27 or 28 or 29
31  12 and 20 and 30
32  clinical trials as topic/ or controlled clinical trials as topic/ or randomized controlled trials as topic/ or meta-analysis as topic/
33  (clinical trial or controlled clinical trial or meta analysis or randomized controlled trial).pt.
34  Random$.ti,ab.
35  control groups/ or double-blind method/ or single-blind method/
36  clinical trial$.ti,ab.
37  controlled trial$.ti,ab.
38  meta analy$.ti,ab.
39  cohort studies/ or longitudinal studies/ or follow-up studies/ or prospective studies/ or retrospective studies/
40  cohort.ti,ab.
41  longitudinal.ti,ab.
42  (follow up or followup).ti,ab.
43  32 or 33 or 34 or 35 or 36 or 37 or 38 or 39 or 40 or 41 or 42
44  31 and 43
45  limit 44 to (english language and yr="2000 -Current")

**KQ3** – Test performance/Dx accuracy

**Search Strategy:**

<table>
<thead>
<tr>
<th>Step</th>
<th>Medical Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Pulmonary Disease, Chronic Obstructive/</td>
</tr>
<tr>
<td>2</td>
<td>Bronchitis, Chronic/</td>
</tr>
<tr>
<td>3</td>
<td>Lung Diseases, Obstructive/</td>
</tr>
<tr>
<td>4</td>
<td>chronic obstructive pulmonary disease$.ti,ab.</td>
</tr>
<tr>
<td>5</td>
<td>chronic obstructive airway disease$.ti,ab.</td>
</tr>
<tr>
<td>6</td>
<td>chronic airflow limitation$.ti,ab.</td>
</tr>
<tr>
<td>7</td>
<td>chronic obstructive respiratory disease$.ti,ab.</td>
</tr>
<tr>
<td>8</td>
<td>obstructive lung disease$.ti,ab.</td>
</tr>
<tr>
<td>9</td>
<td>chronic bronchitis.ti,ab.</td>
</tr>
<tr>
<td>10</td>
<td>copd.ti,ab.</td>
</tr>
<tr>
<td>11</td>
<td>coad.ti,ab.</td>
</tr>
<tr>
<td>12</td>
<td>1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11</td>
</tr>
<tr>
<td>13</td>
<td>Mass screening/</td>
</tr>
<tr>
<td>14</td>
<td>Spirometry/</td>
</tr>
<tr>
<td>15</td>
<td>Bronchospirometry/</td>
</tr>
<tr>
<td>16</td>
<td>Respiratory Function Tests/</td>
</tr>
<tr>
<td>17</td>
<td>Peak Expiratory Flow Rate/</td>
</tr>
<tr>
<td>18</td>
<td>screen$.ti,ab.</td>
</tr>
<tr>
<td>19</td>
<td>spiromet$.ti,ab.</td>
</tr>
<tr>
<td>20</td>
<td>bronchospiromet$.ti,ab.</td>
</tr>
<tr>
<td>21</td>
<td>((respiratory or lung) adj2 function test$).ti,ab.</td>
</tr>
<tr>
<td>22</td>
<td>peak flow.ti,ab.</td>
</tr>
<tr>
<td>23</td>
<td>peak expiratory flow.ti,ab.</td>
</tr>
</tbody>
</table>
(test$ or detect$).ti.
13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21 or 22 or 23 or 24
12 and 25
Pulmonary Disease, Chronic Obstructive/di [Diagnosis]
Bronchitis, Chronic/di
Lung Diseases, Obstructive/di
26 or 27 or 28 or 29
"Sensitivity and Specificity"/
"Predictive Value of Tests"/
ROC Curve/
False Negative Reactions/
False Positive Reactions/
Diagnostic Errors/
"Reproducibility of Results"/
Reference Values/
Reference Standards/
Observer Variation/
Receiver operat$.ti,ab.
ROC curve$.ti,ab.
sensitivit$.ti,ab.
specificit$.ti,ab.
predictive value.ti,ab.
accuracy.ti,ab.
false positive$.ti,ab.
false negative$.ti,ab.
miss rate$.ti,ab.
error rate$.ti,ab.
31 or 32 or 33 or 34 or 35 or 36 or 37 or 38 or 39 or 40 or 41 or 42 or 43 or 44 or 45 or 46
or 47 or 48 or 49 or 50
30 and 51
limit 52 to (english language and yr="2000 -Current")
remove duplicates from 53
limit 52 to (english language and yr="2000 -Current")

KQ 4, 6 – Screening harms

Search Strategy:

1 Pulmonary Disease, Chronic Obstructive/
2 Bronchitis, Chronic/
3 Lung Diseases, Obstructive/
4 chronic obstructive pulmonary disease$.ti,ab.
5 chronic obstructive airway disease$.ti,ab.
6 chronic airflow limitation$.ti,ab.
7 chronic obstructive respiratory disease$.ti,ab.
8 obstructive lung disease$.ti,ab.
chronic bronchitis.ti,ab.
copd.ti,ab.
coad.ti,ab.
1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11
Mass screening/
Spirometry/
Bronchospirometry/
Respiratory Function Tests/
screen$.ti,ab.
spiromet$.ti,ab.
bronchospiromet$.ti,ab.
((respiratory or lung) adj2 function test$).ti,ab.
13 or 14 or 15 or 16 or 17 or 18 or 19 or 20
12 and 21
Pulmonary Disease, Chronic Obstructive/di [Diagnosis]
Bronchitis, Chronic/di
Lung Diseases, Obstructive/di
22 or 23 or 24 or 25
Mortality/
Morbidity/
Death/
safety.ti,ab.
harm$.ti,ab.
mortality.ti,ab.
 complication$.ti,ab.
(death or deaths).ti,ab.
(adverse adj2 (interaction$ or response$ or effect$ or event$ or reaction$ or outcome$)).ti,ab.
side effect$.ti,ab.
adverse effects.fs.
mortality.fs.
false reassurance.ti,ab.
false assurance.ti,ab.
(unnecessary adj3 (treat$ or therapy$)).ti,ab.
 overtreat$.ti,ab.
Arrhythmias, Cardiac/
cardiac ectop$.ti,ab.
ectopic heartbeat$.ti,ab.
arrhythmia$.ti,ab.
premature atrial contraction$.ti,ab.
premature ventricular contraction$.ti,ab.
27 or 28 or 29 or 30 or 31 or 32 or 33 or 34 or 35 or 36 or 37 or 38 or 39 or 40 or 41 or 42
or 43 or 44 or 45 or 46 or 47 or 48
26 and 49
limit 50 to (english language and yr="2005 -Current")
KQ 5 – Spirometry/respiratory tests and smoking cessation/vaccination

Search Strategy:

1  Smoking cessation/
2   "Tobacco Use Cessation"/
3  Smoking/pc [Prevention & Control]
4   ((smok$ or cigarette$) adj10 (cessation or quit$ or stop$ or abstain$ or abstinence)).ti,ab.
5   1 or 2 or 3 or 4
6  Immunization/
7  Vaccination/
8  Immunization Programs/
9  Influenza vaccines/
10 Pneumococcal Vaccines/
11   ((influenza or flu or pneumococcal) adj5 (vaccinat* or immuniz* or shot*)).ti,ab.
12   6 or 7 or 8 or 9 or 10 or 11
13 Spirometry/
14 Bronchspirometry/
15 Respiratory Function Tests/
16   spiromet$.ti,ab.
17   bronchspiromet$.ti,ab.
18   ((respiratory or lung) adj3 (function$ or test$)).ti,ab.
19   health assessment.ti,ab.
20   risk assessment.ti,ab.
21   (biofeedback or feedback).ti,ab.
22   13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21
23 clinical trials as topic/ or controlled clinical trials as topic/ or randomized controlled trials as topic/ or meta-analysis as topic/
24   (clinical trial or controlled clinical trial or meta analysis or randomized controlled trial).pt.
25   Random$.ti,ab.
26   control groups/ or double-blind method/ or single-blind method/
27   clinical trial$.ti,ab.
28   controlled trial$.ti,ab.
29   meta analy$.ti,ab.
30   23 or 24 or 25 or 26 or 27 or 28 or 29
31   5 and 22 and 30
32   limit 31 to (english language and yr="2012 -Current")
33   12 and 22 and 30
34   limit 33 to english language
35   32 or 34
36 Animal/ not (Human/ and Animal/)
37   35 not 36
38   remove duplicates from 37

KQ 7 – Treatment
Search Strategy:
--------------------------------------------------------------------------------
1 Pulmonary Disease, Chronic Obstructive/
2 Bronchitis, Chronic/
3 Lung Diseases, Obstructive/
4 chronic obstructive pulmonary disease$.ti,ab.
5 chronic obstructive airway disease$.ti,ab.
6 chronic airflow limitation$.ti,ab.
7 chronic obstructive respiratory disease$.ti,ab.
8 obstructive lung disease$.ti,ab.
9 chronic bronchitis.ti,ab.
10 copd.ti,ab.
11 coad.ti,ab.
12 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11
13 Bronchodilator Agents/
14 Cholinergic Antagonists/
15 Adrenergic beta-Agonists/
16 Adrenergic beta-2 Receptor Agonists/
17 "Nebulizers and Vaporizers"/
18 Expectorants/
19 Muscarinic Antagonists/
20 Adrenal Cortex Hormones/
21 Albuterol/
22 Fenoterol/
23 Ipratropium/
24 Terbutaline/
25 Bronchodilator$.ti,ab.
26 anticholinergic$.ti,ab.
27 (beta$ adj3 (agonist$ or adrenegenic or adrenoceptor)).ti,ab.
28 (SABA or LABA).ti,ab.
29 Albuterol.ti,ab.
30 Salbutamol.ti,ab.
31 Fenoterol.ti,ab.
32 Levalbuterol.ti,ab.
33 Xopenex HFA.ti,ab.
34 Pirbuterol.ti,ab.
35 Maxair Autohaler.ti,ab.
36 Terbutaline.ti,ab.
37 Spiriva.ti,ab.
38 Arformoterol.ti,ab.
39 Brovana.ti,ab.
40 Formoterol.ti,ab.
41 Foradil.ti,ab.
42 Indacaterol.ti,ab.
43 Onbrez breezhaler.ti,ab.
44 Arcapta.ti,ab.
45 Salmeterol.ti,ab.
46 Serevent diskus.ti,ab.
47 Olodaterol.ti,ab.
48 Vilañterol.ti,ab.
49 muscarin$ antagonist$.ti,ab.
50 antimuscarin$.ti,ab.
51 anti muscarin$.ti,ab.
52 (SAMA or LAMA).ti,ab.
53 Ipratropium.ti,ab.
54 Aclidinium.ti,ab.
55 Tudorza Pressair.ti,ab.
56 Glycopyrronium bromide.ti,ab.
57 Seebri breezhaler.ti,ab.
58 Tiotropium.ti,ab.
59 Respimat.ti,ab.
60 HandiHaler.ti,ab.
61 glucocorticoid$.ti,ab.
62 (inhal$ and corticosteroid$).ti,ab.
63 Beclomethasone.ti,ab.
64 Qvar.ti,ab.
65 Betamethasone.ti,ab.
66 Budesonide.ti,ab.
67 Pulmicort flexhaler.ti,ab.
68 Ciclesonide.ti,ab.
69 Alvesco.ti,ab.
70 Formoterol.ti,ab.
71 Symbicort.ti,ab.
72 Flunisolide.ti,ab.
73 Aerobid.ti,ab.
74 Fluicasone.ti,ab.
75 Flovent.ti,ab.
76 Mometasone.ti,ab.
77 Asmanex.ti,ab.
78 Triamcinolone.ti,ab.
79 Dry powder$ inhaler$.ti,ab.
80 Metered dose inhaler$.ti,ab.
81 Breath actuated inhaler$.ti,ab.
82 Accuhaler.ti,ab.
83 Turbohaler.ti,ab.
84 Diskhaler.ti,ab.
85 Nebulizer.ti,ab.
86 13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21 or 22 or 23 or 24 or 25 or 26 or 27 or 28 or 29 or 30 or 31 or 32 or 33 or 34 or 35 or 36 or 37 or 38 or 39 or 40 or 41 or 42 or 43 or 44 or 45 or 46 or 47 or 48 or 49 or 50 or 51 or 52 or 53 or 54 or 55 or 56 or 57 or 58 or 59 or 60 or 61 or 62 or 63 or 64 or 65 or 66 or 67 or 68 or 69 or 70 or 71 or 72 or 73 or 74 or 75 or 76 or 77 or 78 or 79 or 80 or 81 or 82 or 83 or 84 or 85

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KQ8 – Treatment harms

1. Pulmonary Disease, Chronic Obstructive/
2. Bronchitis, Chronic/
3. Lung Diseases, Obstructive/
4. chronic obstructive pulmonary disease$.ti,ab.
5. chronic obstructive airway disease$.ti,ab.
6. chronic airflow limitation$.ti,ab.
7. chronic obstructive respiratory disease$.ti,ab.
8. obstructive lung disease$.ti,ab.
9. chronic bronchitis.ti,ab.
10. copd.ti,ab.
11. coad.ti,ab.
12. 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11
13. Bronchodilator Agents/
14. Cholinergic Antagonists/
15. Adrenergic beta-Agonists/
16. Adrenergic beta-2 Receptor Agonists/
17. "Nebulizers and Vaporizers"
18. Expectorants/
19. Muscarinic Antagonists/
20. Adrenal Cortex Hormones/
21. Albuterol/
22. Fenoterol/
23. Ipratropium/
24. Terbutaline/
25. Bronchodilator$.ti,ab.
26. anticholinergic$.ti,ab.
27. (beta$ adj3 (agonist$ or adrenogenic or adrenoceptor)).ti,ab.

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28. (SABA or LABA).ti,ab.
29. Albuterol.ti,ab.
30. Salbutamol.ti,ab.
31. Fenoterol.ti,ab.
32. Levalbuterol.ti,ab.
33. Xopenex HFA.ti,ab.
34. Pirbuterol.ti,ab.
35. Maxair Autohaler.ti,ab.
36. Terbutaline.ti,ab.
37. Spiriva.ti,ab.
38. Arformoterol.ti,ab.
39. Brovana.ti,ab.
40. Formoterol.ti,ab.
41. Foradil.ti,ab.
42. Indacaterol.ti,ab.
43. Onbrez breezhaler.ti,ab.
44. Arcapta.ti,ab.
45. Salmeterol.ti,ab.
46. Serevent diskus.ti,ab.
47. Olodaterol.ti,ab.
48. Vilanterol.ti,ab.
49. muscarin$. antagonist$.ti,ab.
50. antimuscarin$.ti,ab.
51. anti muscarin$.ti,ab.
52. (SAMA or LAMA).ti,ab.
53. Ipratropium.ti,ab.
54. Aclidinium.ti,ab.
55. Tudorza Pressair.ti,ab.
56. Glycopyrronium bromide.ti,ab.
57. Seebri breezhaler.ti,ab.
58. Tiotropium.ti,ab.
59. Respimat.ti,ab.
60. HandiHaler.ti,ab.
61. glucocorticoid$.ti,ab.
62. (inhal$ and corticosteroid$).ti,ab.
63. Beclomethasone.ti,ab.
64. Qvar.ti,ab.
65. Betamethasone.ti,ab.
66. Budesonide.ti,ab.
67. Pulmicort flexhaler.ti,ab.
68. Ciclesonide.ti,ab.
69. Alvesco.ti,ab.
70. Formoterol.ti,ab.
71. Symbicort.ti,ab.
72. Flunisolide.ti,ab.
73. Aerobid.ti,ab.

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74. Fluticasone.ti,ab.
75. Flovent.ti,ab.
76. Mometasone.ti,ab.
77. Asmanex.ti,ab.
78. Triamcinolone.ti,ab.
79. Dry powder$ inhaler$.ti,ab.
80. Metered dose inhaler$.ti,ab.
81. Breath actuated inhaler$.ti,ab.
82. Accuhaler.ti,ab.
83. Turbohaler.ti,ab.
84. Diskhaler.ti,ab.
85. Nebulizer$.ti,ab.
86. 13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21 or 22 or 23 or 24 or 25 or 26 or 27 or 28 or 29 or 30 or 31 or 32 or 33 or 34 or 35 or 36 or 37 or 38 or 39 or 40 or 41 or 42 or 43 or 44 or 45 or 46 or 47 or 48 or 49 or 50 or 51 or 52 or 53 or 54 or 55 or 56 or 57 or 58 or 59 or 60 or 61 or 62 or 63 or 64 or 65 or 66 or 67 or 68 or 69 or 70 or 71 or 72 or 73 or 74 or 75 or 76 or 77 or 78 or 79 or 80 or 81 or 82 or 83 or 84 or 85
87. 12 and 86
88. Pulmonary Disease, Chronic Obstructive/dt
89. Bronchitis, Chronic/dt
90. Lung Diseases, Obstructive/dt
91. 87 or 88 or 89 or 90
92. Mortality/
93. Morbidity/
94. Death/
95. "Drug-Related Side Effects and Adverse Reactions"/
96. safety.ti,ab.
97. harm$.ti,ab.
98. mortality.ti,ab.
99. toxicity.ti,ab.
100. complication$.ti,ab.
101. (death or deaths).ti,ab.
102. (adverse adj2 (interaction$ or response$ or effect$ or event$ or reaction$ or outcome$)).ti,ab.
103. side effect$.ti,ab.
104. adverse effects.fs.
105. toxicity.fs.
106. mortality.fs.
107. Dizziness/
108. Headache/
109. Xerostomia/
110. Constipation/
111. Urinary Retention/
112. Urinary Tract Infections/
113. Muscle Cramp/
114. Hematoma/

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115. Candidiasis, Oral/
116. Bone Density/de [Drug Effects]
117. Fractures, Bone/
118. Cataract/
119. Glaucoma/
120. Glaucoma, open-angle/
121. Cough/
122. Bronchial Spasm/
123. Arrhythmias, Cardiac/
124. Tachycardia/
125. Heart Failure/
126. Heart Arrest/
127. Heart Rate/de [Drug Effects]
128. Myocardial Infarction/
129. Cardiomyopathies/
130. xerostomia$.ti,ab.
131. dry mouth.ti,ab.
132. headache$.ti,ab.
133. tremor$.ti,ab.
134. constipat$.ti,ab.
135. urinary retention.ti,ab.
136. urinary tract infection$.ti,ab.
137. muscle cramp$.ti,ab.
138. (bruise$ or bruising).ti,ab.
139. h?ematoma$.ti,ab.
140. ((oral or oropharyngeal) adj candidiasis).ti,ab.
141. ((low or decrease$) adj3 (body mass density or BMD)).ti,ab.
142. fracture$.ti,ab.
143. cataract$.ti,ab.
144. glaucoma.ti,ab.
145. paradoxical bronchospasm$.ti,ab.
146. bronchial spasm$.ti,ab.
147. respiratory death$.ti,ab.
148. cardiovascular event$.ti,ab.
149. arrhythmi$.ti,ab.
150. tachycardi$.ti,ab.
151. palpitation$.ti,ab.
152. ((rapid or increase$ or elevat$) adj3 (heart rate or heartbeat)).ti,ab.
153. myocardial infarction$.ti,ab.
154. cardiomyopath$.ti,ab.
155. (heart adj (failure$ or attack$)).ti,ab.
156. cardiac death$.ti,ab.
157. 92 or 93 or 94 or 95 or 96 or 97 or 98 or 99 or 100 or 101 or 102 or 103 or 104 or 105 or
106 or 107 or 108 or 109 or 110 or 111 or 112 or 113 or 114 or 115 or 116 or 117 or 118 or 119
or 120 or 121 or 122 or 123 or 124 or 125 or 126 or 127 or 128 or 129 or 130 or 131 or 132 or
Targeted immunization uptake search

Search Strategy:

<table>
<thead>
<tr>
<th>Search</th>
<th>Query</th>
</tr>
</thead>
<tbody>
<tr>
<td>#16</td>
<td>Search (((#13 OR #14 OR #15)) AND publisher[sb]) AND English[Language]</td>
</tr>
<tr>
<td>#15</td>
<td>Search (#5 AND #11 AND #12)</td>
</tr>
<tr>
<td>#14</td>
<td>Search (#5 AND #11 AND #12) AND (&quot;2012&quot;[Date - Publication] : &quot;3000&quot;[Date - Publication])</td>
</tr>
<tr>
<td>#13</td>
<td>Search (#4) AND (&quot;2000&quot;[Date - Publication] : &quot;3000&quot;[Date - Publication])</td>
</tr>
<tr>
<td>#12</td>
<td>Search random*[tiab] OR trial*[tiab]</td>
</tr>
<tr>
<td>#11</td>
<td>Search #7 or #8 or #9 or #10</td>
</tr>
<tr>
<td>#10</td>
<td>Search biofeedback[tiab] OR feedback[tiab]</td>
</tr>
<tr>
<td>#9</td>
<td>Search health assessment[tiab] OR risk assessment[tiab]</td>
</tr>
<tr>
<td>#8</td>
<td>Search respiratory function*[tiab] OR lung function*[tiab]</td>
</tr>
<tr>
<td>#7</td>
<td>Search spirometr*[tiab] OR bronchspiromet*[tiab]</td>
</tr>
<tr>
<td>#6</td>
<td>Search vaccinat*[tiab] OR immuniz*[tiab]</td>
</tr>
<tr>
<td>#5</td>
<td>Search (smok*[tiab] OR cigarette*[tiab]) AND (cessation*[tiab] OR quit*[tiab] OR stop*[tiab] OR abstain*[tiab] OR abstinence*[tiab])</td>
</tr>
<tr>
<td>----</td>
<td>--------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>#4</td>
<td>Search #1 OR #2 OR #3</td>
</tr>
<tr>
<td>#3</td>
<td>Search COPD*[title] OR COAD*[title]</td>
</tr>
<tr>
<td>#2</td>
<td>Search obstructive lung disease*[tiab] OR chronic bronchitis*[tiab]</td>
</tr>
<tr>
<td>#1</td>
<td>Search chronic obstructive pulmonary disease*[tiab] OR chronic obstructive respiratory disease*[tiab] OR chronic obstructive airway*[tiab] OR chronic airflow limitation*[tiab]</td>
</tr>
</tbody>
</table>
### eTable 1. Quality Assessment Criteria

<table>
<thead>
<tr>
<th>Design</th>
<th>USPSTF quality rating criteria</th>
<th>National Institute for Health and Clinical Excellence methodology checklists</th>
<th>QUADAS I and II Tools</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Systematic reviews and meta-analyses</strong></td>
<td>• Comprehensiveness of sources considered/search strategy used</td>
<td>• The study addresses an appropriate and clearly focused question</td>
<td>Not applicable</td>
</tr>
<tr>
<td></td>
<td>• Standard appraisal of included studies</td>
<td>• A description of the methodology used is included</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Validity of conclusions</td>
<td>• The literature search is sufficiently rigorous to identify all the relevant studies</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Recency and relevance are especially important for systematic reviews</td>
<td>• Study quality is assessed and taken into account</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Initial assembly of comparable groups employs adequate randomization, including first concealment and whether potential confounders were distributed equally among groups</td>
<td>• There are enough similarities between the studies selected to make combining them reasonable</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Maintenance of comparable groups (includes attrition, crossovers, adherence, contamination)</td>
<td>• The treatment and control groups are similar at the start of the trial</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Important differential loss to followup or overall high loss to followup</td>
<td>• The only difference between groups is the treatment under investigation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Measurements: equal, reliable, and valid (includes masking of outcome assessment)</td>
<td>• All relevant outcomes are measured in a standard, valid and reliable way</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Clear definition of the</td>
<td>• What percentage of the individuals or clusters recruited into each</td>
<td></td>
</tr>
<tr>
<td><strong>Randomized controlled trials (RCTs)</strong></td>
<td>• Initial assembly of comparable groups employs adequate randomization, including first concealment and whether potential confounders were distributed equally among groups</td>
<td>• The study addresses an appropriate and clearly focused question</td>
<td>Not applicable</td>
</tr>
<tr>
<td></td>
<td>• The assignment of subjects to treatment groups is randomized</td>
<td>• The assignment of subjects to treatment groups is randomized</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• An adequate concealment method is used</td>
<td>• Subjects and investigators are kept ‘blind’ about treatment allocation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Subjects and investigators are kept ‘blind’ about treatment allocation</td>
<td>• The treatment and control groups are similar at the start of the trial</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• The only difference between groups is the treatment under investigation</td>
<td>• All relevant outcomes are measured in a standard, valid and reliable way</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• All relevant outcomes are measured in a standard, valid and reliable way</td>
<td>• What percentage of the individuals or clusters recruited into each</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• What percentage of the individuals or clusters recruited into each</td>
<td>•</td>
<td></td>
</tr>
<tr>
<td>interventions</td>
<td>treatment arm of the study dropped out before the study was completed?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• All important outcomes considered</td>
<td>• All the subjects are analyzed in the groups to which they were randomly allocated (often referred to as intention-to-treat analysis)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Where the study is carried out at more than one site, results are comparable for all sites</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cohort studies</th>
<th>The study addresses an appropriate and clearly focused question</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Initial assembly of comparable groups employs consideration of potential confounders with either restriction or measurement for adjustment in the analysis; consideration of inception cohorts</td>
<td>• The two groups being studied are selected from source populations that are comparable in all respects other than the factor under investigation</td>
</tr>
<tr>
<td>• Maintenance of comparable groups (includes attrition, crossovers, adherence, contamination)</td>
<td>• The study indicates how many of the people asked to take part did so, in each of the groups being studied</td>
</tr>
<tr>
<td>• Important differential loss to followup or overall high loss to followup</td>
<td>• The likelihood that some eligible subjects might have the outcome at the time of enrollment is assessed and taken into account in the analysis</td>
</tr>
<tr>
<td>• Measurements: equal, reliable, and valid (includes masking of outcome assessment)</td>
<td>• What percentage of individuals or clusters recruited into each arm of the study dropped out before the study was completed?</td>
</tr>
<tr>
<td>• Clear definition of the interventions</td>
<td>• Comparison is made between full participants and those lost to followup, by exposure status</td>
</tr>
<tr>
<td>• All important outcomes considered</td>
<td>• The outcomes are clearly defined</td>
</tr>
<tr>
<td></td>
<td>• The assessment of outcome is made blind to exposure</td>
</tr>
</tbody>
</table>

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Where blinding was not possible, there is some recognition that knowledge of exposure status could have influenced the assessment of outcome
- The measure of assessment of exposure is reliable
- Evidence from other sources is used to demonstrate that the method of outcome assessment is valid & reliable
- Exposure level or prognostic factor is assessed more than once
- The main potential confounders are identified and taken into account in the design and analysis
- Have confidence intervals been provided?

### Diagnostic Accuracy Studies

- Screening test relevant, available for primary care, adequately described
- Study uses a credible reference standard, performed regardless of test results
- Reference standard interpreted independently of screening test
- Handles indeterminate result in a reasonable manner
- Spectrum of patients included in study
- Sample size
- Administration of reliable screening test
- The nature of the test being studied is clearly specified
- The test is compared with an appropriate gold standard
- Where no gold standard exists, a validated reference standard is used as a comparator
- Patients for testing are selected either as a consecutive series or randomly, from a clearly defined study population
- The test and gold standard are measured independently (blind) of each other
- The test and gold standard are applied as close together in time as possible
- Results are reported for all

- Test clearly described (or referenced)
- Was the spectrum of patients representative of the patients who will receive the test in primary care?
- Was the selection process clearly defined?
- Were the index test results interpreted without knowledge of the reference standard results?
- If a threshold was used, was it prespecified?
- Are there concerns that the index test,
patients that are entered into the study
• A pre-diagnosis is made and reported
its conduct, or its interpretation differ from the review question?
• Is the reference standard acceptable for correctly classifying the target?
• Were the reference standard results interpreted without knowledge of the index test?
• Did the whole or partial selection of sample receive reference test
• Was there an appropriate interval between the index test and reference standard?
• Did all patients receive the same reference standard?
• Were all patients included in the analysis?

Good quality studies generally meet all quality criteria. Fair quality studies do not meet all the criteria but do not have critical limitations that could invalidate study findings. Poor quality studies have a single fatal flaw or multiple important limitations that could invalidate study findings. Critical appraisal of studies using a priori quality criteria are conducted independently by at least two reviewers. Disagreements in final quality assessment are resolved by consensus, and, if needed, consultation with a third independent reviewer.
### eTable 2. Scoring Details for Externally Validated Prescreening Questionnaires

<table>
<thead>
<tr>
<th>Screening Questionnaire</th>
<th>Questionnaire Items</th>
<th>Answers (points assigned)</th>
<th>Scoring &amp; Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lung Function Questionnaire (LFQ)</strong></td>
<td>How often do you cough up mucus?</td>
<td>Never (5) Occasionally (4) Sometimes (3) Often (2) Very often (1)</td>
<td>If score is 18 or less, person may be at risk for COPD</td>
</tr>
<tr>
<td></td>
<td>How often does your chest sound noisy (wheezy, whistling, rattling) when you breathe?</td>
<td>Never (5) Occasionally (4) Sometimes (3) Often (2) Very often (1)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>How often do you experience shortness of breath during physical activity (walking up a flight of stairs or walking up an incline without stopping to rest)?</td>
<td>Never (5) Occasionally (4) Sometimes (3) Often (2) Very often (1)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>How many years have you smoked?</td>
<td>Never smoked (5) 10 years or less (4) 11-20 years (3) 21-30 years (2) More than 30 years (1)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>What is your age?</td>
<td>Less than 40 years (5) 40-49 years (4) 50-59 years (3) 60-69 years (2) 70 years or older (1)</td>
<td></td>
</tr>
</tbody>
</table>
### COPD Diagnostic Questionnaire (CDQ) 6

**Also known as:** *International Primary Care Airways Guidelines (IPAG)*

<table>
<thead>
<tr>
<th>Question</th>
<th>40-49 (0)</th>
<th>50-59 (4)</th>
<th>60-69 (8)</th>
<th>70+ (10)</th>
<th>≥17 suggests increased risk of COPD being present</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>How old are you?</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>What is your weight?</strong></td>
<td>&lt;25.4 (5)</td>
<td>25.4-29.7 (1)</td>
<td>&gt;29.7 (0)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>What is your height?</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>BMI = weight/height</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>How many cigarettes do you smoke daily (if you are an ex-smoker how many cigarettes did you used to smoke daily)?</strong></td>
<td>0-14 pack-years (0)</td>
<td>15-24 pack-years (2)</td>
<td>25-49 pack-years (3)</td>
<td>50+ pack-years (7)</td>
<td>Total score ≥17 suggests increased risk of COPD being present</td>
</tr>
<tr>
<td><strong>How many years did/do you smoke?</strong></td>
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<tr>
<td><strong>Packs per day = cigarettes per day/20 cigarettes per pack</strong></td>
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<tr>
<td><strong>Pack-years = packs per day x years smoked</strong></td>
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<tr>
<td><strong>Does the weather affect your cough?</strong></td>
<td>Yes (3)</td>
<td>No (0)</td>
<td></td>
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</tr>
<tr>
<td><strong>Do you ever cough up phlegm (sputum) from your chest when you don’t have a cold?</strong></td>
<td>Yes (3)</td>
<td>No (0)</td>
<td></td>
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</tr>
<tr>
<td><strong>Do you usually cough up phlegm (sputum) from your chest first thing in the morning?</strong></td>
<td>Yes (0)</td>
<td>No (3)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>How frequently do you wheeze?</strong></td>
<td>Sometimes or often (4)</td>
<td>Never (0)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Do you have or have you had any allergies?</strong></td>
<td>Yes (0)</td>
<td>No (3)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**COPD Population Screener (COPD-PS)**

<table>
<thead>
<tr>
<th>Question</th>
<th>Options</th>
<th>Total score scale ranges from 0 (unlikely to have fixed airflow obstruction) to 10 (likely to have fixed airflow obstruction).</th>
<th>Development study suggests a cut point in the range of 5 to 6 provides a good trade-off between sensitivity and specificity.</th>
</tr>
</thead>
</table>
| During the past 4 weeks, how much of the time did you feel short of breath? | None of the time (0)  
A little of the time (0)  
Some of the time (1)  
Most of the time (2)  
All of the time (2) | Total score scale ranges from 0 (unlikely to have fixed airflow obstruction) to 10 (likely to have fixed airflow obstruction). | Development study suggests a cut point in the range of 5 to 6 provides a good trade-off between sensitivity and specificity. |
| Do you ever cough up any “stuff”, such as mucus or phlegm?              | No, never (0)  
Only with occasional colds or chest infections (0)  
Yes, a few days a month (1)  
Yes, most days a week (1)  
Yes, every day (2) | Total score scale ranges from 0 (unlikely to have fixed airflow obstruction) to 10 (likely to have fixed airflow obstruction). | Development study suggests a cut point in the range of 5 to 6 provides a good trade-off between sensitivity and specificity. |
| Please select the answer that best describes you in the past 12 months.  | Strongly disagree (0)  
Disagree (0)  
Unsure (0)  
Agree (1)  
Strongly agree (2) | Total score scale ranges from 0 (unlikely to have fixed airflow obstruction) to 10 (likely to have fixed airflow obstruction). | Development study suggests a cut point in the range of 5 to 6 provides a good trade-off between sensitivity and specificity. |
| I do less than I used to because of my breathing problems.              | Total score scale ranges from 0 (unlikely to have fixed airflow obstruction) to 10 (likely to have fixed airflow obstruction). | Development study suggests a cut point in the range of 5 to 6 provides a good trade-off between sensitivity and specificity. | Development study suggests a cut point in the range of 5 to 6 provides a good trade-off between sensitivity and specificity. |
| Have you smoked at least 100 cigarettes in your entire life?            | No (0)  
Yes (2)  
Don’t know (0) | Total score scale ranges from 0 (unlikely to have fixed airflow obstruction) to 10 (likely to have fixed airflow obstruction). | Development study suggests a cut point in the range of 5 to 6 provides a good trade-off between sensitivity and specificity. |
| How old are you?                                                        | Age 35 to 49 (0)  
Age 50 to 59 (1)  
Age 60 to 69 (2)  
Age 70+ (2) | Total score scale ranges from 0 (unlikely to have fixed airflow obstruction) to 10 (likely to have fixed airflow obstruction). | Development study suggests a cut point in the range of 5 to 6 provides a good trade-off between sensitivity and specificity. |
References


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