Appendix Table 1. Comparative Studies for COPD case-finding from 2011-2021.

Study characteristics		Criteria			Settings			Case-finding tool	Performance				COPD definition
Study/Year	Sample Size	Age	Symptom	Exposure	Country	Setting	Operator	Device	Incidence	Cut-off	AUC	Sen (%)/Sp (%)	
Frith 2011 [47]	204	⩾50 years of age	-	smoker/ ex-smoker	Australia	PC	study nurse or GP*	PiKo-6®	27.9%	**FEV1/FEV6 < 0.75**	0.85	81%/71%	post-BD FEV1/FVC spirometry<0.7
Frith 2011 [47]	204	⩾50 years of age	-	smoker/ ex-smoker	Australia	PC	study nurse or GP	CDQ	27.9%	⩾ 16.5	0.75	91.0%/37.0%	post-BD FEV1/FVC spirometry<0.7
										⩾ 19.5		71.0%/62.0%	
Thorn 2012 [48]	305	40–85 years of age		>15 pack-years	Sweden	PC	nurse	COPD-6	25.2%	FEV1/FEV6< 73%	0.84	73%/ 80.3%	post-BD FEV1/FVC spirometr

Study	N	Age	Symptoms	Smoking	Country	Setting	Provider	Device	Prevalence	Cutoff	Value	Sens/Spec	Reference standard
													y<0.7
Van Den Bemt 2014 [49]	104	≥50 years of age	respiratory symptoms	≥1 pack-year	Netherlands	PC	GP*	PiKo-6®	42.3%	FEV1/FEV6< 73%	0.937	93.2%/85.0%	post-BD FEV1/FVC spirometry<0.7
												93.3%/70.3%	post-BD FEV1/FVC spirometry<LLN
Stanley 2014 [63]	1054	40–85 years of age		former or current smokers	Australia	PC	GP	CDQ	13.1%	≥ 16.5	0.71	79.7%/46.8%	post-BD FEV1/FVC spirometry<0.7
										≥ 19.5		63.0%/70.1%	
Represas-Represas 2016 [50]	362	≥40 years of age	respiratory symptoms	>10 pack-years	Spain	PC, ES, CPh	PC doctors, ES doctors, pharmacists*	COPD-6	31.5%	FEV1/FEV6< 73%	0.8	92.1%/52.8%	post-BD FEV1/FVC spirometry<0.7

Study	N	Age		Smoking	Country	Setting	Administered by	Test	Prevalence	Criterion	Cutoff	Sensitivity/Specificity	Reference standard
Labor 2016 [51]	227	40–60 years of Age		⩾20 pack-years	Croatia	GP	GP offices*	COPD-6	18.9 %	FEV1/FEV6 <0.7	0.87	32.56 %/100 %	post-BD FEV1/FVC spirometry<0.7
Kim 2016 [52]	190	⩾40 years of age		>10 pack-years	Korea	PC	physicians *	COPD-6	23.7%	FEV1/FEV6 <0.77	0.759	72.7%/77.1%	post-BD FEV1/FVC spirometry<0.7
Lopez Varela 2016 [61]	1540	⩾40 years of age		⩾10 pack-years or exposure to biomass smoke	Argentina, Colombia, Venezuela, Uruguay	PC	GP	simple PUMA	20.1%	⩾5	0.76	74.2%/64.8%	post-BD FEV1/FVC spirometry<0.7
								Weighted PUMA		⩾25	0.79	76.3%/69.3%	
Llordes 2017 [62]	407	⩾40 years of age		⩾1 pack-year	Spain	PC	PC physician, nurse, technician*	COPD-6	26.3%	FEV1/FEV6 <0.78	0.801	87.9%/72.3%	post-BD FEV1/FVC spirometry<0.7

Spyratos 2017 [60]	3234	>40 years of age and		≥10 pack-years	Greece	PC	GP	COPD-PS	10.9%	≥5	0.79	56%/90%	post-BD FEV1/FVC spirometry<0.7
Spyratos 2017 [60]	3234	>40 years of age and		≥10 pack-years	Greece	PC	GP	CDQ	10.9%	17	0.80	74%/72%	post-BD FEV1/FVC spirometry<0.7
Spyratos 2017 [60]	3234	>40 years of age and		≥10 pack-years	Greece	PC	GP	LFQ	10.9%	18	0.81	49%/68%	post-BD FEV1/FVC spirometry<0.7
Llordes 2017 [62]	407	≥40 years of age and		≥1 pack-year	Spain	PC	PC physician	EGARPOC	26.3%	13	0.68	72.9%/46.8%	post-BD FEV1/FVC spirometry<0.7
Llordes 2017 [62]	407	≥40 years of		≥1 pack-year	Spain	PC	PC physician	COPD-PS	26.3%	≥4	0.65	80.4%/47.7	post-BD FEV1/FV

Study	N	age	symptom	exposure	Country		performer	Questionnaire	prevalence	cutoff	AUC	sens/spec	reference
		age and											C spirometry<0.7
Llordes 2017 [62]	407	≥40 years of age and		≥1 pack-year	Spain	PC	PC physician	RHSQ	26.3%	>17	0.72	73.8%/56%	post-BD FEV1/FVC spirometry<0.7
Quezada 2017 [65]	17	≥40 years of age	respiratory symptoms	exposure to smoke or biomass smoke	US (Spain cohort)	MC	-	CAPTURE-S	-	≥ 2	0.9276	88.0%/100%	post-BD FEV1/FVC spirometry<0.7
Quezada 2017 [65]	17	≥40 years of age	respiratory symptoms	exposure to smoke or biomass smoke	US (Spain cohort)	MC	-	PFT	-	males < 350 L/min / females < 250 L/min	1.0000 / 0.8939	100%/70%	post-BD FEV1/FVC spirometry<0.7
Quezada 2017 [65]	17	≥40 years of age	respiratory symptom	exposure to smoke or	US (Spain cohort)	MC	-	CAPTURE instrument (CAPTUR	-	Low risk : CAPTURE-S (0-1;	0.9525	88.2%/100%	post-BD FEV1/FVC

			s	biomass smoke				E-S+PFT)		PEF testing is not Required) Middle - range : CAPTURE-S (2-4; undergo PFT testing, applying the 350/250 interpretation) High risk : CAPTURE-S (5-6; should be referred for			spirometry<0.7

										further testing)			
Martinez 2017 [66]	346	≥40 years of age	respiratory symptoms	exposure to smoke or biomass smoke	US (Spain cohort)	MC	-	CAPTURE	-	≥ 2	0.7954	95.7%/44.4%	post-BD FEV1/FVC spirometry<0.7
Martinez 2017 [66]	346	≥40 years of age	respiratory symptoms	exposure to smoke or biomass smoke	US (Spain cohort)	MC	-	PFT	-	males < 350 L/min females < 250 L/min	0.8783	88.0%/77.5%	post-BD FEV1/FVC spirometry<0.7
Martinez 2017 [66]	346	≥40 years of age	respiratory symptoms	exposure to smoke or biomass smoke	US (Spain cohort)	MC	-	CAPTURE instrument (CAPTURE+PFT)	-	Low risk : CAPTURE-S (0-1; PEF testing is not Required) Middle - range :	0.9057	89.7%/78.1%	post-BD FEV1/FVC spirometry<0.7

										CAPTURE-S (2-4; undergo PFT testing, applying the 350/250 interpretation) High risk : CAPTURE-S (5-6; should be referred for further testing)			
Hidalgo Sierra 2018 [54]	155	⩾40 years of age	respiratory symptom	⩾10 pack-years	Spain	PC	physicians *	PiKo-6®	52.9%	FEV1/FEV6 < 0.70	0.86	100%/97.2%	post-BD FEV1/FVC

Study	N	Age	Symptom	Smoking	Country	Setting	Personnel	Test	Prevalence	Cutoff	AUC	Sens/Spec	Reference standard
				s									spirometr y<0.7
Ronaldso n 2018 [55]	216	⩾35 years of age	-	current smokers	UK	PC	GP, practice nurse	Micro-spirometer	20.8%	FEV1/FV C <0.7	0.73	88.9%/5 7.9%	post-BD FEV1/FV C spirometr y<0.7
Ronaldso n 2018 [55]	216	⩾35 years of age		current smokers	UK	PC	respirator y specialist nurse	COPD-PS	-	⩾5	0.66	53.3%/7 8.6$	post-BD FEV1/FV C spirometr y<0.7
Ronaldso n 2018 [55]	216	⩾35 years of age		current smokers	-	PC	respirator y specialist nurse	CDQ	-	16.5 or 19.5	0.67	81.5%/5 2.3	post-BD FEV1/FV C spirometr y<0.7
Soriano 2018 [69]	171	age ≥35 years	respirator y symptom	current and former	Spain	PC	-	COPD-PS+PFT	-	COPD-PS⩾4+PF T ≦ 2.2 l/s.m^2	0.7613	67.5%/7 1.3%	post-BD FEV1/FV C spirometr y

Study	N	Age	Symptom	Smoking	Country	Setting	Operator	Questionnaire		Cutoff		Sens/Spec	Reference standard
Lopez Varela 2019 [59]	974	⩾40 years of age		⩾10 pack-years/or exposure to biomass smoke	Mexico	PC	GP	PUMA	45.1%	⩾5	0.70	85.4%/37.6	post-BD FEV1/FVC spirometry<0.7
Su 2019 [90]	301	age ≥40 years	respiratory symptom	≥20 pack-years	Taiwan	MC	-	P_{COPD}	48.8%	⩾0.65	0.87	63%/90%	post-BD FEV1/FVC spirometry
Dickens 2020 [56]	544	⩾40 years of age	respiratory symptoms		UK	PC	-	COPD-6	-	FEV1/FEV6 < 0.78	0.91	82.8%/85.0%	post-BD FEV1/FVC spirometry<0.7
Fujita 2020 [57]	1001	⩾40 years of age		smoker/ex-smoker	Japan	public health centres	laboratory technicians*	COPD-6	-	FEV1/FEV6 < 0.70	0.823	85.7%/74.6%	post-BD FEV1/FVC spirometry<0.7

Preteroti 2020 [64]	499	≥18 years of age	respiratory symptoms		Canada	-	-	COPD-DQ	8.81%	20	0.71	89%/34%	post-BD FEV1/FVC spirometry<0.7
Preteroti 2020 [64]	499	≥18 years of age	respiratory symptoms		Canada	-	-	CAT	8.81%	10	0.58	92%/15%	post-BD FEV1/FVC spirometry<0.7
Siddharthan 2020 [70]	1,173	age 35-95 years	respiratory symptom	exposure to smoke or biomass smoke	Uganda	community settings	-	COLA instrument		COLA score≥5	0.83	-	post-BD FEV1/FVC spirometry
Lin 2021 [58]	370	≥40 years of age	respiratory symptoms	≥10 pack-years	Taiwan	MC, PC	outpatient clinics*	Spirobank Smart	27.8%	FEV1/FVC <74%	0.903	82.5%/92.1%	post-BD FEV1/FVC spirometry<0.7
Chen 2021 [67]	385	age ≥40 years	≥1 respirator	≥10 pack-years	Taiwan	MC, PC	outpatient clinics*	Spirobank Smart	26.23%	≦0.74	0.87	84.2%/90.14%	post-BD FEV1/FV

												C spirometry
Chen 2021 [67]	385	age ≥40 years	≥1 respiratory symptom	≥10 pack-years	Taiwan	MC, PC	outpatient clinics*	COPD-PS	26.23%	≥5	0.64	83.2%/45.07%	post-BD FEV1/FVC spirometry
Tanino 2021 [68]	3252	age ≥40 years	respiratory symptom	current and former	Japan	-	respiratory physician	IPAG	6.77%	23	0.676	60.4%/63.8%	post-BD FEV1/FVC spirometry

*brief training on how to use the device; general practitioner (GP); primary care (PC), emergency services (ES), community pharmacies (CPh), medical center (MC); COPD-PS: Population Screener; CDQ: COPD diagnostic questionnaire; AUC: Area Under the Curve; CAPTURE: COPD assessment in primary care to identify undiagnosed respiratory disease and exacerbation risk; CAT: The COPD Assessment Test; COPD-DQ: COPD-Diagnostic Questionnaire; IPAG: International Primary Care Airways Group; RHSQ: Respiratory Health Screening Questionnaire; EGARPOC: COPD screening questionnaire from Terrassa; LFQ: Lung Function Questionnaire; PEF: peak expiratory flow; COLA: COPD in LMICs Assessment; FVC: Forced vital capacity; FEV1: Forced expiratory volume in 1 second.