

Supplementary material

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Table S1. Pharmacological treatment algorithms by GOLD 2007 guidelines.

COPD severity stage according to the GOLD 2007	Preferred treatments
I	SABA or SAMA
II	LABA or LAMA + SABA or SAMA (when needed)
III	LABA or LAMA + ICS + SABA or SAMA (when needed)
IV	LABA or LAMA + ICS + SABA or SAMA (when needed) + theophylline (repeated exacerbations)

Table S2. Pharmacological treatment algorithms by GOLD 2011 guidelines.

COPD severity stage according to GOLD 2011	Preferred treatments (I line)	Alternative treatments* (II line)
A	Option 1: SABA (when needed) or Option 2: SAMA (when needed)	Option 1: LAMA or Option 2: LABA or Option 3: SABA + SAMA
B	Option 1: LAMA or Option 2: LABA	Option 1: LAMA + LABA
C	Option 1: ICS + LABA or Option 2: LAMA	Option 1: LAMA + LABA
D	Option 1: ICS + LABA or Option 2: LAMA	Option 1: ICS + LAMA or Option 2: ICS + LABA + LAMA or Option 3: ICS + LABA + PDE4-inh. or Option 4: LABA + LAMA or Option 5: LAMA + PDE4-inh.

Explanations: * in categories C and D, consider theophylline

Table S3. Pharmacological treatment algorithms by GOLD 2017 guidelines.

COPD severity stage according to GOLD 2017	Preferred treatments (I line)	Other treatments* (II line)
A	Option 1: SABA or Option 2: SAMA or Option 3: LABA or Option 4: LAMA	-
B	Option 1: LABA or Option 2: LAMA or Option 3: LAMA + LABA	-
C	Option 1: LAMA or Option 2: LAMA + LABA	Option 1: LABA + ICS
D	Option 1: LAMA + LABA or Option 2: LAMA + LABA + ICS	Option 1: LAMA or Option 2: LABA + ICS or Option 3: LAMA + LABA + ICS + PDE4-inh. (If FEV ₁ < 50% predicted and patient has chronic bronchitis)

Table S4. Average (min-max) cost of monthly pharmacotherapy with individual classes of ATC4 and molecules according to the Announcement of the Minister of Health (March 1, 2017), and in the case of medicines not covered by the refund based on contract prices, in euro.

Drug class / molecules	Average (min-max) cost of monthly pharmacotherapy [euro]		
	Retail prices	Subsidy of the Ministry of Health	Patient's payment
Short-Acting β2-Agonists (SABA)	8.17 (3.52-21.85)	2.16 (0.00-2.78)	6.01 (0.90-21.85)
Fenoterolum	5.36(5.36-5.36)	2.78 (2.78-2.78)	2.58 (2.58-2.58)
Salbutamolum	8.58 (3.52-21.85)	2.08 (0.00-2.78)	6.50 (0.9-21.85)
Short-Acting Muscarinic Antagonist (SAMA)	4.93 (4.10-6.32)	3.14 (2.74-3.34)	1.79 (0.75-3.58)
Ipratropii bromidum	4.93 (4.10-6.32)	3.14 (2.74-3.34)	1.79 (0.75-3.58)
Long-Acting β2-Agonists (LABA)	15.10 (12.60-26.45)	12.32 (9.43-12.72)	2.78 (0.75-17.03)
Formoterolum	14.23 (12.60-19.18)	12.56 (11.85-12.72)	1.67 (0.75-7.21)
Indacaterolum	20.08 (13.70-26.45)	9.43 (9.43-9.43)	10.65 (4.27-17.03)
Salmeterolum	15.47 (13.60-18.10)	12.72 (12.71-12.72)	2.76 (0.89-5.38)
Long-Acting Muscarinic Antagonist (LAMA)	30.86 (25.32-34.04)	20.00 (17.72-24.56)	10.86 (0.75-16.32)
Glycopyrronii bromidum	30.26 (30.26-30.26)	17.72 (17.72-17.72)	12.54 (12.54-12.54)
Tiotropii bromidum	31.02 (25.32-34.04)	20.65 (17.72-24.56)	10.37 (0.75-16.32)
Umeclidinii bromidum	30.33 (30.33-30.33)	17.72 (17.72-17.72)	12.61(12.61-12.61)
Inhaled corticosteroids (ICS)	38.00 (5.32-163.80)	30.46 (4.11-131.13)	7.55 (0.75-32.68)
Beclometasonum	7.94 (5.32-10.48)	6.24 (4.56-7.87)	1.69 (0.75-2.76)
Budesonidum	50.65 (9.09-163.80)	43.36 (7.12-131.13)	7.29 (1.22-32.68)
Ciclesonidum	10.64 (8.63-12.68)	7.87 (7.87-7.87)	2.77 (0.75-4.80)
Fluticasonum	23.92 (10.05-79.52)	12.62 (4.11-54.13)	11.30 (2.18-26.94)
Mometasonum	11.31 (11.31-11.31)	7.87 (7.87-7.87)	3.44 (3.44-3.44)
Xanthine	2.91 (2.26-3.74)	1.19 (0.75-1.51)	1.72 (0.75-2.99)
Theophyllinum	2.91 (2.26-3.74)	1.19 (0.75-1.51)	1.72 (0.75-2.99)
Mucokinetics	11.47 (11.47-11.47)	8.03 (8.03-8.03)	3.44 (3.44-3.44)
Carbocysteine	11.47 (11.47-11.47)	8.03 (8.03-8.03)	3.44 (3.44-3.44)
Phosphodiesterase-4 inhibitors (PDE4-inh.)	61.60 (61.60-61.60)	0.00 (0.00-0.00)	61.60 (61.60-61.60)
Roflumilast	61.60 (61.60-61.60)	0.00 (0.00-0.00)	61.60 (61.60-61.60)
COMBO SABA + SAMA	7.90 (6.47-9.32)	2.80 (2.74-2.87)	5.09 (3.60-6.58)
Fenoterolum + Ipratropii bromidum	7.90 (6.47-9.32)	2.80 (2.74-2.87)	5.09 (3.60-6.58)
COMBO LAMA + LABA	48.45 (47.03-50.20)	33.43 (32.92-33.68)	15.02 (14.11-16.52)
Indacaterolum + Glycopyrronii bromidum	50.20 (50.20-50.20)	33.68 (33.68-33.68)	16.52 (16.52-16.52)
Olodaterolum + Tiotropii bromidum	47.03 (47.03-47.03)	32.92 (32.92-32.92)	14.11 (14.11-14.11)
Umeclidinii bromidum + Vilanterolum	48.12 (48.12-48.12)	33.68 (33.68-33.68)	14.44 (14.44-14.44)
COMBO LABA + ICS	38.58 (25.58-71.09)	32.42 (24.82-52.87)	6.16 (0.75-18.96)
Beclometasonum + Formoterolum	29.22 (29.22-29.22)	26.86 (26.86-26.86)	2.36 (2.36-2.36)
Budesonidum + Formoterolum	37.60 (28.76-71.09)	30.42 (25.65-52.12)	7.18 (0.76-18.96)
Fluticasoni propionas + Salmeterolum	39.67 (25.56-69.85)	33.68 (24.82-52.87)	5.99 (0.75-16.98)

