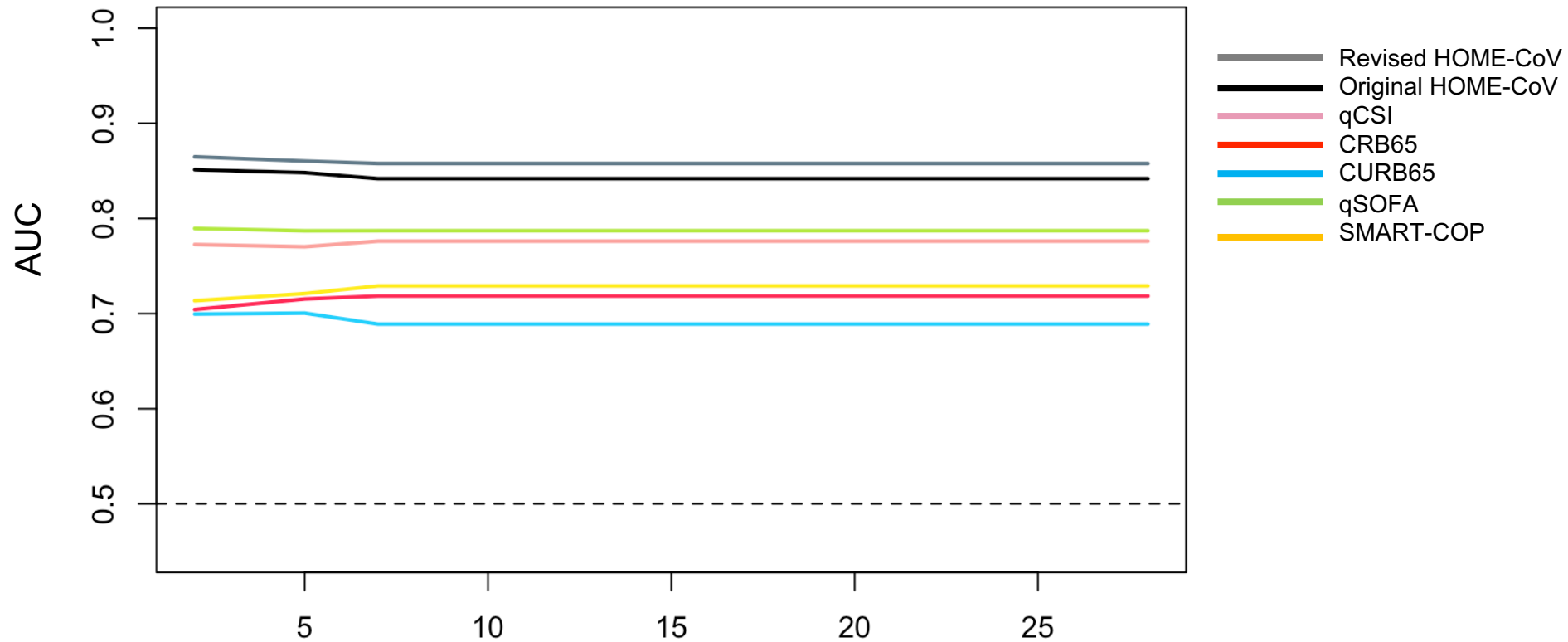




S1 Fig. Time dependent ROC curves of different risk assessment models to predict an adverse evolution (WHO OSCI ≥ 5) to Day 28
AUC: Area Under the Curve

Table S1. The Ordinal Scale for Clinical Improvement is a scale specific to COVID-19 put forward by the WHO in February 2020.

- 0: Patient at home with no clinical or virological evidence of infection
- 1: Ambulatory patient at home with no limitation of activities
- 2: Ambulatory patient at home with limitation of activities (or oxygen)
- 3: Hospitalized patient with mild disease, no oxygen therapy
- 4: Hospitalized patient with mild disease, oxygen therapy (prongs, mask)
- 5: Hospitalized patient with severe disease, under non-invasive ventilation or high-flow nasal oxygen therapy
- 6: Hospitalized patient with severe disease, under intubation and invasive ventilation
- 7: Hospitalized patient with severe disease, under intubation and with an additional organ failure justifying invasive therapy (renal replacement therapy, amine vasopressors, extra-corporeal membrane oxygenation)
- 8: Death for any reason.

Table S2. Revised HOME-CoV criteria				
Variables	Not requiring non-invasive ventilation nor intubated and alive at day 7 N=1631 (%)	Under non-invasive ventilation, intubated or dead at day 7 N=65 (%)	Regression coefficient 95% CI	p-value
Age > 65 years	478 (29.3)	44 (67.7)	3.36 (1.98-5.85)	<0.001
Pulse oxygen saturation $\leq$ 94% in ambient air	333 (20.4)	48 (73.8)	3.29 (2.03-5.32)	<0.001
Respiratory rate $\geq$ 25/min	272 (16.7)	30 (46.2)	1.86 (1.12-3.03)	0.014
Ability to talk without breathing <8 sec	192 (11.8)	13 (20)	1.46 (0.81-2.56)	0.192
Confusion or impaired consciousness	71 (4.4)	20 (30.8)	2.23 (1.21-4.01)	0.008
Clinically significant worsening within the last 24 hours	794 (48.7)	47 (72.3)	1.75 (1.07-2.90)	0.027
Inadequate living conditions*	95 (5.8)	21 (32.3)	2.47 (1.50-4.03)	<0.001
* Inappropriate dwelling (homeless, frail relative at home, long term care institution), lack of support person (family member or friend), or home follow-up impossible.				

Table S3. Subgroup analysis: Performance scores in the training and the validation cohorts.

Population with uremia data (n= 802)		At D7	
	C-Index	AU-ROC (95 CI)	Brier score
Revised HOME-CoV	84.2	87.6 (84.7-90.6)	0.058
Original HOME-CoV 65	76.3	76.5 (70.8-82.2)	0.063
qCSI	73.4	75.3 (69.9-80.7)	0.061
qSOFA	72.3	74.2 (68.9-79.5)	0.058
CURB-65	69.7	70.1 (54.7-85.4)	0.058
CRB-65	77.1	75.3 (68.4-86.3)	0.057
Population with imagery data (n= 789)		At D7	
	C-Index	AU-ROC (95 CI)	Brier score
Revised HOME-CoV	80.5	80.9 (76.5-85.2)	0.033
Original HOME-CoV	79.3	79.6 (74.9-84.3)	0.029
qCSI	76.0	76.5 (71.9-81.1)	0.027
qSOFA	75.5	76.4 (72.0-80.8)	0.029
CRB-65	79.9	80.3 (75.8-84.8)	0.028
SMART-COP	68.0	66.7 (49.3-84.1)	NA

Table S4. Sensitivity analysis: performance characteristics for revised HOME-CoV, original HOME-CoV, qCSI, qSOFA, CRB-65 to predict an unfavorable evolution requiring intubation or resulting in death within the 7 days.

Overall population	At D7		
	C-Index	AU-ROC (95 CI)	Brier score
Revised HOME-CoV	86.68	86.7 (81.6-91.7)	0.016
Original HOME-CoV	79.61	79.7 (70.5-88.8)	0.012
qCSI	79.15	79.2 (70.1-88.3)	0.016
qSOFA	75.97	76.1 (68.3-83.8)	0.016
CRB-65	80.64	80.8 (72.2-89.3)	0.016