

Appendix

This appendix was part of the submitted manuscript and has been peer reviewed. It is posted as supplied by the authors.

Table S1. Patients characteristics for RR less or equal to 17 versus more than 17

	RR ≤ 17 ¹ (n = 131)	RR > 17 ² (n = 100)	p value
Patient Characteristics	(% or SD) ³	(% or SD) ³	
Male	87 (66.4%)	59 (59%)	0.25
Age	60 (17)	60 (17.5)	0.99
Patient weight (KG)	83.8 (23.1)	82 (20.4)	0.55
Patient height (cm)	170 (10.7)	168 (12.4)	0.25
PBW⁴ (KG)	64.3 (11.1)	60.8 (19.5)	0.09
Elective admission	81 (13.7%)	14 (14%)	0.96
Medical admission	62 (47.3%)	53 (53%)	0.39
Premorbid restrictive lung disease	5 (3.8%)	4 (4%)	0.95
Premorbid obstructive lung disease	21 (16%)	20 (20%)	0.43
Premorbid mixed lung disease	4 (3.1%)	2 (2%)	0.7
Fluid overload	26 (20%)	23 (23%)	0.58
APO⁵	7 (5.4%)	4 (4%)	0.63
Pneumonia	30 (23.1%)	38 (38%)	0.014
Atelectasis	15 (11.5%)	9 (9%)	0.53
Pleural effusion by CXR	40 (30.8%)	25 (25%)	0.36
APACHE II score	20.1 (8.06)	22.4 (8.55)	0.035
Hospital days before data collection	6.6 (13.3)	7.7 (8.35)	0.01
ICU days before data collection	2.7 (4.2)	5.2 (7.4)	0.001
VT⁶ (ml)	546 (147)	461 (123)	<0.0001
VT/PBW⁷ (ml/kg)	8.7 (2.5)	7.8 (5.7)	<0.0001
PEEP⁸	8 (8.46)	7.6 (2.47)	0.65
PS⁹	10 [8-10]	10 [10-10]	0.08
RR¹⁰	14.3 (4.34)	22.7 (4.61)	<0.0001
SpO₂¹¹	96.5 (2.43)	96 (2.82)	0.14
FiO₂¹²	30.4 (7.7)	31.5 (8.2)	0.3
pH¹³	7.39 (0.076)	7.42 (0.066)	0.003
PaO₂¹⁴	97.3 (47.9)	92.9 (37.2)	0.46
PaCO₂¹⁵	41.2 (7.5)	38.8 (8.2)	0.015
HCO₃¹⁶	24.7 (4.8)	25.1 (5.25)	0.53

1- (% or SD) = Percentage or standard deviation

2- RR ≤ 17 = Respiratory rate less or equal to 17

3- RR > 17 = Respiratory rate more than 17

4- PBW = Predicted body weight

5- APO = Acute pulmonary oedema

6- VT = Tidal volume

7- VT/PBW = Tidal volume on predicted body weight

8- PEEP = Positive end expiratory pressure

9- PS = Pressure support

10- RR = Respiratory rate

11- SpO₂ = Oxygen saturation

12- FIO₂ = Fractional of inspired oxygen

13- pH = Scale of acidity

14- PaO₂ = Partial pressure of oxygen

15- PaCO₂ = Partial pressure of carbon dioxide

16- HCO₃ = Bicarbonate ion

Table S2. Patient characteristics for RSBI less than or equal to 37 versus RSBI more than 37

Patient characteristics	RSBI \leq 37 ¹ (n=146) (% or SD) ³	RSBI > 37 ² (n=85) (% or SD) ³	pvalue
Male	108 (74%)	38 (44.7%)	<0.0001
Age	59.1 (16.5)	61.7 (18.3)	0.26
Patient weight (KG)	86 (22.6)	77.8 (19.9)	0.007
Patient Height (cm)	171 (10.4)	166 (12.5)	<0.0001
PBW ⁴ (KG)	65.7 (10.6)	57.6 (20.2)	<0.0001
Elective admission	23 (15.8%)	9 (10.6%)	0.27
Medical admission	72 (49.3%)	43 (50.6%)	0.85
Premorbid restrictive lung disease	5 (3.4%)	4 (4.7%)	0.64
Premorbid obstructive lung disease	23 (15.8%)	18 (21.2%)	0.30
Premorbid mixed lung disease	4 (2.7%)	2 (2.4%)	1.00
Fluid overload	29 (19.9%)	20 (23.8%)	0.48
APO ⁵	6 (4.1%)	5 (6%)	0.53
Pneumonia	35 (24%)	33 (39.3%)	0.01
Atelectasis	13 (8.9%)	11 (13.1%)	0.32
Pleural effusion	40 (27.6%)	25 (29.8%)	0.73
APACHE II score	20.5 (8.23)	22.2 (8.47)	0.13
Hospital days before data collection	5.9 (10.4)	8.3 (13)	0.005
ICU days before data collection	3.1 (5.6)	5 (6.3)	<0.0001
VT ⁶ (ml)	575 (129)	397 (84.2)	<0.0001
VT/PBW ⁷	9 (2.5)	7.1 (6)	<0.0001
PEEP ⁸	7.92 (8.09)	7.64 (2.28)	0.75
PS ⁹	10 [8-10]	10 [10-12]	0.001
RR ¹⁰	15 (4.52)	22.9 (5.15)	<0.0001
SpO ₂ ¹¹	96.4 (2.43)	96.2 (2.91)	0.52
FiO ₂ ¹²	3.05 (7.9)	31.4 (8.1)	0.41
pH ¹³	7.4 (0.074)	7.41 (0.071)	0.13
PaO ₂ ¹⁴	94.7 (45.5)	96.5 (40)	0.76
PaCO ₂ ¹⁵	40 (7.77)	40.3 (8.19)	0.80
HCO ₃ ¹⁶	24.4 (4.79)	25.6 (5.27)	0.08

1- (% or SD) = Percentage or standard deviation

2- RSBI \leq 37 = Rapid shallow breathing index less or equal to 37

3- RSBI > 17 = Rapid shallow breathing index more than 17

4- PBW = Predicted body weight

5- APO = Acute pulmonary oedema

6- VT = Tidal volume

7- VT/PBW = Tidal volume on predicted body weight

8- PEEP = Positive end expiratory pressure

9- PS = Pressure support

10- RR = Respiratory rate

11- SpO₂ = Oxygen saturation

12- FiO₂ = Fractional of inspired oxygen

13- pH = Scale of acidity

14- PaO₂ = Partial pressure of oxygen

15- PaCO₂ = Partial pressure of carbon dioxide

16- HCO₃ = Bicarbonate ion

Table S3. Patients characteristics for combination of RR less or equal to 17 and RSBI less or equal to 37 versus RR more than 17 and RSBI more than 37

Patients characteristics	RR ≤ 17and RSBI ≤37¹ (% or SD) ³	RR > 17and RSBI >37² (% or SD)	pvalue
Male	85 (73.3%)	61 (53%)	0.001
Age	59.8 (16.4)	60.2 (18)	0.87
Patient weight (KG)	85.8 (23.4)	80.3 (20.2)	0.06
Patient height (cm)	171 (10.5)	167 (12.2)	0.01
PBW⁴ (KG)	65.3 (10.8)	60.2 (18.6)	0.005
Elective admission	17 (14.7%)	15 (13%)	0.72
Medical admission	55 (47.4%)	60 (52.2%)	0.47
Premorbid restrictive lung disease	5 (4.3%)	4 (3.5%)	0.73
Premorbid obstructive lung disease	18 (15.5%)	23 (20%)	0.37
Premorbid mixed lung disease	4 (3.4%)	2 (1.7%)	0.68
Fluid overload	23 (19.8%)	26 (22.8%)	0.58
APO⁵	6 (5.2%)	5 (4.4%)	0.78
Pneumonia	26 (22.4%)	42 (36.8%)	0.02
Atelectasis	11 (9.5%)	13 (11.4%)	0.63
Pleural effusion	33 (28.7%)	32 (28.1%)	0.92
Apache II score	20.2 (8.29)	22 (8.33)	0.10
Hospital days before data collection	5.8 (10.6)	7.8 (12.2)	0.008
ICU days before data collection	2.7 (4.4)	4.8 (6.9)	0.001
VT⁶ (ml)	571 (136)	447 (121)	<0.0001
VT/PBW⁷ (ml/kg)	9 (2.5)	7.6 (5.3)	<0.0001
PEEP⁸	8 (8.95)	7.54 (2.46)	0.53
PS⁹	10 [8-10]	10 [10-10]	0.09
RR¹⁰	13.8 (4.33)	22 (4.77)	<0.0001
SpO₂¹¹	96.6 (2.48)	96.1 (2.73)	0.14
FiO₂¹²	30.8 (7.9)	30.9 (8)	0.94
pH¹³	7.39 (0.076)	7.42 (0.068)	0.004
PaO₂¹⁴	95.3 (46.2)	95.5 (40.8)	0.98
PaCO₂¹⁵	41.1 (7.7)	39.2 (7.9)	0.06
HCO₃¹⁶	24.6 (4.91)	25.1 (5.08)	0.42

1- (% or SD) = Percentage or standard deviation

2- RR ≤ 17 and RSBI ≤ 37 = RR less or equal to 17 and rapid shallow breathing index less or equal to 37

3- RR > 17 and RSBI > 37= RR more than 17 and rapid shallow breathing index more than 17

4- PBW = Predicted body weight

5- APO = Acute pulmonary oedema

6- VT = Tidal volume

7- VT/PBW = Tidal volume on predicted body weight

8- PEEP = Positive end expiratory pressure

9- PS = Pressure support

10- RR = Respiratory rate

11- SpO₂ = Oxygen saturation

12- FIO₂ = Fractional of inspired oxygen

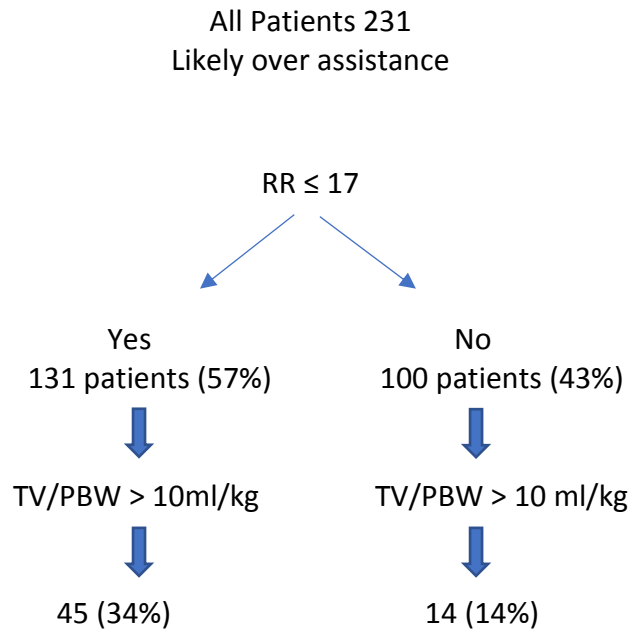
13- pH = Scale of acidity

14- PaO₂ = Partial pressure of oxygen

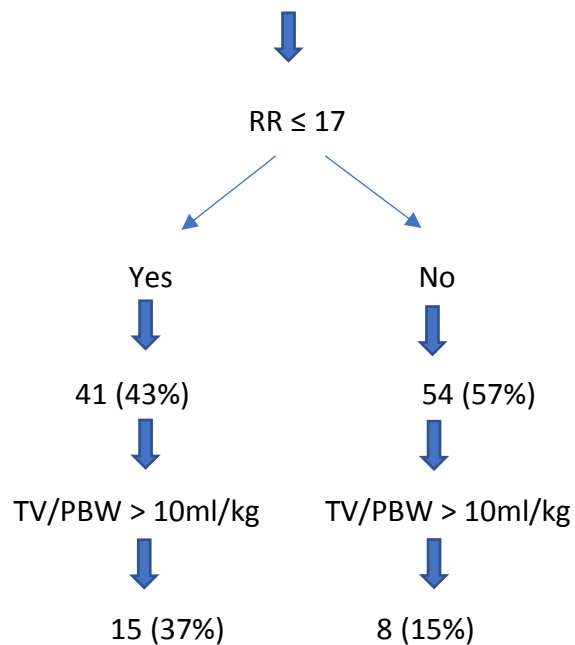
15- PaCO₂= Partial pressure of carbon dioxide

16- HCO₃ = Bicarbonate ion

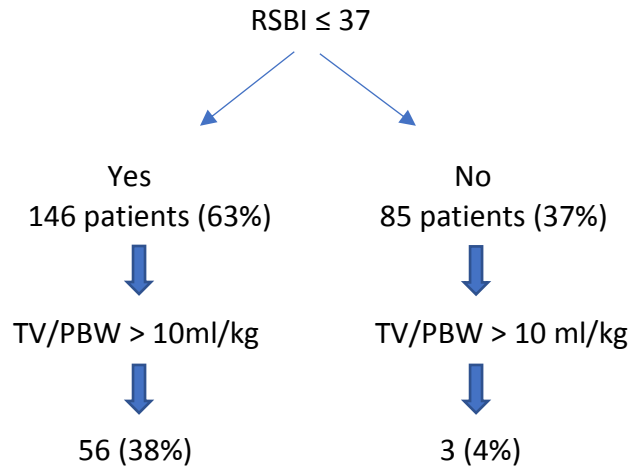
Appendix Figure S1



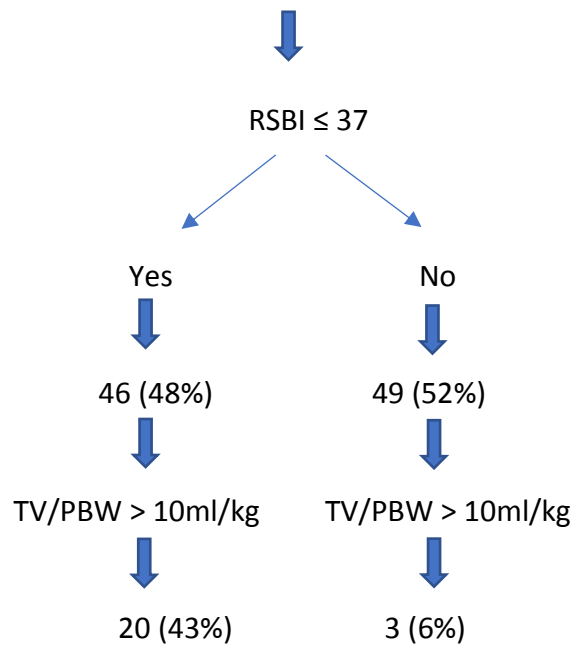
Following day data collection
Number of patients followed up on day 2: n=95 (41%)
Likely over assistance



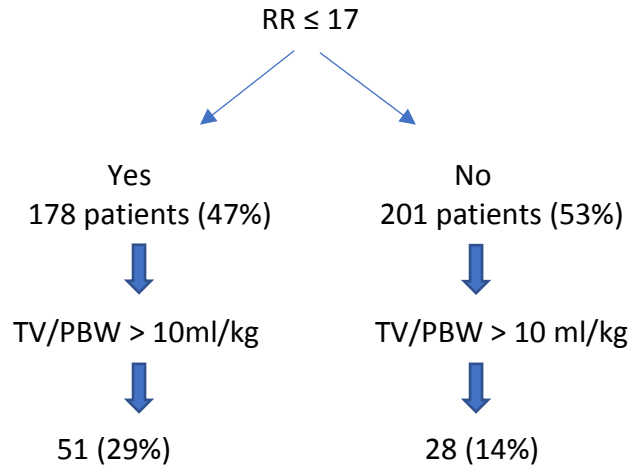
All Patients 231
Likely over assistance



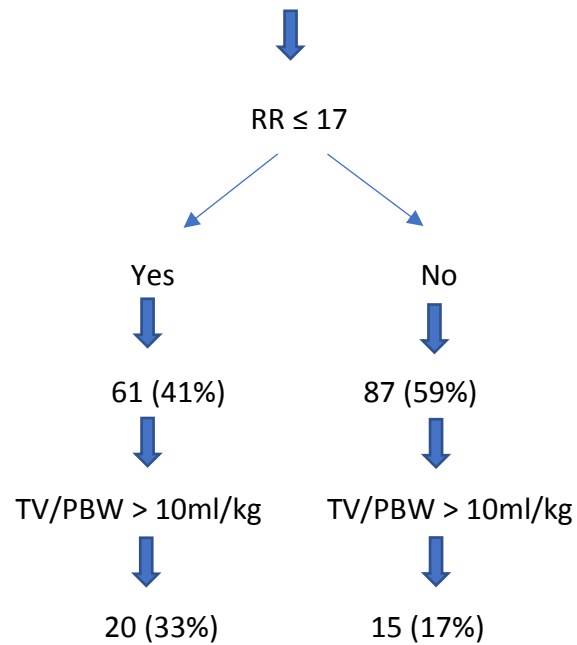
Following day data collection
Number of patients followed up on day 2: 95 (41%)
Likely over assistance



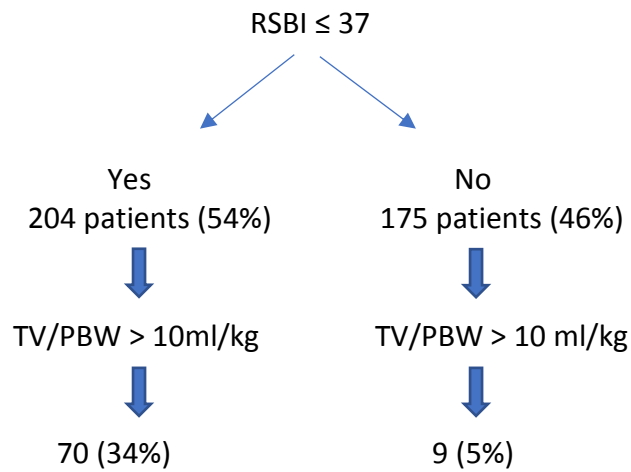
All observations 379
Likely over assistance



Following day data collection
Number of observations followed up next day (148)
Likely over assistance



All observations 379
Likely over assistance



Following day data collection
Number of observations followed up next day (148)
Likely over assistance

