Age:_yrs_Gender: M □ /F □ Body weight:_kg Height:_cm Area (province/coity):/ Housing type: Single house □ Condominium □ Apertment □ Others □ Number of family living toger: (including the subject on HMV) 1.Which underlying comorbidities do you have? (multiple select) DM □ , Hypertension □ , COPD □ , Heart disease □ , Chronic kidney disease □ , Cerebral infarct or bleeding □ , Chronic hepatitis □ , Cancer □ , Others □ 2. When did you start the HMV? ☐ (month/year) (total duration months) 3.Where are you using a HMV now? Home □ , Hursing home □ , Hospital □ , (Other) 4. Tracheostomy ventilation? Yes □ , No □ If no, which type of mask do you use? Nasal mask □ , Facial mask □ , Others: 5. Feeding methods (one of the two) □ Tube feeding (if yes, L-tube □ vs. PEG □) □ Oral feeding 6. How frequent do you change the machines or devices per year? 6-1) Ventilator machine: /yr 6-2) Masks: /yr(only for mask users) 6-3) Circuits: /yr 7. Which ancillary devices do you have now? (multiple select) Oxygen monitoring □ , CO2 monitoring □ , Cough assist □ Chest wall oscillation □ , Suctioning device □ , AMBU-bag □ , Oxygen generator □ 8. Who cares for the subject and ventilators? Family member □ , Privately hired caregiver □ , Self □ , Others: 9. Regular home visit services (frequency) 9-1) By a specialized nurse: /month 9-2) By a HMV provider: /month 10. Any emergencies at home during the last year? 10-1) Please graphin in detail 1)	Case Report Form 1 Survey on home mechanical ventilator use in South Korea Patient Number: □□□ - □□□
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10. Any emergencies at home during the last year? 10-1) Frequency: /yr	
10-1) Frequency: /yr	9-2) By a HMV provider: /month
10-411 (Case Cadiani in Uctali, 11 41	10-1) Frequency: /yr 10-2) Please explain in detail: 1)

11. Any visits to nospitals for problems associated with HAVIV or patient's condition during the last year:
11-1) Visit to outpatient office Yes \square No \square
11-2) Visit to emergency department: Yes \square No \square
12. Any hospitalizations for problems associated with HMV or patient's condition?
12-1) Hospitalization: Yes \square No \square
12-2) Admission to the ICUs: Yes \square No \square
13. National Health Insurance Service (Check only one)
National Health Insurance \square , Medical aid \square , Others:
14. How much do you pay per month (for out-of-pocket expenses associated with patient's care)
Korean won/month
15. Any comments? →
Thank you for answering this questionnaire.

Case Report Form 2

Survey on home mechanical ventilator use in South Korea (Parameters associated with ventilator machines)

(Parameters associated with ventilator machines)							
Patient Number: \square \square \square \square \square							
1. Primary diagnosis (indication) for the use of home mechanical ventilation (HMV). 1-1) Diagnosis: 1-2) ICD-10 code 1) 2) 3)							
2. What is the bran	nd name of the h	ome ventilato	or?				
	guish between lif			support ventil	ators)		
3. Daily hours on I	HMV						
□ 24-h u	□ 24-h use (full-day use)						
☐ Part-time use (<u>hours/day</u>)							
4. Type of interfaces (masks)							
Facial mask \square Nasal mask \square Nasal pillow \square 기타:							
The state of the s							
5. Type of circuits							
☐ Single-limb circuit with a leak valve (an exhalation port)							
☐ Single-limb circuit with an exhalation valve							
□ Double-limb circuit							
6. Ventilator settings.							
Mode	Oxygen supplied	IPAP	EPAP	Tidal volume	호흡수 (set RR)	I:E ratio	
	(l/min)			ml			
Leak							
I /min						1	

Thank you for answering this questionnaire.

Table S1 Primary diagnosis for HMV use

Primary diagnosis	Adults (n=38), n (%)	Children (n=26), n (%)
Chronic obstructive pulmonary disease	14 (36.8)	0 (0.0)
Pulmonary arterial hypertension	1 (2.6)	1 (3.8)
Kyphoscoliosis	3 (7.9)	1 (3.8)
Central sleep apnea	2 (5.3)	0 (0.0)
Cerebrovascular diseases		
Cerebrovascular accident	2 (5.3)	0 (0.0)
Hypoxic brain damage	0 (0.0)	1 (3.8)
Neuromuscular disorders		
Amyotrophic lateral sclerosis	3 (7.9)	0 (0.0)
Mitochondrial myopathy	1 (2.6)	4(15.4)
Congenital myopathy	0 (0.0)	1 (3.8)
Genetic disorders		
Mucopolysaccharidosis type I	0 (0.0)	1 (3.8)
Gaucher's disease	0 (0.0)	1 (3.8)
Pompe disease	1 (2.6)	0 (0.0)
Rett syndrome	1 (2.6)	0 (0.0)
Congenital respiratory disorders		
Bronchopulmonary dysplasia	0 (0.0)	3 (11.5)
Malformations of trachea and bronchus	0 (0.0)	2 (7.7)
Unspecified respiratory disorder	7 (18.4)	7 (26.9)
Unspecified encephalopathy	3 (7.9)	4 (15.4)

HMV, home mechanical ventilation.

Table S2 Emergences incidents associated with HMV use at home

Incidents	Numbers
Dyspnea (tachypnea)	17
Pneumonia	8
Tracheostomy obstruction	3
Tracheostomy dislocation	1
PEG malfunction	3
Hypoxemia	2
Copious secretion	1
Arrhythmia	1
High fever	1
Syncope	1
Seizure	2
Ventilator alarm	2

[†], a total of 42 incidents occurred in 28 patients during the last 1 year. HMV, home mechanical ventilation; PEG, percutaneous endoscopic gastrostomy.

Table S3 Data on 9 subjects who died while receiving HMV

No	Age (years)	Primary diagnosis for HMV	Duration of HMV (months)	† Interface	Cause of death
1	84	Unspecified respiratory disorder	23.0	Nasal mask	Disease progression
2	77	COPD	52.0	Facial mask	Disease progression
3	81	COPD	9.0	Tracheostomy	Disease progression
4	49	Unspecified respiratory disorder	17.0	Facial mask	Disease progression
5	70	Unspecified respiratory disorder	4.0	Tracheostomy	Unexpected
6	66	NMD	19.0	Tracheostomy	Disease progression
7	68	CSA	24.0	Tracheostomy	Disease progression
8	17	Unspecified respiratory disorder	7.0	Tracheostomy	Unexpected
9	7	Unspecified encephalopathy	32.0	Tracheostomy	Unexpected

[†], at the time of death. COPD, chronic obstructive pulmonary disease; CSA, central sleep apnea; HMV, home mechanical ventilation; NMD, neuromuscular disorder.