Physiotherapy practice for hospitalized patients with COVID-19

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DETAILED INFORMATION ABOUT THE QUESTIONNAIRE

The questionnaire was divided into nine sections. Sections 1 and 2 briefly explained the study and asked for informed consent approval. Section 3 inquired about work setting: ICU, ward, or both, with the participant being directed to the appropriate sections. Sections 4 and 5 addressed reasons for indications of physiotherapy and physiotherapy practice in the ICU and in the ward, respectively. Sections 6 and 7 addressed functional outcome measures in the ICU and in the ward, respectively. Section 8 inquired about the physiotherapist's professional information, and section 9 addressed the characteristics of the primary hospital of employment. Participants completed only the sections related to their current work place. The results related to sections 6 and 7 are not presented here.

MORE INFORMATION ABOUT THE SURVEY AND DATA ANALYSIS

The REDCap platform[1] protects against unauthorized access and guarantees anonymity and confidentiality. It also automatically defines the participants' ID as a unique identifier but does not provide the number of people that visited the survey link.

Respondents had to complete all of the pertinent questions in order to submit the survey, which avoided non-response error and missing data.

Contact details of the participants were not obtained. Duplicate entries were identified and excluded on the REDCap platform. The response rate was calculated, after removing the duplicates, as the ratio of the number of physiotherapists who completed the questionnaire to the number of physiotherapists who agreed to participate and initiated completing the questionnaire.

Table 1. Reported reasons for selecting "never" or "rarely" regarding the use of each of the surveyed airway clearance techniques for mechanically ventilated patients.[a]

Reason	MHI	VHI	Hard/ brief ERCC	Soft/ long ERCC	PEEP-ZEEP	Expiratory flow bias	Vibration	Percussion	Positioning
The technique has no scientific evidence that supports its efficacy.	21 (8)	9 (6)	62 (47)	56 (33)	32 (11)	9 (4)	142 (66)	302 (78)	6 (2)
I believe there are more effective techniques.	62 (24)	33 (21)	64 (48)	102 (61)	66 (23)	30 (13)	125 (58)	177 (46)	22 (61)
The technique is not part of my institution's protocol.	46 (18)	25 (16)	19 (14)	25 (15)	80 (27)	42 (19)	19 (9)	37 (10)	2 (6)
I don't know the technique; I have no experience.	8 (3)	56 (36)	1 (1)	11 (7)	99 (34)	155 (69)	1 (0)	0 (0)	1 (3)
The technique may bring more harm than benefit to the patient.	72 (28)	36 (23)	28 (21)	22 (13)	86 (29)	8 (4)	20 (9)	43 (11)	0 (0)
The clinical condition of most patients with COVID-19 is quite critical.	61 (24)	29 (19)	26 (20)	24 (14)	54 (18)	13 (6)	15 (7)	21 (5)	13 (36)
Biosecurity	168 (65)	4 (3)	11 (8)	9 (5)	12 (4)	3 (1)	2 (1)	5 (1)	0 (0)
Other	4 (3)	3 (2)	2 (2)	3 (2)	4 (1)	4 (2)	3 (1)	2 (1)	1 (3)

MHI: manual hyperinflation; VHI: ventilator hyperinflation; ERCC: expiratory rib cage compression; and ZEEP: zero end-expiratory pressure. [a]Values expressed as n (%).

Table 2. Reported reasons for selecting "never" or "rarely" regarding the use of each of the surveyed lung expansion techniques for mechanically ventilated patients.[a]

Reason	ARM	VHI	MHI	MCCD	Positioning
The technique has no scientific evidence that supports its efficacy.	1 (3)	6 (3)	17 (6)	73 (46)	2 (11)
I believe there are more effective techniques.	7 (19)	35 (20)	82 (31)	94 (60)	14 (74)
The technique is not part of my institution's protocol.	4 (11)	46 (26)	44 (16)	12 (8)	0 (0)
I don't know the technique; I have no experience.	7 (19)	58 (33)	12 (4)	3 (2)	0 (0)
The technique may bring more harm than benefit to the patient.	17 (46)	48 (27)	72 (27)	25 (16)	0 (0)
The clinical condition of most patients with COVID-19 is quite critical.	3 (8)	31 (18)	49 (18)	19 (12)	5 (26)
Biosecurity	2 (5)	1 (1)	150 (56)	4 (3)	0 (0)
Other	5 (14)	9 (5)	7 (3)	1 (1)	0 (0)

ARM: alveolar recruitment maneuver; VHI: ventilator hyperinflation; MHI: manual hyperinflation; and MCCD: manual chest compression-decompression maneuver. [a]Values expressed as n (%).

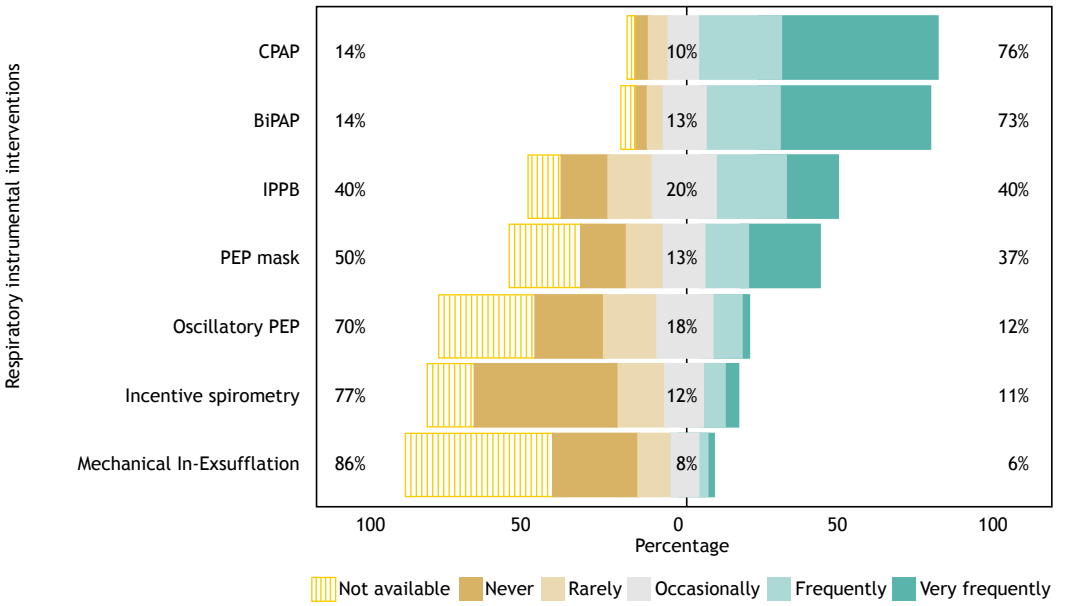

Figure 1. Frequencies of reported instrumental interventions for spontaneously breathing patients with COVID-19 in the ward. IPPB: intermittent positive pressure breathing; and PEP: positive expiratory pressure.

Table 3. Reported reasons for selecting "never" or "rarely" regarding the use of each of the surveyed mobilization interventions for mechanically ventilated patients.[a]

Reason	NMES	PRME	ARME	RRME	Sitting on the edge of the bed	Standing	Cycle ergometer	Stepping in place	Ambulation	Climbing steps	Squat
The technique is not part of my institution's protocol.	31 (30)	3 (3)	0 (0)	4 (11)	1 (6)	1 (3)	6 (14)	1 (2)	1 (2)	12 (9)	12 (8)
I believe there are more effective techniques.	11 (10)	97 (90)	0 (0)	2 (5)	0 (0)	0 (0)	2 (5)	2 (4)	0 (0)	7 (5)	11 (7)
The clinical condition of most patients with COVID-19 is quite critical.	16 (15)	3 (3)	3 (60)	19 (50)	10 (59)	21 (60)	19 (43)	25 (51)	31 (66)	58 (41)	75 (49)
The functional status of most patients with COVID-19 limits the technique application.	10 (10)	2 (2)	2 (40)	16 (42)	9 (53)	23 (66)	15 (34)	27 (55)	29 (62)	63 (45)	92 (60)
The physical structure of my hospital is the limiting factor for the use of the technique.	31 (30)	0 (0)	0 (0)	7 (18)	3 (18)	5 (14)	14 (32)	6 (12)	6 (13)	52 (37)	11 (7)
Due to the excessive demand, physiotherapy care with an exclusively respiratory approach is prioritized.	18 (17)	8 (7)	3 (60)	10 (26)	4 (24)	7 (20)	11 (25)	10 (20)	10 (21)	17 (12)	21 (14)
Biosecurity	1 (1)	0 (0)	0 (0)	1 (3)	1 (6)	2 (6)	0 (0)	1 (2)	1 (2)	9 (6)	7 (5)
Other	20 (19)	11 (10)	0 (0)	0 (0)	2 (12)	4 (11)	2 (5)	3 (6)	3 (6)	3 (2)	6 (4)

NMES: neuromuscular electrical stimulation; PRME: passive range of motion exercises; ARME: active range of motion exercises; and RRME: resistive range of motion exercises. [a]Values expressed as n (%).

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Table 4. Reported reasons for selecting "never" or "rarely" regarding the use of each of the surveyed airway clearance techniques for spontaneously breathing patients.[a]

Reason	Directed/ assisted cough	ACBT	FET	Autogenic drainage	Hard/brief ERCC	Soft/long ERCC	Vibration	Percussion	Oscillatory PEP	MI-E
The technique has no scientific evidence that supports its efficacy.	2 (10)	6 (11)	4 (6)	13 (9)	15 (19)	17 (20)	62 (48)	160 (75)	3 (3)	0 (0)
I believe there are more effective techniques.	7 (33)	23 (43)	25 (40)	80 (53)	68 (85)	55 (65)	72 (56)	92 (43)	31 (29)	19 (18)
The technique is not part of my institution's protocol.	0 (0)	9 (17)	6 (10)	25 (17)	13 (16)	5 (6)	7 (5)	10 (5)	28 (26)	26 (25)
I don't know the technique; I have no experience.	0 (0)	8 (15)	0 (0)	12 (8)	3 (4)	4 (5)	1 (1)	2 (1)	2 (2)	26 (25)
Patients usually do not adapt to or understand the technique.	1 (5)	13 (25)	16 (25)	32 (21)	11 (14)	6 (7)	2 (2)	1 (0)	3 (3)	7 (7)
The technique may bring more harm than benefit to the patient.	2 (10)	4 (8)	10 (16)	7 (5)	20 (25)	10 (12)	11 (9)	28 (13)	7 (7)	8 (8)
The clinical condition of most patients with COVID-19 is quite critical.	3 (14)	15 (28)	16 (25)	35 (23)	21 (26)	11 (13)	13 (10)	18 (8)	24 (23)	18 (17)
Biosecurity	5 (24)	6 (11)	15 (24)	5 (3)	13 (16)	3 (4)	4 (3)	3 (1)	26 (25)	9 (9)
Other	5 (24)	3 (6)	4 (6)	19 (13)	41 (51)	5 (6)	7 (5)	5 (2)	16 (15)	19 (18)

ACBT: active cycle of breathing technique; FET: forced expiratory technique; ERCC: expiratory rig cage compression; PEP: positive expiratory pressure; and MI-E: mechanical in-exsufflation. [a]Values expressed as n (%).

Table 5. Reported reasons for selecting "never" or "rarely" regarding the use of each of the surveyed lung expansion techniques for spontaneously breathing patients[a]

Reason	Prone positioning	Breathing exercises	Incentive spirometry	IPPB	MCCD	CPAP	BiPAP	PEP mask
The technique has no scientific evidence that supports its efficacy.	7 (78)	12 (133)	113 (67)	5 (6)	34 (36)	0 (0)	0 (0)	2 (3)
I believe there are more effective techniques.	2 (22)	5 (56)	75 (45)	28 (34)	60 (63)	11 (38)	2 (9)	21 (28)
The technique is not part of my institution's protocol.	0 (0)	1 (11)	26 (15)	23 (28)	8 (8)	7 (24)	9 (41)	27 (36)
I don't know the technique; I have no experience.	0 (0)	0 (0)	2 (1)	8 (10)	3 (3)	0 (0)	2 (9)	7 (9)
Patients usually do not adapt to or understand the technique.	2 (22)	0 (0)	4 (2)	2 (2)	3 (3)	1 (3)	0 (0)	2 (3)
The technique may bring more harm than benefit to the patient.	1 (11)	4 (44)	16 (10)	5 (6)	12 (13)	3 (10)	2 (9)	9 (12)
The clinical condition of most patients with COVID-19 is quite critical.	0 (0)	3 (33)	13 (8)	6 (7)	10 (11)	1 (3)	1 (5)	8 (11)
Biosecurity	0 (0)	1 (11)	6 (4)	18 (22)	2 (2)	8 (28)	5 (23)	8 (11)
Other	1 (11)	0 (0)	7 (4)	7 (8)	3 (3)	6 (21)	4 (18)	5 (7)

IPPB: intermittent positive pressure breathing; MCCD: manual chest compression-decompression maneuver; and PEP: positive expiratory pressure; [a]Values expressed as n (%).

Table 6. Reported reasons for selecting "never" or "rarely" regarding the use of each of the surveyed mobilization interventions for spontaneously breathing patients.[a]

Reason	NMES	ARME	RRME	Sitting on the edge bed	Standing	Cycle ergometer	Stepping in place	Ambulation	Climbing steps	Squat
The technique is not part of my institution's protocol.	24 (33)	0 (0)	5 (29)	1 (50)	0 (0)	5 (22)	2 (25)	0 (0)	6 (10)	5 (9)
I believe there are more effective techniques.	10 (14)	0 (0)	2 (12)	0 (0)	0 (0)	1 (4)	0 (0)	0 (0)	4 (7)	9 (16)
The clinical condition of most patients with COVID-19 is quite critical.	2 (3)	0 (0)	4 (24)	1 (50)	0 (0)	6 (26)	4 (50)	3 (100)	15 (26)	24 (41)
The functional status of most patients with COVID-19 limits the technique application.	4 (5)	0 (0)	8 (47)	1 (50)	0 (0)	6 (26)	6 (75)	2 (67)	26 (45)	38 (66)
The physical structure of my hospital is the limiting factor for the use of the technique.	22 (30)	0 (0)	6 (35)	0 (0)	0 (0)	7 (30)	1 (13)	0 (0)	25 (43)	7 (12)
Due to the excessive demand, physiotherapy care with an exclusively respiratory approach is prioritized.	21 (29)	0 (0)	7 (41)	0 (0)	0 (0)	5 (22)	3 (38)	0 (0)	6 (10)	8 (14)
Biosecurity	4 (5)	0 (0)	1 (6)	0 (0)	0 (0)	0 (0)	1 (13)	0 (0)	10 (17)	3 (5)
Other	17 (23)	1 (100)	0 (0)	0 (0)	0 (0)	2 (9)	0 (0)	0 (0)	5 (9)	1 (2)

NMES: neuromuscular electrical stimulation; ARME: active range of motion exercises; and RRME: resistive range of motion exercises.
[a]Values expressed as n (%).

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