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Workshop Report

# CHEST PHYSIOTHERAPY IN 2nd INTERNATIONAL REHAB MEDICINE CONFERENCE ON APRIL 2015

**PLACE OF WORKSHOP: ARMED FORCES INSTITUTE OF REHABILITATION, RAWALPINDI, PAKISTAN**

**WORKSHOP FACILITATORS:**

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## BACKGROUND

Chest physiotherapy is a broad topic; it consists of various techniques and procedures which need practice and expertise for excellent outcomes.

CPT basically works on respiratory system and it generally promotes normal physiology of respiration. Itimproves ventilation/perfusion process, by increasing volumes and capacities of lungs.It also strengthens up the respiratory muscles and eliminates secretions from lungs and airways. CPT allows the lungs to supply optimum amount of O2 to the human tissue, which is necessary for healthy body growth and activities of daily living.

Each year, many patients with any medical or surgical disorder, develop respiratory complications in hospital settings. There is a high rate of deaths because of respiratory distress in ICUs. CPT is neglected therapy in majority hospitals in Pakistan.

A comprehensive and efficient CPT can reduce the risk of respiratory complications and decreases the rate of mortality.

The practitioner should be competent enough in selecting appropriate technique/techniques for particular patientand should be skilled to perform maneuver effectively.

The work shop on chest physiotherapy is an effort to guide and train physiotherapists and other medical professionals to perform an effective and significant treatment.The practical session of workshop provides opportunity to individuals to perform maneuver independently.

A provision of significant chest physiotherapy proves and justifies the role of physiotherapists in intensive care unit and ward.

Chest physiotherapy was conducted at AFIRM, RWP. There were twenty five participants, majority were physiotherapist, physiotherapy assistants, nurses, junior doctors.

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**Objectives of Workshop**

- To enhance knowledge of participants about Chest Physiotherapy Maneuvers
- To make participants able to design Chest Physiotherapy plan according to patient
- To make participantscompetent to perform Chest Physiotherapy maneuvers independently
- To make participants proficient to guide patient, family and juniors about the techniques of Chest Physiotherapy

**Sequence of workshop**

- Pre-Test
- Presentation
- Clinical Demonstration
- Group Activity
- Post -Test
- Evaluation of Workshop
- Certificate Distribution

**Contents of workshop:**

In the beginning, pre- test was conducted (15 question test paper). This test assessed the knowledge of participants about the chest physiotherapy before the work shop.

The work shop had three parts, firstpart based on *presentation* included:

**1. Brief review of anatomy and physiology of respiratory system:**

- Lung and airway divisions and location
- Bronchpulmonary segments
- Lungs volumes and capacities

**2. CPT basics:**

- Objectives of CPT
- Indications, contraindications, precautions complications and supportive items of CPT

**3. CPT maneuvers**:

- Breathing exercise
- Diaphragmatic breathing
- Deep breathing
- Segmental breathing
- Purse-lip breathing

**4. Chest manipulation:**

- Percussion
- Vibration
- Shaking

**5. Postural drainage:**

**6. Other technique:**

- ACBT
- Autogenic drainage

The second part was *practical session*, in which facilitators demonstrated each and every technique and maneuvers of chest physiotherapy (discussed in presentation) on the live models.

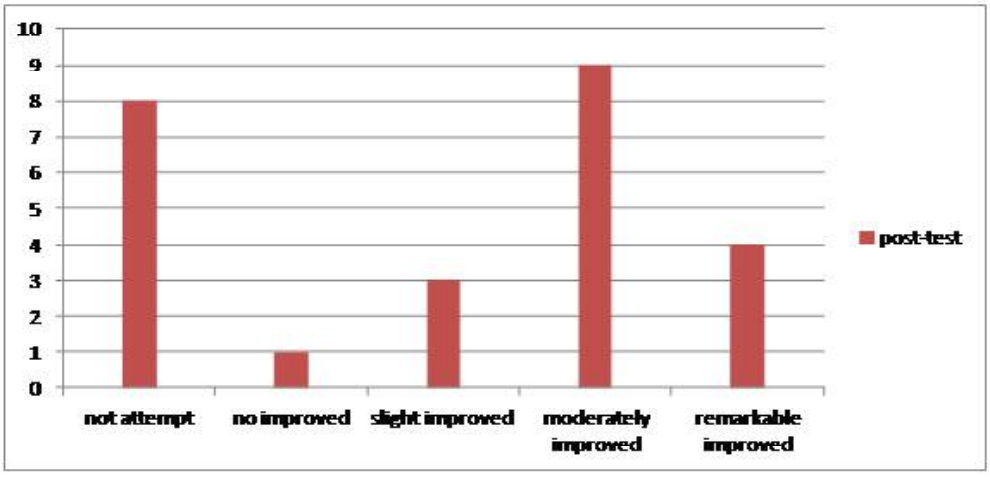
The third part was *hands on group activity*, in this section, all participants were divided in six groups and they were assigned different topics of chest physiotherapy maneuvers, each participant of group got chance toperform assigned topic on live models independently.

The post-test was conducted (pre-test question paper). The difference of both tests showed the efficacy of chest physiotherapy work shop.

**Comparison of pre-test and post-test:**

There were twenty five participants who attempted pre- test, out of which seventeen participants were present during the post –test. The comparison of pre- test and post-test mentioned. .if there is no change in scores of Pre-Test and Post-Test shows no improvement, if 1or 2 marks are more in post –test shows slightly improved, 3 or 5 more marks in post-Test shows moderately improved and more than six marks are improved shows remarkably improved in graph. The most of participants moderately improved their knowledge about chest physiotherapy, a small number remarkably improved their post -test and only few were slightly improved.

**RESULTS OF SEVENTEEN PARTICIPANTS WHO FILLED PRE AND POST TESTS**




**Recommendations for promotion of clinical skills:**

- **Participation in CPT hands-on workshops**
- Application of Chest Physiotherapy in-door and out- door patients

**Conclusion:**

The work shop of chest physiotherapy was an effective training program, it is proved by Pre-Test and Post-Test results and feedback from participants

**Workshop evaluation/ feedback from participants:**

Before the certificate distribution, a Performa was offered to participants for feedback of work shop.

**Acknowledgement**

Special thanks are acknowledged to the administration and all staff members of AFIRM for permission, conduction and cooperation.

**Annexure 1:** List of participants.

| | Name | Phone no. | Designation |
|---|---|---|---|
| 1 | Ms. Afia quddos | -5111580 | PT. asstt. |
| 2 | Ms. Afreena | -5660353 | PT. asstt. |
| 3 | Mr. Ali-Bin-Asim | -5088365 | Physiotherapist |
| 4 | Ms. Ansa | -5426901 | Nurse |
| 5 | Ms. Farzana | -9746422 | Nurse |
| 6 | Ms. Misbah | -5413075 | Physiotherapist |
| 7 | Ms.Mehnaz | -5510547 | PT. asstt. |
| 8 | Ms. Nadia Abid | -7049057 | Physiotherapist |
| 9 | Ms. Rafia | -5400853 | Nurse |
| 10 | Ms. Waheeda | -5572147 | Nurse |
| 11 | Ms. Uzma | -9091299 | doctor |
| 12 | Mr. Shakeel | -4237468 | Physiotherapist |
| 13 | Ms. Rizwana | -527138 | doctor |
| 14 | Ms. Nafeesa | -5306947 | Nurse |
| 15 | Ms. Samreen | -5111580 | Nurse |
| 16 | Ms. Fareeha | -5650196 | Physiotherapist |
| 17 | Ms. Nadia Azher | -5281672 | Physiotherapist |

**Annexure 2:** Pre and Post Test

**Pre-Test:**

**Name:**_____**Dept:**_____**Profession**_____

1. Chest physiotherapy strongly recommended for patients in:
   a. OPD
   b. Gen. ward
   c. ICU
   d. VIP ward
2. The frequency of vibration is recommended about:
   a. 5-10 Hz
   b. 10-20 Hz
   c. 20-25 Hz
   d. 25-50 Hz
3. chest physiotherapy includes:
   a. Breathing exercise only
   b. postural drainage only
   c. Percussion only
   d. All of above
4. The component of ACBT is:
   a. Percussion
   b. Vibration
   c. deep breath
   d. Shaking
5. Postural drainage is contraindicated in patients with:
   a. Excessive sputum
   b. weak cough
   c. lung collapse
   d. positional intolerance
6. When practitioner strikes on chest wall with cupped hand ,technique is known as:
   a. Percussion
   b. Vibration
   c. postural drainage
   d. huff

7. A-child with cystic fibrosis comes for chest physiotherapy ,chest X.ray presents secretion in middle lobe, therapist plan to do postural drainage for particular lobe, the head side should be down at ..... for middle lobe postural drainage.

a. 30 degrees
b. 40 degrees
c. 60 degrees

8 .A senior physiotherapist assigns a patient of COPD to junior physiotherapist for basal lobe postural drainage ,Regarding lower lobe postural drainage, head side should be down at.....

a. 35 degree
b. 45 degrees
c. 55 degrees
d. 65 degrees

9. A Physiotherapist auscilates the patient and performs percussion of apical basal segment. It is located just below the:

a. Inferior angle of scapula
b. Superior angle of scapula
c. Lateral angle of scapula
d. None of above

10. A-48 years old patient ic known case of COPD, he has been learned from his respiratory therapist to keep respiratory system efficient by performing autogenic drainage.what is autogenic drainage-?

a. Breathing with different postures
b. Breathing with different volumes
c. Breathing with different devices
d. Breathing in different settings

11. A female patient is admitted to ICU after motor vehicle accident ,patient has cervical fracture (at C3-C4) with quadriplegia ,after 0ne week pt. is alert and able to follow command , she is still on mechanical ventilator because of low O2 saturation , unable to cough, chest radio graph shows diffuse secretion in both basal lobes.
Which of the following exercise help to the patient to improve respiratory function?

a. diaphragmetic breathing
b. purse-lips breathing
c. segmental breathing
d. Glossopharyngeal breathing

12. which device is the most helpful for above mentioned patient to remove secretions from air way?

a. suction machine
b. b .cough assist
c. incentive spirometer
d. percussor

13. A 35 years old female repots the shortness of breathe in early morning, she has had a productive cough for two weeks , breath sounds are diminished in both basal lobes with coarse ronchi in upprer lobes, chest radiograph shows secretion in basals and raised domes of diaphgram.
Which of the following exercise help to the patient to improve respiratory function?

a. diaphragmetic breathing
b. purse-lips breathing
c. segmental breathing
d. Glossopharyngeal breathing

14. A-40 years old patient admitted in pulmonary ward, he is known case of chronic bronchitis, on clinical findings breath sounds are absent at Rt.apical lobe, after chest X.ray indicates tenacious secretion in Rt.upper lobe, The CPT session will be much effective if time of percussion for single segment is:

a. 20-25 sec
b. 10-20 sec
c. 5-15 se c
d. 30-60 sec

15. A female comes with recent thoracic surgery , removal of a cyst from middle lobe ,chest molity is poor at site of scar, chest X.ray indicates raised diagram of right side, and low breath sounds at middle lobe.
Which of the following exercise help to the patient to improve respiratory function?

a. diaphragmetic breathing
b. purse-lips breathing
c. segmental breathing
d. Glossopharyngeal breathing

**Post-Test:**

**Name:_____Dept:_____Profession_____**

1. Chest physiotherapy strongly recommended for patients in:
   e. OPD
   f. Gen. ward
   g. ICU
   h. VIP ward

2. The frequency of vibration is recommended about:
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3.chest physiotherapy includes:
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g. segmental breathing
h. Glossopharyngeal breathing

**Annexure 3:** Program Agenda.

- Pre-Test 10 min
- Presentation 45 min
- Short Break 05 min
- Clinical Demonstration 45 min
- Group Activity 45 min
- Post –Test 10 min
- Evaluation of Workshop 05 min
- Certificate Distribution 15 min

**Annexure 4:** Chest physiotherapy evaluation from participants.

| Please take a few moments to provide us with some important feedback about the workshop. This information will be used to improve and select future workshop | Strongly disagree | agree | Neither agree nor disagree | strongly agree | Not answered |
|---|---|---|---|---|---|
| the facilitators were organized | | 4 | | 13 | |
| The facilitators made good use of time allotted | | 1 | | 16 | |
| The facilitators seemed knowledgeable about the topic | | 4 | | 13 | |
| The facilitators' presentation style was effective in helping me in learning | | 3 | | 13 | 1 |
| The teaching/training method used was appropriate for the audience | | 4 | | 13 | |
| The material will be useful for me | | 0 | | 17 | |
| I enjoyed the workshop | | 4 | | 13 | |
| I understood the concepts as presented in the workshop | | 2 | | 15 | |
| The workshop improved my understanding of the topic | | 2 | | 14 | 1 |
| The hands on activity improved my ability to utilize skills related to the topic | 1 | 6 | 1 | 8 | 1 |
| The knowledge and skills I learned will be useful to me in my job | | 2 | | 15 | |
| I would recommend this workshop to others | | 2 | | 15 | |
| I would attend other presentations/workshop offered by these facilitators | | 5 | | 11 | 1 |

1. What one thing would you recommend be done to improve this presentation for future participants?

3/17 nothing to improve

1/17 demand for patient rather model for practical session

7/17 more time for hands on activity

6/17 not answer

2. What other presentation/workshop topics would you like to see offered?

Recommended topics:

5/17 neuro related

2/17CPT in ICU and for cardiac patients

1/17for pain management

7/17 not answer

3. Please share any other comments you have regarding this workshop. (Use the back of the form if needed.)

5/17 excellent, knowlgeable, useful

12/17 not answers

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