Improving Physical Therapy Treatment Outcomes Through Evidence-Based Tobacco Cessation Counseling

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Session Overview:

Tobacco use constitutes one of the greatest threats to public health worldwide, resulting in approximately 8,600,000 cases of chronic illness, and 443,000 deaths each year through direct exposure and second-hand smoke. Tobacco use results in disease and pathologies that encompass all areas of physical therapy practice, including cardiovascular, musculoskeletal, neurological, and integumentary systems. Furthermore, smoking prevalence is nearly 10% higher among people with disabilities when compared with the general population (30.5% versus 21.7%, respectively). Fewer than 40% of insured American adults report receiving smoking cessation advice during their last clinical encounter with a health care provider, and people with disabilities are even less likely to receive tailored smoking cessation advice. The effects of tobacco use may be magnified in people with disabilities due to the clustering of other risk factors, such as obesity and tendency towards a sedentary lifestyle. Therefore, it is essential for physical therapists and physical therapist assistants to screen clients for tobacco use and nicotine addiction, and incorporate strategies for smoking cessation as a component of physical therapy interventions.

Tobacco cessation counseling (TCC) is consistent with the physical therapist’s (PTs) and physical therapist assistant’s (PTAs) role in promoting wellness, improving health, and preventing secondary complications of chronic disease. PTs and PTAs are uniquely positioned to provide effective TCC due to the number of visits during an episode of care. Furthermore, patients who receive TCC from more than one professional are twice as likely to quit. Despite these facts, less than 25% of PTs typically offer tobacco cessation advice as a component of care, and approximately 40% of PT programs nationwide do not include training in tobacco cessation counseling in entry-level physical therapy course curricula (Pignataro – unpublished data from dissertation).

The purpose of this educational session is to review evidence-based tobacco use management strategies, including guidelines for TCC for clinicians established by the US Department of Health and Human Services, “The 5 A’s and the 5 R’s.” Discussion will include screening for nicotine addiction, matching counseling to the PT diagnosis and patient’s readiness to quit, and the use of community resources for additional referral. Participants will observe and practice screening and counseling techniques using case-based role playing exercises. Groups will be encouraged to explore anticipated barriers and potential facilitators to the application of tobacco cessation counseling in PT settings, entry-level training, and continuing professional education, as well as the need for further research regarding implementation and outcomes of tobacco cessation counseling by physical therapy professionals.
**SESSION OBJECTIVES:**

**Upon completion of this course, you will be able to:**

1. Establish rationale for the role of physical therapy professionals in health promotion and wellness through effective patient education for behavioral change.

2. Describe opportunities for improved patient education related to direct access and the escalating prevalence of preventable chronic disease, disability, and premature mortality.

3. Apply principles of motivational interviewing for improved patient assessment, education, and enhanced adherence.

4. Identify potential barriers towards the use of brief motivational interviewing in clinical settings and delineate strategies for addressing challenges.

5. Discuss evidence-based findings supporting the use of motivational interviewing for common physical therapy diagnoses and treatment goals.

**References**


PACK - Year – 20 cigarettes to a pack; 1 pack per day for a year = 1 pack year

Example – 10 cigarettes per day for 6 years = 3 pack-year history of smoking

SMOKING HISTORY QUESTIONNAIRE (Sample) – adapted from:
http://azcc.arizona.edu/sites/azcc.arizona.edu/files/Smoke_print_nocopy.pdf

1. Have you ever used any form of tobacco (cigarettes, pipes, cigars, smokeless tobacco)?
   
   ☐ Yes
   ☐ No

   If you answered “No,” please skip to question 25.

2. During your entire life, have you smoked at least 100 cigarettes, which is about 5 packs of cigarettes?

   ☐ Yes
   ☐ No

   If you answered “No,” please skip to question 16.

3. How old were you when you first started smoking cigarettes? ______________

4. Do you smoke cigarettes now?

   ☐ Yes
   ☐ No

   If you answered “Yes,” please skip to question 9.

5. About how many years were you a smoker? __________

   (EXAMPLE: If you smoked for 5 years and quit for 2 years and smoking again for 5 years before quitting, your total years of smoking would be 10 years)

6. How many cigarettes on average did you smoke per day? __________

   (NOTE: 1 pack = 20 cigarettes)

7. Did you usually inhale to:

   ☐ Your mouth only?
   ☐ Your chest?
8. Usually how much of the cigarette did you smoke?

| All of it |
| One half |
| Less than one half |

IF YOU HAVE QUIT SMOKING, PLEASE SKIP TO QUESTION 14.

QUESTIONS FOR PEOPLE WHO ARE STILL SMOKING CIGARETTES

9. About how many years have you been a smoker? __________
(EXAMPLE: If you smoked for 5 years and quit for 2 years and smoked again for the last 5 years, your total years of smoking cigarettes is 10 years).

10. How many cigarettes on average do you smoke per day? __________
(NOTE: 1 pack = 20 cigarettes)

11. Do you usually inhale to:

| Your mouth only? |
| Your chest? |

12. Usually how much of the cigarette do you smoke?

| All of it |
| One half |
| Less than one half |

13. About how many cigarettes did you smoke over the last three days? __________

14. Please record the brand of cigarettes that you have smoked the most. If you have smoked two or more brands equally, choose only one brand: ________________
   a. Is the brand a menthol type cigarette?
      | Yes |
      | No |
   b. Does this cigarette brand have a filter?
      | Yes |
      | No |

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15. Before age 20, what was the average number of cigarettes you smoked per day? _______
   Check here if you did not smoke before age 20: Not applicable

OTHER TOBACCO USE

16. Have you ever smoked a pipe or cigar at least 20 times in your life?
   Yes
   No
   If yes, please indicate below:
   Pipe
   Cigar
   Both

   How many times a week do you/ did you smoke a pipe and/ or cigar? ___________

17. How many years have you been or were you a pipe or cigar smoker? ____________

18. Do you currently smoke a pipe and/ or cigar?
   Yes
   No
   If you answered no, how many years has it been since you stopped smoking pipes or cigars? ________

19. Have you ever used smokeless tobacco (chewing tobacco, snuff)?
   Yes
   No
   If you answered no, please skip to question 21.

20. Do you currently use smokeless tobacco (chewing tobacco, snuff)?
   Yes
   No
QUESTIONS ABOUT QUITTING TOBACCO

21. Have you ever attempted to quit any form of tobacco?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

    If you answered no, please skip to question 25.

22. How many times have you quit for at least one day? ____________

23. What are/ were the reasons that you attempted to quit? (Please check all that apply)

<table>
<thead>
<tr>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>High price of cigarettes</td>
</tr>
<tr>
<td>Disapproval of friends/ relatives</td>
</tr>
<tr>
<td>Hospitalization</td>
</tr>
<tr>
<td>Restricted smoking laws</td>
</tr>
<tr>
<td>It is not the thing to do anymore</td>
</tr>
<tr>
<td>Unable to exercise</td>
</tr>
<tr>
<td>Health Problems – please specify: ____________________________________</td>
</tr>
<tr>
<td>Concern for others within your household</td>
</tr>
<tr>
<td>Concern about future health risks</td>
</tr>
<tr>
<td>Pregnancy</td>
</tr>
<tr>
<td>Other – please specify: _____________________________________________</td>
</tr>
</tbody>
</table>

24. Have you ever used any forms of nicotine replacement? (e.g. – patch, gum)

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>
QUESTIONS ABOUT ENVIRONMENTAL TOBACCO SMOKE

25. Did your mother smoke cigarettes while she was pregnant with you?

| Yes | No | Don’t Know |

26. Did the person who took care of you most often (i.e. – mother, father, grandparent) smoke during your infancy/childhood?

| Yes, throughout my childhood (from infancy throughout) | Yes, but only when I was older than 10 years of age | No, they did not smoke cigarettes during my infancy/childhood | Don’t Know |

27. We want to know how much time people have been smoking around you. During the past month, approximately how many hours per day were you exposed to other people’s cigarette smoke in an enclosed location (e.g. – home, work, vehicle)? _________________

THANK YOU FOR TAKING THE TIME TO COMPLETE THIS QUESTIONNAIRE.
SCREENING FOR NICOTINE ADDICTION

Modified Fagerström Test for Nicotine Dependence*
(http://nicotinefreedom.com/articles/fagerstrom)

1. How soon after you wake up do you smoke your first cigarette?
   - Within 5 minutes (3 points)
   - 5 to 30 minutes (2 points)
   - 31 to 60 minutes (1 point)
   - After 60 minutes (0 points)

2. Do you find it difficult not to smoke in places where you shouldn't, such as in church or school, in a movie, at the library, on a bus, in court or in a hospital?
   - Yes (1 point)
   - No (0 points)

3. Which cigarette would you most hate to give up; which cigarette do you treasure the most?
   - The first one in the morning (1 point)
   - Any other one (0 points)

4. How many cigarettes do you smoke each day?
   - 10 or fewer (0 points)
   - 11 to 20 (1 point)
   - 21 to 30 (2 points)
   - 31 or more (3 points)

5. Do you smoke more during the first few hours after waking up than during the rest of the day?
   - Yes (1 point)
   - No (0 points)

6. Do you still smoke if you are so sick that you are in bed most of the day, or if you have a cold or the flu and have trouble breathing?
   - Yes (1 point)
   - No (0 points)

**Scoring:** 7 to 10 points = highly dependent; 4 to 6 points = moderately dependent; less than 4 points = minimally dependent.
ASSESSING READINESS FOR CHANGE

Smoking Stage of Change
Client ID#____________________________

Short Form Date:_________/_________/_______
Assessment Point:_________________

1. Are you currently a smoker?
   - A) Yes, I currently smoke.
   - B) No, I quit within the last 6 months.
   - C) No, I quit more than 6 months ago.
   - D) No, I have never smoked.

Smokers only:

2. In the last year, how many times have you quit smoking for at least 24 hours? _____

3. Are you seriously thinking of quitting smoking?
   - A) Yes, within the next 30 days
   - B) Yes, within the next 6 months
   - C) No, not thinking of quitting

**Scoring:**

- **Precontemplation:** 3C
- **Contemplation Stage:** 3A with *no previous 24 hr quit attempt* in the past year; or 3B
- **Preparation Stage:** 3A with *at least 1 previous 24 hr quit attempt* in the past year
- **Action Stage:** 1B
- **Maintenance Stage:** 1C

Pignataro and Ohtake – Evidence-Based Tobacco Cessation Counseling
US Public Health Service Clinical Guidelines for Tobacco Cessation Counseling

The 5 A’s

- Every patient should be asked about tobacco use
- For people who smoke, an outline of the “5A’s” is listed below

ASK: do you smoke?
   How often?
   How many cigarettes per day?
   How many cigarettes per week?

ADVISE: As your physical therapist, I strongly recommend that you stop smoking. It is one of the best things you can do to improve your health, including the reason you are coming for physical therapy. Explain why smoking cessation will improve the outcomes of the patient’s physical therapy diagnosis, specifically

ASSESS: How interested are you in quitting smoking right now? Please tell me on a scale from 1 to 10, where 1 is not at all interested and 10 is very interested.

ASSIST: If patient is ready to quit right now (answers on scale from 7 to 10), proceed with recommendations for immediate cessation (action phase)
   If the patient is not yet ready to quit, proceed for recommendations for contemplation phase

ARRANGE: Can we call you to see how you are doing with your quit attempt? When would be a good time to reach you?
**ACTION PHASE:** Patient reports he or she is ready to quit smoking immediately (answers 7 to 10 on readiness scale)

- Commend the patient on his or her willingness to quit
- Express empathy towards making such a difficult decision
- Encourage the patient to get rid of tobacco products, put away ashtrays if quitting today
- If the patient is not ready to quit today, ask them to select a quit date in the next week or two
  - Encourage patient to make some immediate changes in smoking behaviors to facilitate future cessation: cutting back on how much they smoke, limiting where they smoke, tell others they want to quit so that they can gather social support, writing down reasons they want to quit to serve as a reminder and ongoing motivation
- Recommend materials for patient that will assist cessation
  
  Internet sites: American Cancer Society [www.cancer.org](http://www.cancer.org), 1-800-ACS-2325  
  American Legacy Foundation [www.americanlegacy.org](http://www.americanlegacy.org), 1-202-454-5555  
  American Lung Association [www.lungusa.org](http://www.lungusa.org), 1-800-LUNG-USA  
  Toll-Free Quit Lines: American Cancer Society, 1-800-ACS-2345  
  American Lung Association, 1-800-LUNG-USA  
  National Quit Line: 1-800-QUITNOW (will refer caller to local resources)
- Ask the patient if she or he is interested in pharmacotherapy – if yes, offer to contact the patient’s medical provider/physician
CONTEMPLATION PHASE:

- Acknowledge difficulties in making a quit decision, e.g. “That’s OK. Most people who smoke aren’t ready to quit right away. I’d like for you to give it more thought. The decision to quit can only be made by you, but I am willing to help any way that I can. ”
- Follow the 5 R’s

| Relevance: Explain how smoking impacts the person’s individual health, e.g. for patients with an orthopedic injury, it can interfere with bone healing, contribute to osteoporosis, exacerbate pain, and effect muscle strength and endurance |
| Risks: Include both acute and long-term risks of smoking, e.g. disability, reduced quality of life
Also discuss environmental risks such as increased health risks to spouses, children and others exposed to secondhand smoke |

| Rewards: Ask your patient to identify some of the major benefits of cessation, i.e. better health, more optimal recovery and physical functioning, money saved, improved sense of taste and smell ... |
| Roadblocks: Spend time asking the patient about the perceived barriers to cessation, e.g. withdrawal symptoms, weight gain, fear of failure ... and brainstorm possible solutions |

| Repetition: Reinforce your commitment and interest in helping the patient stop smoking. Continue to gauge his or her motivation to quit during subsequent office visits, or arrange for follow-up phone contact |
STOP SMOKING
How Physical Therapy Can Help

“The most important step you can take in improving your health is to quit smoking” – US Surgeon General

Why Quit Now?
No matter how old you are, or how long you have smoked, quitting can help.

Immediate Benefits

Within 1 day:
- decreased heart rate
- decreased blood pressure
- better breath

Within 1 month:
- improved circulation
- better lung function
- better sense of taste and smell

Within 1 year:
- fewer colds and illnesses
- decreased coughing
- less shortness of breath
- 50% decrease in heart disease risk

How Quitting Helps Your Recovery

- Smoking can delay healing in muscles, bones, and other tissues.
- Smoking can lead to increased pain—people who smoke need more medication for pain and report less relief than people who don’t smoke.
- Smoking can increase your chance of re-injury—bones, tendons, and ligaments do not regain their full strength.

Why It’s So Hard to Quit

Nicotine is addictive.

There are steps you can take to reduce withdrawal:

- Nicotine replacement therapy can decrease cravings and can come in the form of gum, patches, inhalers and lozenges. Your doctor may be able to provide other medications to assist.
- People who exercise while quitting have better success and less withdrawal symptoms.

Symptoms of Nicotine Withdrawal

Symptoms usually peak within 7 to 10 days and can include:
- dizziness
- depression
- anxiety/irritability
- trouble sleeping
- difficulty concentrating
- feeling restless
- headaches
- increased appetite and weight gain
Getting Through the Tough Spots

Take special care of yourself so that you have the energy to handle the extra stress of quitting:
- drink plenty of water, eat nutritious foods, get enough sleep

Avoid temptation:
- stay away from people and places that remind you of smoking, or make you want to smoke

Make a list of goals:
- use them to stay motivated and review them to picture your success

Keep substitutes ready:
- healthy snacks include carrots, celery, pickles, apples, raisins, and sugar free gum

Stay active by exercising, walking, cycling, etc. - this will help with restlessness and weight gain

Realize that anger, frustration and worry are normal - you are worth the extra effort it takes to successfully quit!

MORE INFORMATION

American Cancer Society:
1-800-227-2345
www.cancer.org

Centers for Disease Control Quit Line:
1-800-QUIT-NOW

National Cancer Institute:
1-877-448-7848; toll free quit line
www.smokefree.gov

Provides resources, including text messaging for ongoing support, advice and tips to stop smoking

Nicotine Anonymous:
1-877-879-6422
www.nicotineanonymous.org

American Lung Association:
1-800-548-8252
www.lungusa.org

Can sign up for “Freedom from Smoking,” low-cost, online program

QuitNet:
www.quitnet.com
Online support group, chat, message boards, forums, and “quit buddies”