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Psychologist Collaborations in Pulmonary Primary Care Practice

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Abstract

Background: A literature review of the role of the Psychologist in Pulmonary Primary Care Practice was conducted. While little research specific ally addresses this important topic, a substantial amount of general issues of practice in Primary Care for the Psychologist exists. This author summarized salient features of this literature based on her twenty-five years' experience in the field.

Study design: A literature review of Pubmed, MedLine, Sage and PsychInfo was conducted for the last five years.

Results: Behavior interventions have been used with success in the medical field using valid assessment tools and intervention specific to pulmonary primary care.

Keywords: Pulmonary medicine; Medical psychology; Medical psychologist; Behavioral medicine

Introduction

The role of the Clinical Psychologist has broadened over the number of decades. While training program directors report preferences of mental health and private practice work for their alumni, the constant popularity of Behavioral Medicine settings continues to grow. It is estimated that Clinical Psychologists choose some twenty-five subspecialties within the area of Behavioral Medicine [1]. The range from cardiovascular to renal care medicine as subspecialties point to both the scope and depth to the area of practice.

Within the Behavioral Medicine focus, Clinical Psychologists have practiced in the subspecialty of Pulmonary Medicine. The increased prevalence of Chronic Obstructive Pulmonary disease (it is second to cardiovascular stroke and hypertension as a source of mortality in the United States) and Asthma (the most commonly diagnosed illness by Pediatricians) [2]. Worldwide estimates of pulmonary diseases such as the rotovirus, challenge Pulmonologist care and behavioral interventions from Psychologists are welcomed [2].

Traditionally, Psychologists practicing in Medical settings have functioned as a generalist. Increasingly, the subspecialties, including Pulmonary care have reached attention and focus.[1] With this, the rate and practice of the Clinical Psychologist includes the use of specialty assessments and interventions fitted to the Psychosocial and Medical needs of Pulmonary Medicine referrals and consultation [3]. Studies have identified the statistical utility calculated from identified risk factors on the Behavioral Health Inventory; thus, identified risk factors can be targeted by the Psychologist for assessment and treatment interventions can be set up [4].

The Psych Info computer database was searched using the terms Primary Care, Behavioral Medicine, Medical Psychology, Pulmonary Medicine alone and in various combinations. Empirical articles, book chapters and books in English, published in the last twenty years were included. Articles not meeting these criteria were excluded. Two hundred and seventy-three articles were yielded from the search. A review of each article was then conducted and twenty-eight were kept for final consideration.

Role of the Psychologist in Pulmonary Primary Care

The top three professional activities of Psychologists reported as practice (65%), research (55%) and reaching-supervision (50%) [1]. Professional activities of the Medical Psychologist such as desensitization to imaging procedures performed by Medical Psychologists with anxiety-ridden patients needing this procedure [5]. Imaging to identify, mask and track disease is standard medical care. Pain management in the cases of pleural infections and other painful lung disorders takes the form of breath exercises, medication and breath treatment. In some cases, none extreme, lung resections surgical procedures provide relief. With lung cancers (large cell, squamous cell, small cell or outcell) the radiation and chemotherapy procedures are supplemented with Psychological care that provides relaxation interventions, cognitive therapy and therapeutic approaches [6]. The chronic illness factors of conditions such as emphysema, chronic obstructive pulmonary disease and cancers are addressed with education/support groups, individualized cognitive-behavior therapy/cognitive therapy [7,8].

Consultations in inpatient units, as a part of medical rounds, provide the Psychologist with an opportunity to administer bedside assessment and therapy. Following this, program development care that focuses on the common needs of pulmonary patients in outpatient and primary practice settings was formed [9].

The development of psychosocial services for pulmonary patients is common with lung cancer, pneumonia and sleep apnea conditions. It is estimated that some 11% of pulmonary cases present to pulmonology specialists for care [10]. Medical Psychologists, using specialty assessment tools, evaluate the psychological contributing factors to these conditions; provide education about disease/symptoms and individualized care to address psychological symptoms that may be impacting the physical symptoms. A key area in the assessment of pulmonary patients by Medical Psychologists is the assessment of mood (i.e., Mood Disorder or General Medical Condition causing a Mood Disorder) [11,12].

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Traditional preventative programming can be implemented by the Medical Psychologist in a pulmonary practice with screenings with brief education.

It is of assistance to the medical team when substantive information about the patient's cognitive functioning is obtained. The tracking of cognitive ability with a neuropsychological evaluation provides a functional assessment of the degree of changes in behavior due to a lung disease (pathology).

Interventions Used by the Psychologist in Pulmonary Primary Care Practice

Working within the patient's health belief model and expectations for treatment is essential to the formulation of treatment goals [1,12]. Current interventions include: Biofeedback, Relaxation Training (Mindfulness), Breath Instruction, Sleep Restriction and Stimulus Control, Group/Class Disease and Support Education, Prevention of symptoms, Cognitive Behavioral Intervention, Crisis Intervention, Skill Training and Personal Adjustment/Supportive care [1,12].

A review of the treatment outcome literature in this area reveals mild to moderate levels of effectiveness. Common health care activities practiced by the Clinical Psychologist working in a Medical setting [1]. Table 1 lists the health care activities with pain control, support groups and behavioral change programs as feasible practices in pulmonary care. These health care activities listed represent a sampling of Psychologist profession responsibilities carried out in Primary Care/Medical settings.

The conceptualization preceding treatment planning is accomplished by an assessment. Table 2 lists the current general and specific measures used in pulmonary care practice by the Clinical Psychologist. Table 2 is a valuable list that highlights the commonly used assessment tools in the field. Each assessment tool listed has highly regarded psychometric properties. In table 3, the considerations for Medical Psychology consultations were listed. Essentially all of the reasons for referral from a Medical Professional to a Psychologist that are listed in table 3 would apply to Pulmonary Practice. The request for Psychological Services by the Physician for their patient is focused on ways to keep them engaged and adhering to treatment(s). A representative sample of the most commonly presented diseases in Pulmonary Medicine are listed in table 4. The Psychologist in Pulmonary Primary Care will benefit from study of the presentations of these diseases to both better understand their patient and to not mistake behavioral symptoms as standalone symptoms to the exclusion of a medical/disease source. For example, depression and confusion symptoms are presented with pernicious anemia that should not be confused for mentation deficits such as delirium. Further examples are contained in Appendix A. Finally, a review of the clinical literature revealed some commonly prescribed medications in treatment of pulmonary disease. It is advisable for the Psychologist to be knowledgeable of what in general, these medications treat.

1. Assessment of candidates for penile prosthesis surgery, back surgery, organ transplantation, in vitro fertilization or oocyte donation
2. Desensitization of fears of medical and dental treatments—including needles, anesthesia, childbirth, or magnetic resonance imaging (MRI) procedures
3. Treatment to enhance coping with or control over pain, including chronic back pain, headache, or severe burn
4. Interventions to control symptoms such as vomiting with chemotherapy, scratching with neurodermatitis, vasospasms with Raynaud's phenomenon, or diarrhea with irritable bowel syndrome
5. Support groups for chronic illness, cardiac rehabilitation, HIV-positive patients, or families of the terminally ill
6. Training to overcome physical handicaps after trauma, cognitive retraining after stroke, or training to use prosthetic devices effectively
7. Behavior-change programs for behavioral risk factors such as smoking, weight, and stress
8. Consultations and workshops to deal with issues of staff burnout, communication, and role conflict
9. Consultations and program development regarding patient compliance (e.g., special aids for the elderly or inpatient units for insulin-dependent diabetic children
10. Consultations with industry to develop worksite health-promotion programs and management of occupational stress
11. Development of psychosocial services for oncology patients
12. Neuropsychological assessments for baseline, diagnostic, and treatment-planning purposes

Table 1: Health Care Activities [1].

General Purpose:
Minnesota Multiphasic Personality Inventory-2-R
Millon Clinical Inventory-II
Symptom check List-90-Revised (SCL-90-R; Derogotis)
Brief Battery for Health Improvement 2
Specific Purpose:
Beck Depression Inventory-II
Center for Epidemiologic Studies Depression Scale (CES-D)
State-Trait Anxiety Inventory
Mini-Mental Status Exam
Disease/Patient Specific Purpose:
Sickness Impact Profile
McGill Pain Questionnaire
Cornell Medical Index
Millon Behavioral Health Inventory
Family Environment Scale

Table 2: Commonly Used Assessment Measures in Pulmonary Care [1].

• Complaints seem out of proportion to organic pathology.
• Treatment does not yield expected results despite an improved organic status.
• New symptoms arise as old symptoms resolve.
• The patient repeatedly raises issues/questions already addressed.
• The patient seems to require more time and attention than usual.
• The patient does not adhere to prescribed treatments.
• The patient takes anxiolytic, sleep, or analgesic medication for a longer period of time than appropriate.
• The patient resists the idea of attempting to wean from anxiolytic, sleep, or analgesic medications.
• The patient exhibits a great deal of emotional distress.
• The patient reports significant family problems in dealing with illness.
• The patient overuses alcohol or other psychoactive substances.
• Psychophysiological components could exacerbate the medical condition.

Table 3: Considerations for Medical Psychology Consultation [1].

Researchers adapted the care costs for various diagnoses with Respiratory disease coming in at fourth place [13]. Pain associated with Respiratory disease presents a challenge clinically as the number of psychosocial sources of stress is high. The utility of assessment with the Brief Battery for Health Improvement in the identification and understanding of psychosocial stressors to the patient. The feedback and short written report to the patient provides clear expression of areas for further investigation and intervention [14,15]. The use of a parent questionnaire about the attitude in caring for their child with asthma in

Alpha-1 Antitrypsin deficiency	Hay fever
Acute bronchitis	Hypoventilation syndrome
Acute respiratory distress	Idiopathic pulmonary arterial hypertension (IPAH)
Adenocarcinoma, lung	Large cell carcinoma
Acute lung injury	Laryngeal dysphonia
Allergic rhinitis	Mycobacterium avium-intracellular (MAI)
Alveolar hypoventilation syndrome	Middle ear dysfunction
Acute respiratory distress syndrome (ARDS)	Non-small cell lung cancer
Asthma	Oat cell carcinoma
Atypical pneumonia	Obesity hypoventilation
Bronchiolitis obliterans organizing pneumonia (BOOP)	Occupational asthma
Bronchial asthma	Pneumocystis pneumonia (PCP)
Bronchial carcinoma	Pleural effusion / pleuritis evaluation
Community acquired pneumonia	Pneumothorax
Obstructive/central sleep apnea	Pulmonary hypertension
Chronic cough evaluation / cough, hemoptysis	Respiratory acidosis/alkalosis
Chronic obstructive lung disease	Rhinitis, allergic
Charg-Strauss syndrome	Sarcoidosis
Cystic fibrosis	SARS
Diffuse alveolar damage (DAD)	Small cell lung cancer
Deep vein thrombosis	Seasonal allergies
Dyspnea evaluation	Syndrome of inappropriate antidiuretic hormone
Eaton-Lambert masthenicsy	Squamous cell carcinoma
Emphysema	Tuberculosis
Foreign body aspiration	Tracheoesophagial fistula
Hospital acquired pneumonia (HAP)	Venous thromboembolism

Table 4: Pulmonary Medicine – Commonly Presented Diseases [1].

the statistical analysis of the questionnaire provided valid evidence as well as content that was used for "Asthma Action Plan" that was tailored for each patient [14,16].

Documented cognitive changes in patients with severe versus less severe carbon monoxide poisoning has been achieved with Psychologist intervention and measures [17]. The respiratory distress that is treated by the Pulmonologist is effectively addressed with these identified cognitive functioning factors. While traffic noise is of concern as it contributes to air pollution and lung disease. Significant high noise annoyance based on the 36-item Short Form Health Survey, for female adults as compared to males [18]. A nine-item symptom checklist in the identification of psychological distress related to lung transplantation recipients adherence to their recovery medical treatment [8]. The Clinical Psychologists need to evaluate the chronic obstructive pulmonary disease patient's risk factors. Cigarette smoking, exposure to occupational dusts, infection, and pre-existing asthma symptoms are risk factors primarily associated with Chronic Obstructive Pulmonary Disease [5].

Content analysis of patients that underwent a lung transplant revealed that emotional distance to the lung as a strong factor related to non-compliance with treatment following lung transplant [8,19]. Acute Respiratory Distress (ARDS) results in lung injury that affects 150,000 people per year [9] due to the inhalation of toxins such as tobacco [20-23], pollution from traffic [18] and other pollutants [24].

Fatigue symptoms identified by the Fatigue Impact Scale distinguished Chronic Obstructive Pulmonary Disease patients based on perceived workload [25].

Researchers reported higher self-esteem and younger age at diagnosis factors that differentiated patient adherence to treatment for their Cystic Fibrosis [13].

Investigation of the utility of intervention termed "lung age based motivational strategy" versus the standard of care identified measurements of lung function by spirometry that are communicated to the smoker as a "motivational strategy" [22].

Recommendations for Practice in Pulmonary Primary Care

Current practice parameters used, in general in behavioral medicine, can be applied by the Psychologist working in Pulmonary Primary Care (Table 1). Initially, knowledge of the symptoms and course of commonly presented pulmonary conditions are needed along with the corresponding medical treatment. Appendices A and B, and table 4 list this specific information. Next, the assessment and understanding for the reasons for referral can be obtained by the Psychologist working with patients in pulmonary primary care using traditional assessment measures as found in tables 3 and 4. Finally, interventions specific to the Pulmonary Primary Care practice involve the employment of biofeedback, relaxation training (mindfulness), breath instruction and psychosocial education about symptoms approaches. These approaches have had moderate success with patients [25-28]. Common interventions center on addressing the needs of the patient for health care activity and answering the referral questions (as per Table 3). This exciting, stimulating area of practice holds many professional opportunities for Psychological practice.

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