*Project S.E.N.S.O.R. News

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New Consensus Statement on Work-Related Asthma

Just when you might have thought that enough guidance documents on work-related asthma had been written, a new consensus statement was published from the American College of Chest Physicians (ACCP) in September 2008 (1).

Perhaps it is the relatively common occurrence of work-related asthma, 10-15% of new onset adult asthma is initiated by workplace exposures and another 10% of pre-existing asthma is significantly aggravated by workplace exposures, or perhaps it is the importance of early diagnosis and the inclusion of removal from exposure in the patient's management, or perhaps it is the difficulty and time involved in confirming the diagnosis of work-related asthma and/or concern about the legal/social consequences of making such a diagnosis that leads to the repeated promulgation of guidance documents (2-5).

In any event, this new document provides a useful and comprehensive coverage of work-related asthma. The new consensus statement is an update of the last statement published by The American College of Chest Physicians in 1995. A panel of 17 allergists, pulmonologists and occupational medicine physicians authored this new statement. The consensus of the panel is summarized below in 12 statements. The diagnosis and management of suspected work-related asthma is shown as a flow diagram in Figure 1.

CONSENSUS STATEMENTS

Statements in italics are comments from the newsletter editor and not the ACCP.

1. "In **all** individuals with **new-onset or worsening asthma**, take a history to screen for WRA (OA and WEA). Then confirm the diagnosis of asthma and investigate to determine whether the patient has WRA, performing these tests, whenever possible, prior to advising the patient to change jobs."

2. "In all individuals with suspected WRA, obtain a history of job duties, exposures, industry, use of protective devices/equipment, and the presence of respiratory disease in coworkers, and consult material safety data sheets (MSDSs), which list many recognized hazardous agents. Document the onset and timing of symptoms, medication use, and lung function, and their temporal relationship to periods at and away from work."

3. "In individuals who have asthma not caused by work but that subsequently worsens while working, consider the diagnosis of WEA, which is usually based on changes in symptoms, medication use, and/or lung function temporally related to work."

4. "In individuals with suspected sensitizer-induced OA, in addition to carefully documenting the occupational history, perform additional objective tests when feasible (*eg*, serial peak flow recordings, serial methacholine challenges, immunologic assessments, induced sputum testing, and SICs) to improve the diagnostic probability."

5. "In individuals with suspected WRA who are currently working at the job in question, record serial measurements of peak flow as part of the diagnostic evaluation and ask the patient to record these optimally a minimum of four times daily, for at least 2 weeks at work and 2 weeks off work."

Specific software to interpret such testing is available from Michigan State University. Call our toll-free number, 1-800-446-7805, to request.

6. "In individuals with suspected sensitizer-induced OA, working at the job in question, perform a methacholine challenge test or obtain comparable measurements of nonspecific airway responsiveness during a working period, and repeat it during a period (optimally, at least 2 weeks) away from the work exposure to identify work-related changes."

The panel reached conclusion #6 despite the lack of evidence-based studies to describe the sensitivity and specificity of this approach.

7. "In individuals with suspected sensitizer-induced OA, perform immunologic tests (skin prick testing or *in vitro* specific IgE assays) to identify sensitization to specific work allergens when these tests are technically reliable and available."

8. "In individuals with suspected sensitizer-induced OA, conducting a Specific Inhalation Challenge (SIC) (where available) is suggested when the diagnosis or causative agent remains equivocal; however, this testing should only be performed in specialized facilities, with medical supervision throughout the testing."

We are unaware of the availability of a facility in Michigan that performs SIC as part of routine clinical care. Our group at Michigan State University has performed such testing on a research basis to identify new causes of work-related asthma.

9. "For all individuals with WRA, attempt better control of exposures. **Remove patients with sensitizer-induced OA from further exposure to the causative agent** in addition to providing other asthma management."

The estimate of symptom recovery was 32% but ranged from 0 to 100% in different studies. Recovery was better from high molecular weight organic substances such as flour versus low molecular weight chemicals such as an isocyanate. The estimate of loss of non-specific bronchial hypersensitivity after cessation of exposure was similar to symptom recovery at 38%.

10. "In individuals with irritant-induced asthma or WEA, the panel advises optimizing asthma treatment and reducing the exposure to relevant workplace triggers. If not successful, change to a workplace with fewer triggers is suggested in order to control asthma."

11. "For workers who are potentially exposed to sensitizers or uncontrolled levels of irritants, the panel advises primary prevention through the control of exposures (*e.g.*, elimination, substitution, process modification, respirator use, and engineering control)."

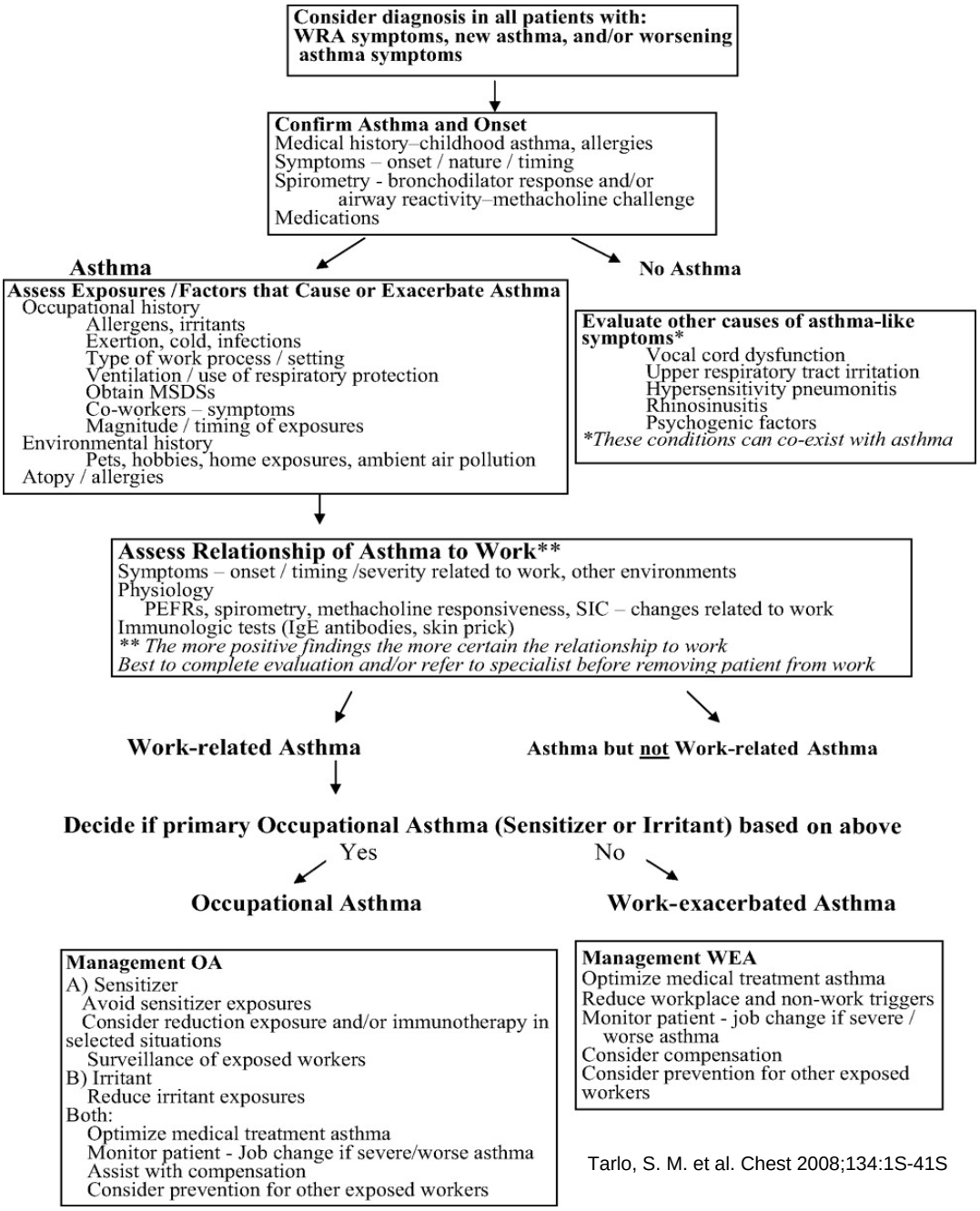
12. "An individual diagnosis of OA represents a potential sentinel health event:

✓ Evaluate the workplace to identify and prevent other cases of OA in the same setting; and

✓ For work environments with potential exposure to sensitizers, the Panel advises secondary preventive measures including medical surveillance using tools such as questionnaires, spirometry, and where available, immunologic tests."

This is the premise on which our surveillance program for work-related asthma is based and as always we are eager to receive reports from health care providers so that we can initiate a public health intervention. We also are happy to assist in the diagnosis and management of individual patients. Kenneth Rosenman, MD at 1-800-446-7805 remains available to discuss clinical issues.

Figure 1. Approach To Diagnose and Manage Work-Related Asthma



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Michigan State University
College of Human Medicine
117 West Fee Hall
East Lansing, MI 48824-1316
Phone (517) 353-1846

Address service requested.

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*PS *Remember to report all cases of occupational disease!*

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(517) 353-1846
MSU-CHM
117 West Fee Hall
East Lansing, MI 48824-1316

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