

# The Occupational History: A Neglected Area in the Clinical History

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The need for detailed occupational histories has been demonstrated by the occurrence of 100,000 deaths from, and 390,000 new cases of, occupational disease each year. Work generated illness takes the form of serious involvement of all bodily organ systems and, in addition, can present as the ill effects of carcinogenesis, mutagenesis, and teratogenesis. Monographic writings on physical diagnosis and family medicine have failed to give emphasis to a substantial description of the patient's employment and its health effects. Such a complete occupational medical history has as its primary objectives the improvement of medical care and the return of the worker to gainful employment. The elaboration of such a history involves inquiry into all past work performed, the development of symptoms, the health of fellow workers, and knowledge of the preventive medical program offered at the worksite. A detailed work history will aid the primary care physician in the rendering of more intelligent preventive medical attention to the wage earner-patient.

It was Bernardino Ramazzini, the universally accepted father of occupational medicine who, in 1700, appended the teachings of Hippocrates by writing, "I may venture to add one more question:

What occupation does he follow?"<sup>1</sup> Although this counsel was documented nearly 300 years ago, no more attention is being given the patient's occupation today by the medical practitioner than it was three centuries past in Modena, Italy. With the concern now being expressed regarding work generated illness because of federal and state mandates and as a result of the rise of consumer and trade union interest, it is essential that the primary care physician seek knowledge of the patient's work setting because of the causal role that

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this environment might play in the development of the morbid state being presented.

## Background

There have been lamentations offered by academicians and others to the effect that cursory consideration only is given this segment of the ill person's past life. Ramazzini epitomized it well when he wrote further that, "In medical practice, however, I find that attention is hardly even paid to this matter, or if the doctor in attendance knows it without asking, he gives little heed to it, though for effective treatment evidence of this sort has the utmost weight."<sup>1</sup>

Contemporary comments, both generic and specific, have been in parallel with those of the Eighteenth Century physician. Feinstein<sup>2</sup> complains that history taking is demonstrated to students less often than almost any other technologic aspect of the medical curriculum. Abrahamson<sup>3</sup> slices more sharply when he comments that in practice many histories are inadequate, a proportion useless, and a minority actively harmful. And Melinkoff<sup>4</sup> asks pertinently, "but is there a seasoned physician who has not seen some patients subjected to the wrong tests, at the wrong times, for the wrong reasons, at great expense and with disastrous results because the original history was taken clumsily or carelessly?" Mitchell,<sup>5</sup> speaking from the National Institute for Occupational Safety and Health, states that if he were the "Czar of Medicine," he would decree only one thing in the area of occupational health, and that would be to teach all medical students to take a proper occupational medical history. He would try to raise their level of awareness and suspicion about job related illnesses.

To solidify further the sharpened concern regarding the importance of the occupational health history, the Governing Council of the American Public Health Association<sup>6</sup> adopted a policy statement in 1978 which urged the Secretary of Health, Education, and Welfare to develop instructional histories by physicians and others. Further, national guidelines for the taking of occupational histories should be promulgated by the Secretary so that the existence and quality of such histories become a necessary part of the care of all patients.

Finally, in a continuing effort toward improving the teaching of medical students in the conduct of the physical examination, Wiener and Nathanson<sup>7</sup> point out in the medical interviews observed that patients were overquestioned without being allowed to relate the story of their illnesses. Disjointed, discontinuous stories were the product of rapidly fired questions, and poorly defined complaints were accepted without attempts at teasing out clarification or definition. Errors in technique included faulty physician mannerisms, excessive note taking, repetition of questions, and failure to respond appropriately to patients' questions.

To express the need quantitatively, it has been observed in the state-of-the-art report by the Assistant Secretary for Health<sup>8</sup> that estimates place the number of deaths each year from occupational diseases at 100,000, with 390,000 new cases of occupational disease being recognized. In spite of the immensity of these figures of human wastage, the true extent of work related diseases is probably considerably larger. The gap between estimate and probable reality is caused by the lack of identification of such diseases as occupational in origin and the absence of reporting if, indeed, the etiology is suspected. The severity of these diseases and the exposures bringing them to clinical bloom can produce long-term disorders of the central nervous system and other critical organs, carcinogenesis, mutagenesis, and teratogenesis. Diverse effects on reproductive capacity are seen in stillbirths, spontaneous abortions, reduced fertility, and sterility. Sound epidemiologic studies have demonstrated that rates of cancer for various occupational groups range from 2 to 11 times the rates seen in the general population or corresponding age and racial segments.

Although controls have been instituted by some companies, a variety of factors militate against the complete eradication of work substances toxic to humans. Two outstanding examples of a negative influence are the granting of differential pay for jobs deemed more hazardous, and the allowing of overtime work in hazardous jobs. The employee thus chooses between long-term risks to health and immediate financial benefits. Furthermore, the Occupational Safety and Health Act of 1970, which mandated protection of the worker, not only has seen inadequate implementation, but in every Congressional Session measures are introduced aimed at attenuating the law. Finally, even

more neglected has been the prevention of the adverse mental health consequences of work. Only now, in a few organizations, are there programs being offered in stress management.

A carefully obtained and documented occupational health history will aid in identifying the relationship between pathologic change or altered physiology and exposure to toxic chemicals or hazardous physical energies at the workplace.

## Areas of Deficiency

### *Monographs on Physical Diagnosis*

With the creation of the American Board of Family Practice and with the establishment of approved residency programs, a body of literature has developed whose content, strangely, prior to this new specialty configuration, appeared infrequently in the periodic or monographic literature. It would be assumed that two publication subsets, particularly the textbooks devoted to physical diagnosis and the large works covering family medicine, would discuss the importance and components of an occupational history. Such a review proved disappointing, for only one volume dedicated a full chapter to the area under discussion. This work was from a British press,<sup>9</sup> and while the editors gave no special emphasis to history taking by the physician, a ten-page chapter was devoted to Occupational Medicine, as so many English physicians serve as Appointed Factory Doctors who examine employment candidates for industry.

A selection was made of current publications to obtain some knowledge of the consideration given this portion of the general medical history. Prior and Silberstein,<sup>10</sup> while devoting a full and good chapter to Medical History, disposed of the Occupational History in two brief paragraphs. In a work entitled *The Complete Patient History*, Kraytman<sup>11</sup> mentions the "job" as an environmental factor to be considered; yet in his discussion of dyspnea as an individual exemplary problem, he offers 15 questions pertaining to employment, in-

cluding some alluding to job satisfaction.

Morgan and Engel,<sup>12</sup> in discussing the organization of the medical record, indicate "present occupation" and "occupational history" as items to be explored under Personal and Social History, and devote five lines to the elaboration of present occupational factors. Both stress and chemical exposure elements are mentioned for detailed description.

In a review of the "Patient Profile," Walker, Hall, and Hurst<sup>13</sup> give four pages to the occupation, pointing up the relationship between occupational status, and disability and mental health. *Unemployment* is given emphasis as a source of stress. Also, occupation is cited briefly in the discussions of "Interpersonal Relationships" and "Depression."

Chamberlain and Ogilvie,<sup>14</sup> British authors, in their description of the history and general principles of examination, devote about 1½ pages to "Occupation," a segment of which includes, in good English fashion, a touch of ancient history. Suggestions to the reader concerning the search for work caused symptoms are complete and, in addition, a short section carries some comments regarding the patient and "Industrial Relationships."

In their work, *Clinical Skills*, Boucher and Morris<sup>15</sup> indicate four typical questions to be asked of the patient about his work, and a comment is made regarding hazardous substance exposure. Comparably, Hobson,<sup>16</sup> in a text for nurses and allied health personnel, spells out four questions germane to the patient's occupation.

### *Monographs on Family Medicine*

All published in the past three years, the second set of monographic writings which was explored relates to family medicine. Rakel<sup>17</sup> limits his half-page discussion under "Occupational Risks," to cancer, one example being that of scrotal skin malignancy, now an extraordinarily rare lesion.

In a multi-author publication, *Family Practice*,<sup>18</sup> brief descriptions of the pneumoconioses are provided in one chapter, a short paragraph describes "Industrial Toxins" in the chapter on Gas-

troenterology, but nothing appears relating to the teasing out of historical occupational experiences.

In the work edited by Taylor on *Family Medicine*, an excellent lengthy chapter by Toewe and Beck<sup>19</sup> reviews "Occupational Health and Industrial Medicine." The statement is made bluntly and pithily that, "Since the patient may be unaware of the relationship between job exposure and illness, or may have forgotten about it, the family physician must include occupational causes in the differential diagnosis of almost every adult patient's problem." The primary care physician is provided a fine description of the work etiologies of disease, but it must be assumed that the details of the occupational history are implicit in the writing, for no separate discussion is given the mechanism of joining employment cause to clinical effect.

Medalie<sup>20</sup> organizes well his approach to family assessment and diagnosis, but touches sketchily on the elements of "Occupation/Profession" and "Present Work," and in the section covering Family Life History and Present Situation, only three questions are presented as pertinent to the patient's work setting.

The treatment of the occupational history in the family medicine monographs is therefore somewhat lengthier than that of the texts on physical diagnosis, but does not exceed by much the first group of writings. A comprehensive discussion is yet to appear in these two sets of publications.

### Obtaining the Occupational History

The ultimate objectives in obtaining a complete occupational medical history\* may be summarized as follows:

#### Primary Objectives

- Improvement of medical care
- Return of worker to gainful employment

\*The long use of the term "taking a history" is objectionable for it almost implies removal of something by force, as in "I took a history." The physician—or his surrogate—obtains, acquires, or develops a history, as a joint labor of both the physician and the patient.

#### Secondary Objectives

Identification of the correct etiology of the illness  
 Determination of anatomic or physiologic (functional) deficits

Facilitation in formulating the diagnosis  
 Institution of appropriate treatment plan

Correction of hazardous work environment:

- Removal of worker to alternative assignment
- Removal of offending physical, chemical, or psychologic stress, and substitution of non-offending agent
- Protection of other workers not yet manifesting frank disease
- Establishment of bioassay baselines for use in future comparisons
- Formulation of appropriate recommendations, if indicated, to employer, regarding job or task assignment of worker
- Early initiation of rehabilitative measures and prevention of disability

To achieve these objectives, certain questions must be framed and asked. Of considerable aid, as a beginning step, is the obtainment of the primary elements of the patient's history of employment, beginning with the first job and developing the work experience up to present time.

1. Company
  - Name
  - Location—city, county, state (and country, if abroad)
  - Type of company—statement of mission, or type of product
  - Department, division, branch, unit, section, work station if known
2. Period of employment—from month and year to month and year
3. Full-time or part-time work
4. Job titles or work performed
5. Potentially hazardous work exposures:
  - Physical
  - Chemical
  - Biologic
  - Psychologic
  - Sociologic
6. Personal protective equipment or devices worn\*
7. Secondary or moonlighting jobs held

\*Included are protective clothing, air-supplied respirators, masks, ear defenders, protective eyewear, and safety shoes

Specific areas can then be explored as determined by leads derivable from the list of jobs held and the clinical history already obtained (Appendix). It must be pointed out that, as in any suggested history format, all of the questions noted in the Appendix are not asked. For example, if the physician believes that his patient may be presenting with an industrially induced chemical intoxication, there need be no queries related to noise exposure. Leads from the present illness will govern the selection and use of the appropriate questions.

Certain organizations and some research/investigation teams from university centers have developed printed history forms so that completion may be accomplished by an assistant other than a health professional. In the office setting, however, where occupational disease is not seen daily in the clientele, a formal document need not be employed. What is important is the physician's desire to seek details concerning his patient's *work places*, past and present, and the *work materials* with which he has been in contact. Emphasis is given the notation of past employment sites because of the lag or latency periods characteristic of the development of certain occupational illnesses. Asbestos related disease is the outstanding example, where a work generated pleural mesothelioma may appear 40 years after initial job exposure.

Another factor plays a role. If the diagnosis of a work generated disorder is made and substantiated, the patient will unquestionably file a claim under workmen's compensation law in the appropriate jurisdiction, and if an inadequate medical history obtains, one's patient is done a distinct disservice. As more materials are found to be toxic or carcinogenic, the greater will be the need for good historic documentation. As one always cautioned students in occupational medicine, one should write every note in the clinical record as though one day it would be entered as evidence or as an exhibit at a workmen's compensation hearing.

### Comment

Certain caveats warrant emphasis. The physician cannot take at first hearing the patient's job title as a full description of what he actually done as a worker. It is customary in industry to give

certain positions rather generic titles such as mechanic, laborer, clerk, or aircraft assembler. The assignments meted out to incumbents in these jobs are legion and can vary greatly in both the physical and mental demands. The advantage of such a looseness in classification is that it permits flexibility and interchangeability in a department. A laborer can be asked to paint a bench, stir up soil, carry ladders, and the like. A helper can be assigned to any one of several crafts.

With each task may go different exposures. One assembler may come in contact with a variety of toxic solvents while another may work exclusively with drawings. The inquiring physician must inquire or else he will be led astray by the inexactitude of position designations, and will miss identifying the point of contact of worker and hazard.

As a parallel of this point, the patient may be tagged with a job title which carries no meaning to the treating physician. Harrington and Schilling<sup>21</sup> underscored this point in their discussion of the problems of history taking. The job title, using the brewing industry for their example, may go back several centuries, and either a knowledge of the industry or an explanation from the worker is needed to decide truly what is involved in the job such as masher, wort runner, bottoms presser, racker, titler, stripper, smeller, and trauncer. Or in comparable vein, how many physicians would recognize at first hearing these job labels—stull man, flumer, yare man, turkish rubber, or grubber, or even ecdysiast? One must seek clarification from the industrial cognoscenti so that hazardous contacts can be identified. Harrington and Schilling<sup>21</sup> underscore another trap involved in occupational history taking and that pertains to the chronology of a product. As they relate, the physician will know, certainly, what a cooper does—he repairs and makes barrels. But what neither he nor the cooper knows is that the barrels undergoing overhaul previously contained white lead. The last job is not necessarily the one causative of disease.

Finally, one must warn the physician caring for a workman that there are many myths connected with various occupations so that some workers believe in occupational health hazards which do not exist. Deeply buried are many time-nurtured untruths regarding dangers on the job.

Mayers<sup>22</sup> put it well when she wrote, "Failure to discover an occupational etiology, when it