

# An Evaluation Tool for the Diagnosis and Management of Arthritic Disorders

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The proper management of a chronic illness depends on the establishment of an exact diagnosis followed by institution of appropriate treatment. In the field of rheumatology, this goal is much more difficult than it appears. Many patients present with vague rheumatic symptoms that may be manifestations of several disorders. Therefore, a specific disease process usually cannot be diagnosed at initial presentation. Although laboratory tests may help the physician narrow down the possibilities, the results are frequently inconclusive. Indeed, the rheumatologist often must "undo" an incorrect diagnosis because excessive emphasis was placed on a laboratory procedure.

## WORKING DIAGNOSIS

Since rheumatic symptoms are often vague and laboratory studies may be inconclusive, the physician should develop a working diagnosis based on the patient's history and physical examination. At the patient's initial presentation, the physician should consider the most likely diagnosis and recognize that the diagnosis may change as the illness unfolds. In arthritis the possibilities are extensive. Furthermore, the lack of curative therapy poses an additional problem. While it is possible to offer symptomatic relief of arthritis and even modify the course of illness in many cases, physicians must acknowledge the limitations of available therapy.

## EVALUATION PROGRAM

To facilitate the management of rheumatologic disorders, a group of rheumatologists\* developed a tracking program entitled "Initial Management of Arthri-

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tis." Reproduced herein, the program consists of a Work-up Form and a Database and Tracking Form. In addition, a list of diagnostic and tracking discriminators is provided as a diagnostic aid. These forms are intended to complement the patient's medical record. The program should not be used as a "cookbook," though it can guide the physician in general terms. By using the Database and Tracking Form, the physician can obtain information helpful in the establishment of a working diagnosis and can collect data points for repetitive measurement. Changes

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## INITIAL MANAGEMENT OF ARTHRITIS WORK-UP FORM

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DOCTOR: \_\_\_\_\_

PATIENT NAME: \_\_\_\_\_ DATE: \_\_\_\_\_

AGE: \_\_\_\_\_ SEX: \_\_\_\_\_

CHIEF COMPLAINT:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

PRESENTING SYMPTOMS (including duration, patterns, etc.)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

WHAT FUNCTIONAL LIMITATIONS HAS THIS PROBLEM CAUSED?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

PREVIOUS TREATMENT FOR THIS PROBLEM:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

SIGNIFICANT MEDICAL/SURGICAL HISTORY:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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that occur as the patient is evaluated over time may suggest additional diagnostic considerations and therapeutic options.

## MEDIC: A Mnemonic Device

Use of this program is based on therapeutic concepts of medication, education, diagnosis, involvement, and course, which are identified by the mnemonic, MEDIC:

# DATABASE AND TRACKING FORM

	Visit 1 DATE _____	Visit 2 DATE _____	Visit 3 DATE _____	Visit 4 DATE _____	
<b>HISTORICAL</b>	<b>Musculoskeletal</b>				
	Joint: Pain/Tenderness	_____	_____	_____	_____
	Swelling	_____	_____	_____	_____
	Shoulder/Hip Pain	_____	_____	_____	_____
	Spine Pain	_____	_____	_____	_____
	Muscle Pain/Aching/Stiffness	_____	_____	_____	_____
	Morning Stiffness > 1 hour	_____	_____	_____	_____
	<b>Systemic</b>				
	Fatigue	_____	_____	_____	_____
	Fever	_____	_____	_____	_____
	Weight Loss	_____	_____	_____	_____
	Skin Rash	_____	_____	_____	_____
	GI symptoms	_____	_____	_____	_____
	GU symptoms	_____	_____	_____	_____
Depression	_____	_____	_____	_____	
Other Psychological Problem	_____	_____	_____	_____	
Sleep Disturbance	_____	_____	_____	_____	
Other organs (specify)	_____	_____	_____	_____	
<b>PHYSICAL</b>	Joint: Tenderness				
	Swelling	_____	_____	_____	_____
	Heat	_____	_____	_____	_____
	Deformity/Instability	_____	_____	_____	_____
	Nonarticular Swelling				
	Nonarticular Tenderness	_____	_____	_____	_____
	Muscle Weakness	_____	_____	_____	_____
	Subcutaneous Nodules	_____	_____	_____	_____
	Rash	_____	_____	_____	_____
	Lymph Node Enlargement	_____	_____	_____	_____
	Liver/Spleen Enlargement	_____	_____	_____	_____
	Other Organ Involvement	_____	_____	_____	_____
	Vasculitic Lesions	_____	_____	_____	_____
	Functional Impairment (as reported by the patient)	_____	_____	_____	_____
<b>LABORATORY</b>	CBC				
	Westergren ESR	_____	_____	_____	_____
	RA Latex	_____	_____	_____	_____
	Antinuclear Antibodies	_____	_____	_____	_____
	Uric Acid	_____	_____	_____	_____
	Muscle Enzymes	_____	_____	_____	_____
	Joint Fluid	_____	_____	_____	_____
X-ray	_____	_____	_____	_____	
CONCOMITANT MEDICATIONS & DOSAGE					
_____	_____	_____	_____		
Rx ORDERED TODAY					
_____	_____	_____	_____		

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- **Medication** is prescribed on the basis of an initial working diagnosis and is modified according to further diagnostic data, patient response, side effects, compliance, and patient acceptance. Medication must not be used to the exclusion of other important therapeutic modalities, including guided rest and exercise, splinting, education, and occupational and physical therapy.
- **Education** of the patient concerning the nature of the disorder, its control, and its prognosis is important for all forms of arthritic disease and especially the

## DIAGNOSTIC DISCRIMINATORS

**REMEMBER**—There are few truly diagnostic tests in rheumatology. Diagnoses are made primarily on the basis of patterns of historical, physical and laboratory findings.

In general, the symptoms, signs or laboratory studies noted below will help classify rheumatic complaints into a category, leading to a working diagnosis that can then suggest appropriate initial therapy.

### DISEASE CATEGORIES

#### Diffuse Systemic Diseases

Fever  
Weight loss  
Other systemic symptoms & signs  
Pain/AM stiffness > 1 hour  
Westergren ESR elevation  
Anemia  
Inflammatory joint fluid w/o crystals  
Suggestive serologies (e.g., Latex, ANA, Fixation Test)  
Joint inflammation (swelling, warmth, erythema)  
Muscle weakness  
X-ray

#### SUGGESTS

Rheumatoid arthritis (RA);  
Systemic lupus erythematosus (SLE);  
Vasculitis; Polymyalgia rheumatica  
Spondyloarthropathies, e.g., ankylosing spondylitis;  
Reiters syndrome; psoriatic arthritis;  
Inflammatory myopathy; other less common  
connective tissue disorders

#### Localized Articular Diseases

Localized joint pain/tenderness  
Bony enlargement  
Soft tissue swelling  
Joint fluid crystals  
Serum uric acid  
X-ray

#### SUGGESTS

Osteoarthritis;  
Crystal-induced arthritis  
(gout, pseudogout)

#### Nonarticular Rheumatic Diseases

Soft tissue swelling  
Nonarticular involvement  
Nonarticular point tenderness  
X-ray, when indicated  
Normal serologies and ESR

#### SUGGESTS

Fibromyalgia syndrome;  
Tenosynovitis/bursitis;  
Low back syndrome

## TRACKING DISCRIMINATORS

The TRACKING DISCRIMINATORS listed below are particularly helpful in defining a favorable or unfavorable response to the management program. When an obvious change is occurring for the better, this is a reassurance that the therapeutic program is appropriate. However, with inadequate response or with drug intolerance or side effects, there is need for additional considerations or therapy. Even improvement should be considered a reason to reevaluate therapy and make appropriate modifications.

- Numbers of joints painful and/or swollen
- Severity of joints painful and/or swollen
- Systemic organs involved
- Fever
- Stiffness or fatigue
- Weight loss
- Functional ability
- Psychological state
- Patient acceptance of program
- Medication side effects

## POTENTIAL ACTIONS TO BE TAKEN

Depending upon the response of your patient, consider as potential actions those listed below.

- Medicine: addition  
deletion  
dosage change
- Reevaluation of diagnosis
- Additional patient education
- Consultation
- Hospitalization
- Use of allied health personnel

more chronic disorders. As with any aspect of therapy, it is necessary to tailor the level of education to the individual patient.

- **Diagnosis** is essential to proper management of chronic disorders. A specific diagnosis may be impossible early in the course of the disease. Physicians should repeatedly evaluate any diagnosis for accuracy. This is accomplished through close attention to the evolving clinical manifestation of the disease combined with careful analysis of the laboratory data.

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## **HOW TO USE THE DATABASE AND TRACKING FORM**

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This form will help you develop a working diagnosis by providing a format where the database can be easily recorded. Additionally, information gathered on future visits can be readily compared with the baseline data.

For ANY new patient with musculoskeletal symptoms, place the responses in the boxes under the appropriate visit. The historical and physical findings will help you define a working diagnosis. To enhance the value of the form for tracking, it is suggested that your responses be graded for severity using the 0-3 scale below (in the case of laboratory tests, the actual values can be recorded).

**0 = None**

**1 = Mild**

**2 = Moderate**

**3 = Severe**

**Blank means not evaluated**

With the results noted in this manner, you can refer to the **DIAGNOSTIC DISCRIMINATORS** to see if your diagnostic considerations agree with those suggested. Also, as results are entered over several visits, you can tell at a glance if the patient is stable, improving, or worsening.

Notice that there is nothing to indicate the interval between visits, as this must be determined by you on the basis of disease severity, acuteness of symptoms, or potency of medication. Patients on drugs with a higher potential for adverse drug reactions should be seen more frequently.

When you have completed this form (after 4 patient visits), you can incorporate it into the patient's permanent office record. Additional **DATABASE AND TRACKING FORMS** can be used in order to extend the tracking beyond the fourth visit.

- **Involvement** of the patient, family, support person network, allied health professionals, physician associates, and appropriate consultant specialists contributes to comprehensive management and should be considered an essential aspect of management.
- **Course** of the disease gives essential information upon which to base future diagnostic, therapeutic, and personal decisions. Ongoing evaluation (tracking) is required to document the evolution of the illness. The data obtained help in the modification of management.

## Work-up Form

The Work-up Form shown on page 44 of the program includes spaces for answers to questions the physician usually asks when taking a patient's history. There is also space provided for functional limitations identified by the patient, as these manifestations are important to track. (This category also is included on the Database and Tracking Form under the "Physical" section and is one of the ten tracking discriminators identified by the rheumatologists who prepared the program.)

## Database and Tracking Form

The Database and Tracking Form shown on page 45 lists many potential disease symptoms, which may be identified in particular patients. Some of these may serve as diagnostic aids. Others are more important to track for periods of time to help determine response to treatment. Some can serve both purposes. As an example, the Figure shows a Database and Tracking Form that was filled in over a 5½ week period for a patient with rheumatoid arthritis. In this case, the diagnosis was clear-cut at the time of the first visit. As a newly diagnosed rheumatoid, the patient was begun on aspirin 3,600 mg/day. When seen again in two weeks, symptoms and signs were obviously more pronounced. Aspirin was raised to 4,200 mg/day, but within ten days the patient was back. Though there may have been some minor improvement in joint symptoms, the patient had developed significant heart burn and tinnitus. She was having more trouble sleeping. Aspirin was discontinued and Feldene® (piroxicam) 20 mg/day begun. Two weeks later, the patient was seen again, no longer having gastrointestinal or central nervous system adverse reactions, and her joints had improved significantly.

The Database and Tracking Form helped document the changes in the patient's condition – both negatively and positively. The changes in the tracking discriminators helped lead the physician to look at other potential actions to be taken.

## CONCLUSION

The Initial Management of Arthritis program facilitates the development of a data base, which is then tracked over time. If used appropriately, it will add to the value of the medical record by offering a means of rapid review of clinical data and thereby improve patient care.

# INITIAL MANAGEMENT OF ARTHRITIS WORK-UP FORM

DOCTOR: Y  
PATIENT NAME: X DATE: 1/7/85  
AGE: 28 SEX: F

CHIEF COMPLAINT:

*Pain and swelling of joints*

PRESENTING SYMPTOMS (including duration, patterns, etc.)

*Three months of pain and swelling, beginning in hands and knees. Subsequently, also pain in both shoulders, feet, and right ankle.*

WHAT FUNCTIONAL LIMITATIONS HAS THIS PROBLEM CAUSED?

*Problems holding things. Can't walk as much as before. At times, problems getting clothes on.*

PREVIOUS TREATMENT FOR THIS PROBLEM:

*Taking acetaminophen on her own.*

SIGNIFICANT MEDICAL/SURGICAL HISTORY:

*None*

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Figure. Work-up Form (above) and Database and Tracking Form (next page) for a 28-year-old woman with rheumatoid arthritis.

# DATABASE AND TRACKING FORM

	Visit 1 DATE <u>1/7/85</u>	Visit 2 DATE <u>1/21/85</u>	Visit 3 DATE <u>1/31/85</u>	Visit 4 DATE <u>2/14/85</u>	
<b>HISTORICAL</b>	<b>Musculoskeletal</b>				
	Joint: Pain/Tenderness	<u>2</u>	<u>3</u>	<u>2</u>	<u>1</u>
	Swelling	<u>2</u>	<u>2</u>	<u>2</u>	<u>1</u>
	Shoulder/Hip Pain	<u>2</u>	<u>2</u>	<u>2</u>	<u>1</u>
	Spine Pain	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
	Muscle Pain/Aching/Stiffness	<u>1</u>	<u>1</u>	<u>2</u>	<u>2</u>
	Morning Stiffness > 1 hour	<u>3hr</u>	<u>3</u>	<u>3</u>	<u>1/2 hr</u>
	<b>Systemic</b>				
	Fatigue	<u>2</u>	<u>2</u>	<u>3</u>	<u>1</u>
	Fever	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
	Weight Loss	<u>0</u>	<u>0</u>	<u>4/6</u>	<u>0</u>
	Skin Rash	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
	GI symptoms	<u>0</u>	<u>0</u>	<u>Heartburn</u>	<u>0</u>
	GU symptoms	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
	Depression	<u>0</u>	<u>1</u>	<u>1</u>	<u>0</u>
Other Psychological Problem	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	
Sleep Disturbance	<u>1</u>	<u>1</u>	<u>2</u>	<u>1</u>	
Other organs (specify)	<u>0</u>	<u>0</u>	<u>Tinnitus</u>	<u>0</u>	
<b>PHYSICAL</b>	Joint: Tenderness	<u>2</u>	<u>2</u>	<u>2</u>	<u>1</u>
	Swelling	<u>1</u>	<u>2</u>	<u>1</u>	<u>1</u>
	Heat	<u>1</u>	<u>1</u>	<u>1</u>	<u>0</u>
	Deformity/Instability	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
	Nonarticular Swelling	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
	Nonarticular Tenderness	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
	Muscle Weakness	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
	Subcutaneous Nodules	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
	Rash	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
	Lymph Node Enlargement	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
	Liver/Spleen Enlargement	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
	Other Organ Involvement	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
	Vasculitic Lesions	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
	Functional Impairment (as reported by the patient)	<u>1</u>	<u>2</u>	<u>2</u>	<u>1</u>
	<b>LABORATORY</b>	CBC	<u>HCT 35</u>		
Westergren ESR		<u>42</u>			
RA Latex		<u>1:80</u>			
Antinuclear Antibodies		<u>Negative</u>			
Uric Acid		<u>ND</u>			
Muscle Enzymes		<u>ND</u>			
Joint Fluid		<u>3000 WBC - Inflammatory</u>			
X-ray		<u>ND</u>	<u>periarthral calcifications</u>		
<b>CONCOMITANT MEDICATIONS &amp; DOSAGE</b>		<u>None</u>			
<b>Rx ORDERED TODAY</b>		<u>ASA 0.3</u> <u>3 tabs qid</u>	<u>ASA 0.3</u> <u>4 tabs with 3 tabs of</u> <u>to max in 11 hrs</u>	<u>Feldene</u> <u>20 mg</u>	<u>Continue</u> <u>Feldene</u>

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