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# Acute and Chronic Pain Challenges for Arthritis Patients in an Acute Care Setting

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## Case Study

### Acute and Chronic Pain Challenges for Arthritis Patients in an Acute Care Setting

by Janet Bykowski, R.N.

#### Educational Objectives

1. Demonstrate the importance of chronic pain management in an acute care environment.
2. Discuss the special impact of co-morbidity of arthritis upon pain management intervention.
3. Provide education to clinicians, patients, and caregivers that would promote an interdisciplinary plan of care for acute and chronic concurrent pain management.

#### Background

In 1998, the American Geriatrics Society published clinical practice guidelines addressing chronic pain in older adults. The guidelines identified barriers and recommended practice improve-

ments to enhance routine assessment, pharmacological therapy, and non-pharmacological therapy. Recommended improvements focused on facilitating access to and delivery of optimal care for all older adults living with chronic pain. Nurses are encouraged to assess older adults routinely for the presence of chronic pain and to advocate for appropriate treatment when indicated (American Geriatrics Society, 2000). Eight years later, health-care organizations continue to struggle to implement interdisciplinary plans of care that provide comprehensive pain management for the patient suffering with chronic pain. Chronic pain is even more common than previously thought. Pain itself is rarely discussed as a condition in and of itself; it is mostly viewed as a symptom of another condition (CDC, 2006a).

Arthritis introduces a special set of conditions for pain management:

#### Centers for Disease Control and Prevention Background Information on Chronic Pain and Arthritis

- 10% of Americans struggle with chronic pain.
- Chronic pain is the leading cause of disability in the United States.
- 25% of adults suffered a day-long bout of pain in the past month.
- Three-fifths of adults ages 65 and older said their pain had lasted a year or more.
- Almost 1/3 of adults ages 18 and older and 1/2 of adults ages 65 years and over reported joint pain, aching, or stiffness during the past 30 days.
- More than 100 forms of arthritis exist, with rheumatoid arthritis and osteoarthritis the most prevalent forms.
- More than 33 million Americans have arthritis, 28 million of them being over the age of 45.
- By 2020, researchers project that 60 million people in the

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United States will be affected by arthritis.

- Osteoarthritis prevalence increases with age: as much as 80 percent of the population over 75 years old show radiologic signs of the condition.
- Each year, arthritis results in 750,000 hospitalizations and 36 million outpatient visits.
- Fibromyalgia is a debilitating pain syndrome that affects two to four percent of the population.

Rheumatoid arthritis (RA) is an inflammatory disease that causes pain, swelling, stiffness, and loss of function in the joints. It occurs when the body's white blood cells travel to the synovium, causing inflammation which thickens the synovium. The inflamed synovium invades and destroys the cartilage and bone within the joint. The surrounding muscles, ligaments, and tendons that support the joint become weak and unable to work properly. RA can also cause fatigue, occasional fevers, anemia, and depression (NIAMS, 2006).

### Case Study

Jenny is a 52-year-old woman with severe rheumatoid arthritis and diabetes. She presented to her doctor's office with a severely infected finger from a paper cut. Jenny assumed that the nodule, swelling, redness, and pain of her finger were associated with her arthritis. As a result, she did not seek medical

attention until the finger became necrotic. After the initial hand examination, the physician immediately referred her to a surgeon for evaluation.

The hand surgeon recognized the possibility of an amputation if the infection had spread to the bone. He notified the hospital of her immediate admission and to prepare her for surgery that evening. As part of the patient intake process, a nursing assessment was conducted which included a complete medical history and listing of all medications, both prescription and non-prescription, including herbal products, vitamins, etc. As is standard of practice, all medications were discontinued prior to surgery and IV antibiotics were started thirty minutes prior to surgery.

Jenny has a history of autoimmune disease. At 18, she developed Hashimoto's thyroiditis and has taken replacement thyroid therapy for 27 years. Hashimoto's disease has been linked to many other autoimmune diseases, including rheumatoid arthritis, and diabetes mellitus (Slatosky et al., 2000). Jenny was diagnosed with rheumatoid arthritis (RA) at age 29. Her RA has been difficult to treat and she has been on many types of medications and treatments during the last 20 years in an attempt to alleviate pain and prevent disability from the disease. During the last two

years, the rheumatologist has used a multi-prescriptive approach, which has been very successful in managing her arthritis. Jenny was also diagnosed with diabetes mellitus at age 46 and is currently taking oral medications to manage this disease.

The following medications were discontinued upon admission to the hospital.

- Nabumetone, an NSAID (Non-Steroidal Anti-Inflammatory Drug) for treatment of RA. Used for pain and to reduce inflammation.
- Methotrexate, a DMARD (Disease Modifying Anti-Rheumatic Drug) for treatment of RA. Relieves painful, swollen joints and slows joint damage.
- Remicade, for treatment of RA. Slows joint damage.
- Metformin HCL, for treatment of diabetes. Helps regulate glucose levels.
- Synthroid, for treatment of thyroid disease.

The surgeon performed an incision and drainage of her finger. The finger did not have to be amputated, since the infection had not spread to the bone. The acute pain was managed through a patient-controlled analgesia (PCA) pump, which allowed pain medication to be safely administered by preprogramming of the narcotic. Post-surgery insulin was ordered to control her diabetes, since

infection increases glucose levels. Synthroid medication was resumed to control the Hashimoto's Disease. Nabumetone (an NSAID), which Jenny took twice a day, was not reordered, since NSAIDs can cause bleeding, nausea, and vomiting. Jenny usually took methotrexate once a week; on that schedule it would have been due on the night of surgery; but methotrexate, due to immunosuppressive qualities, can increase risk for infection. Therefore, Jenny did not take this medication while in the hospital or during the time she recovered at home receiving antibiotics. Remicade, another scheduled medication for her RA treatment regime is an infusion that Jenny received every eight weeks. This was due within two weeks post-surgery. Remicade is also an immuno-suppressive medication and can increase the risk for infection. Therefore, this too was counter-indicated while receiving antibiotic therapy.

During Jenny's five days of hospitalization, **acute** pain was routinely assessed with safe and appropriate interventions. However, **chronic** pain, not acute pain, was the limiting factor in mobility of her hands, knees, feet and back. She was unable to change position in bed without assistance and getting out of bed to go to the bathroom and other walking activities were difficult and painful due to joint stiffness. Limited mobility due

to stiffness, the chronic pain, and the possible long term effects of missing rheumatoid arthritis medications and treatments were contributing factors. Significantly, the interdisciplinary plan of care focused on the acute pain and recovery from surgery and infection. As part of the medication reconciliation process, the physician determined that Jenny would be discharged with pain medication, antibiotics, Metformin for her diabetes, Synthroid, and NSAIDs. Antibiotic therapy was to continue for eight weeks; consequently, methotrexate or remicade were on hold.

As a result of the disruption to her usual treatment regimen, Jenny's RA flared. Aggressive treatment, managed by her rheumatologist, required nine months to gain control and alleviate the chronic pain. Subsequently, Jenny experienced frequent absences and decreased productivity when she was able to return to work. This led to increased stress levels, which accelerated the rheumatoid inflammatory response. Additional negative outcomes included depression, financial burden, guilt from decreased productivity at work and home, ankle trauma due to unstable mobility, and falls.

It is important to remember that Jenny received standard of care for the surgery, the diabetes, and acute pain control during the

five days she was hospitalized. Review of her case identified several issues:

- 1) Though a well-educated individual, at no time did Jenny advocate for her own chronic disease management;
- 2) A rheumatology consult was omitted;
- 3) There was clearly identified a need to provide both acute and chronic pain management in an acute care environment.

### Next Steps

There is an opportunity to improve pain management of hospitalized patients with a history of arthritis. Reviewing our discharge coding data at Mary Washington Hospital for one year, we found that over 5% (1300) of our patients had a comorbidity diagnosis of arthritis. Their average age was 69; there was a 2:1 ratio of women to men; and the length of stay was 4.34 days. We are developing a nurse-initiated research study that will involve a retrospective review of patients with a comorbidity of arthritis, and development of a chronic pain protocol. The hypothesis is that patients with a comorbidity of arthritis have increased levels of pain and lengths of stay as a result of inadequate treatment of chronic pain.

The *Retrospective Review* will encompass these measures:

1. Check for a completed

medication reconciliation form that would identify medications used in the treatment of symptoms of arthritis. (In January, 2006 the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) announced the implementation of the *National Patient Safety Goal #8, Medication Reconciliation across the Continuum of Care*. Medication reconciliation applies to all care settings, including ambulatory, emergency and urgent care, long-term care, home care, as well as inpatient services. A complete list of the patient's medications is communicated to the next provider of service, when the patient is referred or transferred to another setting, service, practitioner, or level of care within or outside the organization. Medications in these references include prescription, over-the-counter, vitamins, herbals and nutraceuticals, and others (Rogers, 2006).

2. Check for reference to arthritis management in the patient's medical history prior to hospitalization.

3. Check for evidence of chronic pain assessment at the time of admission.

4. Check for evidence that both acute and chronic pain management education were provided to the patient.

5. Ascertain if unmanaged chronic pain contributed to increased length of stay.

The *Chronic Pain Protocol* will include the following:

1. Staff and patient education for protocol implementation.
2. Criteria and tools to identify chronic pain upon admission.
3. Chronic pain management addressed in the Inter-disciplinary Plan of Care (IPOC).
4. Holistic approach to discharge instructions.
5. Patient and family education at discharge.

**People with arthritis can become a partner in chronic pain management in an acute care setting.** The goal for pain management is to meet physical, emotional, spiritual, and social needs while the person with arthritis is hospitalized. People should be aware that health care providers in an acute care setting are focused primarily on assessing and treating acute pain. Most providers ask the person to rate pain using a 0–10 subjective pain scale. However, a behavioral scale is used for patients who cannot verbalize their pain rating. Assisting the providers in differentiating between one's chronic and acute pain is essential to safe, effective treatment outcomes.

**You can become a care partner by doing the following:**

1. Obtain a current universal medication form, update it regularly, and give it to your clinicians.
  - a. This form is available

from the Institute for Safe Medication Practices at [www.ismp.org](http://www.ismp.org).

b. Read the instructions for use, including the importance of keeping the form with you.

c. Include non-pharmacological interventions which have been effective in the management of chronic pain, such as relaxation techniques (i.e., deep breathing, visualization); massage; yoga or other Eastern meditation exercises; walking, swimming, other exercises, according to your body's abilities and needs; music therapy; nutrition; etc.

2. Develop a chronic pain log that includes the following:

a. The pain log should be a 0–10 scale, with 0 as the lowest pain and 10 as the worst pain. This is consistent with the pain scale used in hospitals.

b. Note how chronic pain affects your daily functions: Physical Effects: Is it difficult for you to do what you want when in pain? Are you taking pain medications even if they provide little relief? Does it take you longer to complete daily tasks such as dressing or personal grooming? Do you accept that fatigue is a limiting factor? Emotional Effects: Are you depressed, angry, or frustrated due to pain and your limitations? Do you think that other people do not believe how bad you feel? Do you feel guilty when you have to rest? Do you experience feelings of helplessness or inadequacy?



Social Effects: Are you taking more time off from work? Are you unable to plan activities that would be fun? Do you become isolated from friends and family?

3. Create your own chronic pain scale.

a. An example that includes a printable form can be downloaded from [www2.rpa.net/~lrandall/print.html](http://www2.rpa.net/~lrandall/print.html). Patient instructions can be downloaded from the Randall Chronic Pain Scale web page at [www2.rpa.net/~lrandall/scale.html](http://www2.rpa.net/~lrandall/scale.html).

### Study Questions

1. Do patients, professionals and employers recognize and understand the negative outcomes of untreated chronic pain?
2. What are some of the system barriers that compromise chronic pain management in an acute care setting?
3. What steps can adults with arthritis and family caregivers take to become partners in pain management?

### About the Author



For the past six years, Janet M. Bykowski, R.N., has been the Pain Management Clinical Manager for the Department of Nursing at Mary Washington Hospital (Medicorp Health System), Fredericksburg. Prior to this, Janet managed the

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