

Background: The provision of subcutaneous methotrexate has historically been through homecare who provide injection training and delivery. In July 2018, subcutaneous methotrexate was accepted for shared care in the Trust's locality to reduce medication costs but to also improve safety, reducing the risk of concomitant trimethoprim prescribing.

When suitable for shared care, initial injection training is provided by outpatient pharmacists and prescribing and monitoring during the stabilisation period is the responsibility of the rheumatology pharmacy team.

Objectives: The primary aim of this audit was to compare patient satisfaction between these two different routes of injection training and prescription provision. Additionally, the time it took for a patient to receive their first dose following a decision to start treatment, was also compared.

Methods: Patients were identified from databases held within the department, contacted retrospectively via telephone and asked to complete a short questionnaire. Clinic letters and the homecare company provided dates of treatment decision and initiation.

Results: 40 patients were contacted, 20 had received treatment via outpatient pharmacy and 20 via homecare.

Table 1. Patient reported satisfaction following receipt of injection training and prescription provision via outpatient pharmacy and homecare

| | Outpatient Pharmacy (20) | | | Homecare (20) | | |
|--|--------------------------|-----------|----------------|---------------|-----------|----------------|
| | Not satisfied | Satisfied | Very satisfied | Not satisfied | Satisfied | Very satisfied |
| Time taken to start treatment | 2 | 5 | 13 | 2 | 6 | 12 |
| Injection training | 0 | 4 | 16 | 3 | 5 | 12 |
| Method for delivery of injection training and initial prescription | 1 | 8 | 11 | 3 | 4 | 13 |
| Process of receiving repeat prescriptions | 1 | 4 | 15 | 1 | 3 | 16 |

The mean time taken to start treatment was 30 days in the homecare group and 13 days in the outpatient group. 7 patients (35%) within the outpatient group started treatment within 7 days. The shortest time within the homecare group was 15 days (3 patients).

Conclusion: Reported patient satisfaction between the two routes of treatment provision was similar. Patients commenced treatment significantly quicker via outpatient pharmacy, reporting a high degree of satisfaction with the injection training provided by outpatient pharmacists. This audit has confirmed that shared care provision of methotrexate initially via outpatient pharmacy is a safe, efficient and viable option.

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HPR Professional education, training and competencies

AB1563-HPR TRAINING AND ASSESSMENT OF MUSCULOSKELETAL ULTRASOUND AND INJECTION SKILLS - A SYSTEMATIC REVIEW

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Background: The importance of international harmonization regarding education of rheumatologists in musculoskeletal ultrasound (MSUS) and injection skills have been highlighted in several studies, including the need for standardized training programs containing competency-based education using validated assessment tools [1-2].

Objectives: To examine how residents are trained and assessed in MSUS, MSUS-guided and landmark-guided joint aspiration and injection. Additionally, to present the available assessment tools and examine their supporting validity evidence.

Methods: A systematic search of PubMed, Cochrane Library, and Embase was conducted in accordance with the PRISMA guidelines and studies published from January 1, 2000 to May 31, 2021 were included. Two independent reviewers performed the search and data extraction. The studies were evaluated using the Medical Education Research Quality Instrument (MERSQI).

Results: 9,884 articles were screened and 43 were included; 3 randomized studies, 21 pre- and post-test studies, 16 descriptive studies (Table 1), and 3 studies developing assessment tools. The studies used various theoretical training modalities e.g. lectures, anatomical quizzes, and e-learning. The practical training models varied from mannequins and cadavers to healthy volunteers and patients. Most studies used subjective "comfort level" as assessment, others used practical examination and/or theoretical examination. All training programs increased trainees' self-confidence, theoretical knowledge, and/or practical performance, however few used validated assessment tools to measure the effect. Only one study met the MERSQI high methodical quality cut-off score of 14.

Table 1. Description of included studies examining training of MSUS, MSUS-guided or landmark-guided joint aspiration and injection skills.

| Study characteristics | MSUS | MSUS-guided | Landmark-guided |
|-----------------------------|------|-------------|-----------------|
| No. of studies ^a | 14 | 3 | 23 |
| Study design | 0 | 0 | 3 |
| Randomized | 2 | 2 | 17 |
| Pre- and post-test | 12 | 1 | 3 |
| Descriptive | | | |
| Participants ^b | 408 | 38 | 1388 |
| Residents | 1 | - | 8 |
| Experts | | | 149 |
| Medical students | | | 47 |
| Others | | | |
| Assessment ^c | 7 | 1 | - |
| Objective | - | - | 2 |
| Practical | 2 | 1 | 13 |
| Theoretical | 5 | 1 | 8 |
| Subjective | | | |
| Questionnaire | | | |
| Mixed | | | |
| MERSQI ^d | 9.2 | 7.5 | 8.9 |
| Mean score | | | |

Legend: ^a Studies developing assessment tools are not included in this table. ^b Accumulated number of participants enrolled in the studies. ^c Number of studies. ^d Mean score using the Medical Education Research Study Quality Instrument, maximum score = 18.

Conclusion: The included studies were heterogeneous, and most were of poor methodological quality and not based on contemporary educational theories. This review highlights the need for educational studies using validated theoretical and practical assessment tools to ensure optimal MSUS training and assessment in rheumatology.

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AB1564-HPR ULTRASOUND EXAMINATION AND INTRA-ARTICULAR INJECTIONS BY A RHEUMATOLOGY NURSE SPECIALIST.

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Background: At The Department of Medicine, section of Rheumatology, Odense University Hospital (OUH) Svendborg, we consult patients with rheumatoid arthritis, psoriatic arthritis and gout. The patients can have joint inflammation. Therefore need joint assessment by ultrasound, arthrocentesis and / or IA injection. Ultrasound examination, arthrocentesis and administration of intra-articular (IA) injections for rheumatic disease represent an expansion of the nurse's role.