

## Additional file II Development of the systematic podiatry protocol

The protocol is based on a Dutch explanation of podiatric reporting according to the steps of methodical action. The Dutch explanation of podiatric reporting has been written by The Dutch Association of Podiatrists (NVvP). It describes the steps taken to report on foot problems. However, this is not a guideline or treatment protocol. It is not based on the best available evidence and it is not specific to rheumatic foot problems.

Several steps were taken to develop the clinical guidance protocol for podiatrists in the management of foot problems in rheumatic disorders. The Medical Research Council (MRC) framework of developing a complex intervention were used (1). See also Figure 1a.

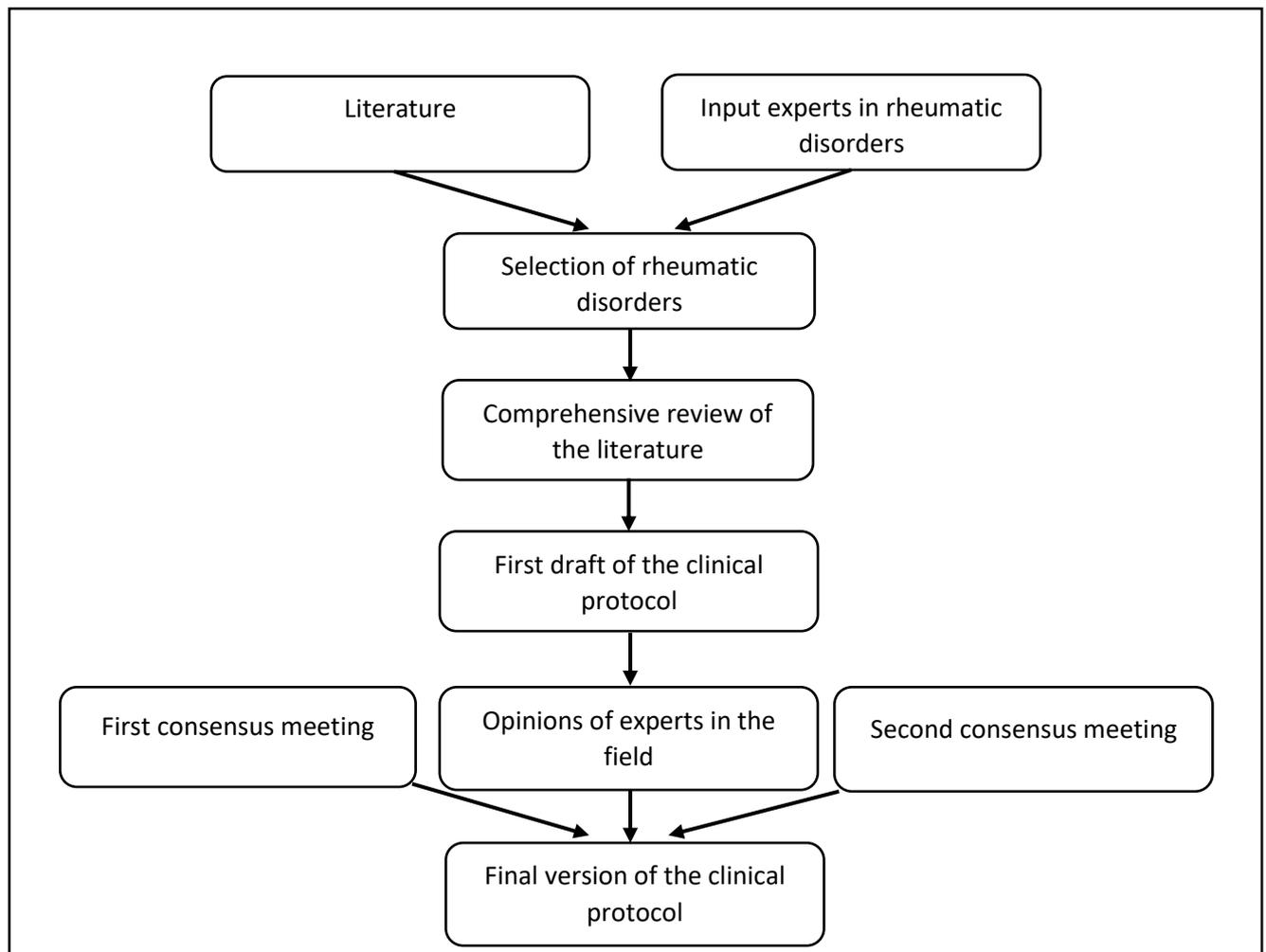


Figure 1a Development of the systematic podiatry protocol in the management of foot problems in rheumatic disorders.

First, a selection of rheumatic disorders was made based on previous work (2), literature and opinion of experts in the field of rheumatology. The following rheumatic disorders were selected: rheumatoid arthritis (RA), spondyloarthritis (SpA), (pseudo)gout and osteoarthritis (OA). Second, a systematic literature search was conducted in order to identify diagnostic categories of foot problems in rheumatic disorders. Third, a preliminary version of the protocol was developed based on the first two steps, consultation of international guidelines for foot health (3, 4) and podiatry books (5-7). Fourth, the preliminary version of the protocol was discussed in a consensus meeting. Also, individual experts in the field were asked their opinion of the protocol. The experts had extensive experience in the field of foot problems, rheumatology or both. After optimizing the protocol, a second consensus meeting was held with podiatrists for the collection of feedback and to gain consensus on the protocol. Resulting in a clinical guidance protocol for podiatrists. The care provided is not new however, the protocol systematically guides podiatrists in the use of the multidisciplinary recommendations (2).

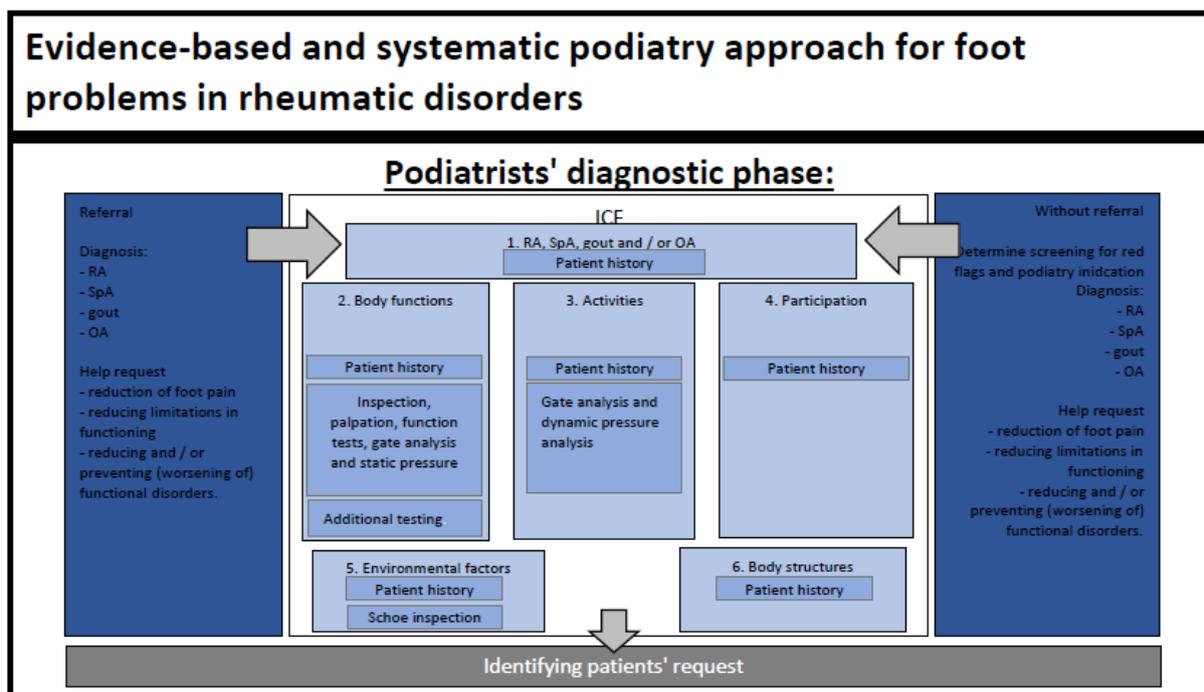
There are many factors associated with foot problems in these four rheumatic disorders. A classification of those factors is currently not possible of several reasons. Firstly, rheumatic foot problems show a variety of symptoms. Secondly, the severity of rheumatic foot problems differs per patient. Thirdly, evidence for causal relationships between factors and rheumatic foot problems is lacking. Therefore, an indication matrix (see also Table 1) was developed of four rheumatic disorders and six diagnostic categories of rheumatic foot problems, instead of a classification.

*Table 1 Indication matrix of four rheumatic disorders (rheumatoid arthritis (RA), Spondyloarthritis (SpA), gout and osteoarthritis (OA)) and six diagnostic categories. One cell in the table is marked black because no evidence had been found in the literature that dermatological abnormalities occur in osteoarthritis.*

Rheumatic disorder	Diagnostic categories					
	Active inflammation of foot structures	Abnormal foot position and foot function pathologies	Dermatological pathologies	Peripheral neurovascular pathologies	Inadequate shoes	Different expectations about the treatment
RA						
SpA						
Gout						
OA						

The indication matrix has been used to shape the process of management (history taking, physical examination, treatment and evaluation). A full version of the protocol can be found in Figure 1b.

Figure 1b Full version of the systematic podiatry approach for foot problems in rheumatic disorders



**Podiatrists' diagnostic evaluation**

Establishing treatment goals and treatment strategy

**Podiatrists' treatment phase:**

	Advice and education	Treatment	Referral
<p>ICF RA, SpA, gout and / or OA</p> <p><u>Active inflammation of foot structures</u></p>	<p>General lifestyle advice</p> <p>Shoe advice</p>	<p>Preliminary therapy</p> <p>Silicon toe orthoses</p> <p>Foot orthoses</p>	<p>Local drug treatment</p> <p>Systemic drug treatment</p>
<p>ICF Body functions</p> <p><u>Abnormal foot shape and foot function pathologies</u> (deviant shape, pressure and gait characteristics) as a result of: - foot deformities - deviations of foot posture - foot symptoms</p>	<p>General lifestyle advice</p> <p>Shoe advice</p>	<p>Instrumentele</p> <p>Preliminary therapy</p> <p>Silicon toe orthoses</p> <p>Foot orthoses</p> <p>Exercise therapy</p>	<p>Exercise therapy</p> <p>Orthopedic device for ready to wear footwear</p> <p>Semi-orthopedic footwear</p> <p>Orthopedic footwear</p> <p>Foot surgery</p>
<p>ICF Body functions</p> <p><u>Dermatological pathologies</u> - Nail defect(s) - Skin and nail infections - Excessive callus formation / corns - Wounds</p>	<p>Foot care advice</p> <p>Pedicure advice</p> <p>Shoe advice</p>	<p>Instrumental treatment</p> <p>Wondbehandeling</p> <p>Preliminary therapy</p> <p>Silicon toe orthoses</p> <p>Foot orthoses</p>	<p>Verruca treatment</p> <p>Local or systemic treatment of infection(s)</p> <p>Multidisciplinary wound treatment</p>
<p>ICF Body functions</p> <p><u>Peripheral neurovascular pathologies</u></p>	<p>General lifestyle advice</p> <p>Foot care advice</p> <p>Pedicure advice</p> <p>Shoe advice</p> <p>Advice on checking the</p>	<p>Screening</p> <p>Foot orthoses</p>	<p>Diagnostics and treatment of edema</p> <p>Diagnosis and treatment of vasculitis / arteritis</p> <p>Diagnosis and treatment of neuropathy</p> <p>Diagnosis and treatment of peripheral arterial</p> <p>Orthopedic device for ready to wear footwear</p> <p>Semi-orthopedic shoes</p> <p>Orthopedic shoes</p>
<p>ICF Environmental factors</p> <p><u>Inadequate shoes</u></p>	<p>Shoe advice</p>		
<p>ICF Body structures</p> <p><u>Different expectations about the treatment</u></p>	<p>Education about podiatry</p>		<p>Referral to the attending physician</p>

Reducing pain, limitations in functioning and / or preventing (worsening of) functional disorders

Evaluate and adjust treatment strategy

## References

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