

# Romanian Questionnaire to Assess the Prevalence of Occupational Hand Eczema among Healthcare Providers

Anca E. Chiriac<sup>1</sup>, Doina Azoicai<sup>2</sup>, Anca Chiriac<sup>3,4,5</sup>, Adrian Naznean<sup>6</sup>, Francesca Larese Filon<sup>7</sup>, Simona Roxana Georgescu<sup>8</sup>, Liliana Foia<sup>9</sup>, Cristian Podoleanu<sup>10</sup>, Simona Stolnicu<sup>11</sup>

<sup>1</sup> "Grigore T. Popa" University of Medicine and Pharmacy, Iași, Romania

<sup>2</sup> Department of Epidemiology, "Grigore T. Popa" University of Medicine and Pharmacy, Iași, Romania

<sup>3</sup> Nicolina Medical Center, Department of Dermatology, Iași, Romania

<sup>4</sup> Apollonia University, Iași, Romania

<sup>5</sup> "Petru Poni" Research Institute, Romanian Academy, Iași, Romania

<sup>6</sup> Department of Foreign Languages, University of Medicine and Pharmacy, Tîrgu Mureș, Romania

<sup>7</sup> Unit of Occupational Medicine, University of Trieste, Italy

<sup>8</sup> Department of Dermatology, "Carol Davila" University of Medicine and Pharmacy, Bucharest, Romania

<sup>9</sup> Department of Biochemistry, "Grigore T. Popa" University of Medicine and Pharmacy, Iași, Romania

<sup>10</sup> Department of Internal Medicine IV, University of Medicine and Pharmacy, Tîrgu Mureș, Romania

<sup>11</sup> Department of Pathology, University of Medicine and Pharmacy, Tîrgu Mureș, Romania

## CORRESPONDENCE

### Cristian Podoleanu

Str. Gheorghe Marinescu nr. 1  
540139 Tîrgu Mureș, Romania  
Tel: +40 265 215 133  
E-mail: podoleanu@me.com

## ARTICLE HISTORY

Received: 28 October, 2016  
Accepted: 10 November, 2016

**Anca E. Chiriac** • Str. Universității nr. 16, 700115 Iași, Romania. Tel: +40 232 267 801

**Doina Azoicai** • Str. Universității nr. 16, 700115 Iași, Romania. Tel: +40 232 267 801

**Anca Chiriac** • Str. Muzicii nr. 2, 700399 Iași, Romania. Tel: +40 232 210 310

**Adrian Naznean** • Str. Gheorghe Marinescu nr. 38, 540139 Tîrgu Mureș, Romania. Tel: +40 265 215 551

**Francesca Larese Filon** • Piazzale Europa nr. 1, 34128 Trieste, Italy. Tel: +39 040 558 7111

**Simona Roxana Georgescu** • Bul. Eroii Sanitari nr. 8, 050474 București, Romania. Tel: +40 213 180 719

**Liliana Foia** • Str. Universității nr. 16, 700115 Iași, Romania. Tel: +40 232 267 801

**Simona Stolnicu** • Str. Gheorghe Marinescu nr. 38, 540139 Tîrgu Mureș, Romania. Tel: +40 265 215 551

## ABSTRACT

Occupational skin diseases have an unknown prevalence in Romania, although they are considered the most frequent occupational diseases reported in Western European countries. Self-reported hand eczema among healthcare providers by questionnaire aims to estimate the prevalence of work-related hand eczema and associated risk factors in hospitals and out-patient units in Romania. The aim of this study is to discuss and to validate a questionnaire for surveying work-related skin diseases and exposure among healthcare providers.

**Keywords:** hand eczema, healthcare professionals, questionnaire

Occupational skin diseases should be a priority for public health because they represent up to 30% of occupational diseases.<sup>1</sup> The recognition of occupational skin diseases is important for improving prevention and patient management, as their economic and social impact on each individual and the society is significant. Occupational hand eczema among healthcare providers has a great impact on their quality of life and, consequently, on their professional activity.

The purpose of this study is to develop a standardized questionnaire that can be used as a tool for self-reporting, diagnosing and monitoring the prevalence of hand dermatitis among healthcare providers in Romania.

**QUESTIONNAIRE**

Year of birth: \_\_\_\_\_ Gender: ☐ M ☐ F

Hospital ☐ Outpatient Unit ☐

Workplace: \_\_\_\_\_ Department: \_\_\_\_\_

What is your current occupation? \_\_\_\_\_

What is your major activity at work? \_\_\_\_\_

When did you start it? \_\_\_\_\_

Nurse ☐ Healthcare provider ☐  
Physician ☐ Other ☐

Do you have other medical problems?  
☐ No ☐ Yes \_\_\_\_\_

Have you ever suffered from hand eczema?  
☐ Yes ☐ No

Has it been diagnosed by a physician (general practitioner, dermatologist, allergologist)?  
☐ Yes ☐ No

When did you last have eczema on your hands?  
☐ Have it currently ☐ Within the past 3 months but not at present  
☐ Within the last 6 months ☐ More than 12 months ago

Have you received medication for hand eczema?  
☐ No ☐ I do not remember  
☐ Yes, in the past \_\_\_\_\_  
☐ Yes, I am currently under medication \_\_\_\_\_

Have you observed itchy rashes or other skin lesions at the workplace after contact with specific substances?  
☐ Yes ☐ No ☐ I do not know  
Please mention the type and name of incriminated substances: \_\_\_\_\_

Have you observed itchy rashes or other skin lesions during holidays/weekends?  
☐ Yes ☐ Yes, sometimes ☐ No ☐ I do not know

Have skin problems affected your daily activities in your occupation?  
☐ No ☐ Sometimes ☐ Often  
☐ Yes ☐ Rarely ☐ I do not know

Did you ever have skin problems during childhood?  
☐ Yes ☐ No ☐ I do not know

Do you use protective gloves at work, in general?  
☐ No ☐ Natural latex ☐ Rubber latex  
☐ Polyethylene ☐ Vinyl ☐ Cotton  
☐ Nitrile ☐ Neoprene ☐ Others: \_\_\_\_\_

Do you use protective gloves daily?  
☐ Yes ☐ No

How often do you change your protective gloves? How many pairs do you use per working day?  
\_\_\_\_\_  
\_\_\_\_\_

How many hours per week do you work in your main job (on average)?  
\_\_\_\_\_  
\_\_\_\_\_

How many times do you wash your hands at work?  
☐ 0-5 times ☐ 6-10 times ☐ 11-20 times ☐ > 20 times

How long do you work in wet environment per day?  
☐ < 30 minutes ☐ 30 minutes - 2 hours ☐ > 2 hours

Have you ever had symptoms of nasal allergy, asthma or other allergic problems (itchy wheals, pruritus)?  
☐ Yes ☐ No Please mention: \_\_\_\_\_

Were the allergies diagnosed by a specialist?  
☐ Yes ☐ No Please give details: \_\_\_\_\_

Has anyone in your family been diagnosed with an allergy?  
☐ No ☐ I do not know ☐ Yes \_\_\_\_\_

Do you smoke? For how long and how many cigarettes/day?  
☐ No ☐ Yes \_\_\_\_\_

Please describe what you see when you have hand eczema and grade the severity from 0 to 5

	Tip of the digits	Digits	Palms	Dorsal aspect of the hand	Wrist
Erythema					
Discoloration					
Papules					
Vesicles					
Edema					
Fissures					
Pruritus/Pain					

**FIGURE 1.** The proposed self-reported questionnaire

The questionnaire was compiled after a validated Italian work-related questionnaire, which was translated to Romanian, and its target group is represented by healthcare professionals from different medical fields. It is a type of self-report of hand eczema/dermatitis to estimate the prevalence of the disease in the target group. The questionnaire is simple, short (three pages), easy to understand and to complete, it requires “yes” or “no” answers to specific questions, it is anonymous and focused on the clinical aspects related to direct work exposure (Figure 1). Details regarding contact with work-related aggravating factors are also assessed: contact with chemical agents (detergents, disinfectants, soap, liquid soap, shampoo, and other personal hygiene products or skin cleansers), use of latex or other types of gloves (plastic, cotton, natural or synthetic rubber). Other relevant exposures, such as the frequency of hand washing, are also surveyed. The medical history of the surveyed employees is also relevant based on the atopic or allergic background of each individual, the presence of comorbidities, chronic treatments or other exposures such as UV radiation.<sup>2-4</sup>

Based on the results of the study, early dermatological interventions and specific education regarding personal skin protection can be initiated. Moreover, the study will enable the quantification of allergens and/or irritant agents and their confirmation by patch testing.

Screening for predisposing factors (especially atopic or genetic predisposition) can be evaluated, and in case of susceptible individuals career counseling and targeted prevention strategies can be provided.

The questionnaire allows the identification of subjects who are susceptible to develop occupational skin diseases,

the recognition of work-related risk factors, and it should represent the first step in the elaboration of preventive measures concerning specific occupations and risk profiles.

Underestimation of the prevalence of occupational hand eczema can be expected from self-reporting due to numerous factors: lack of understanding of all questions, fear to provide honest answers that can affect daily activity, unwillingness to acknowledge the existence of symptoms, lack of compliance or knowledge.

This is the first self-reported questionnaire in Romania that tries to estimate the prevalence of irritant and allergic contact dermatitis of the hands among employees in the specific sector of healthcare services.

## ACKNOWLEDGEMENT

The authors are grateful for networking support from the COST Action TD1206 “StanDerm”.

## REFERENCES

- Occupational skin diseases and dermal exposure in the European Union (EU-25): policy and practice overview. Available online from: [https://osha.europa.eu/en/tools-and-publications/publications/reports/TE7007049ENC\\_skin\\_diseases](https://osha.europa.eu/en/tools-and-publications/publications/reports/TE7007049ENC_skin_diseases)
- Susitaival P, Flyvholm MA, Meding B, et al. Nordic Occupational Skin Questionnaire (NOSQ-2002): a new tool for surveying occupational skin diseases and exposure. *Contact Dermatitis*. 2003;49:70-76.
- Carlsson A, Ganemo A, Anderson CD, Meding B, Stenberg B, Svensson A. Scoring of hand eczema: good agreement between patients and dermatological staff. *Br J Dermatol*. 2011;165:123-128.
- Pesonen M, Jolanki R, Larese-Filon F, et al. Patch test results of the European baseline series among patients with occupational contact dermatitis across Europe – analyses of the European Surveillance System on Contact Allergy network, 2002-2010. *Contact Dermatitis*. 2015;72:154-163