

Title: Maskne - dermatosis of pandemic. A survey on impact of PPE on facial skin among HCW and N-HCW in Poland.

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Supplementary Figures

Fig. S1 Percentage distribution of most popular PPE among HCW and N-HCW.

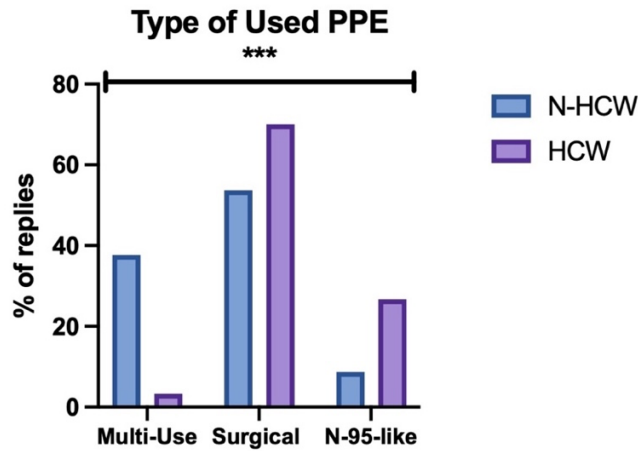


Fig. S2 Reusing a disposable surgical mask by HCW and N-HCW.



Fig. S3 Touching face while wearing PPE. HCW less frequently admitted to touching their face than N-HCW.

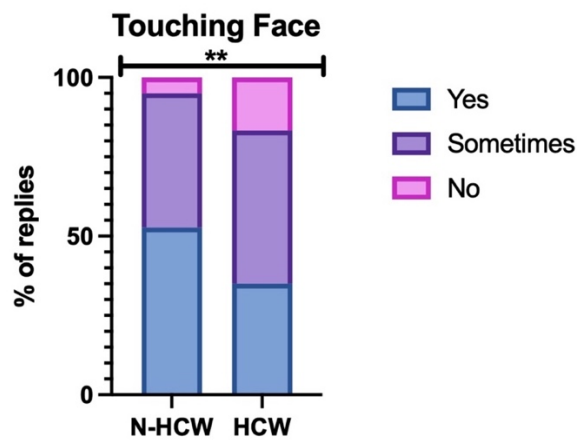


Fig. S4 Obeying the rules when putting on and removing the PPE

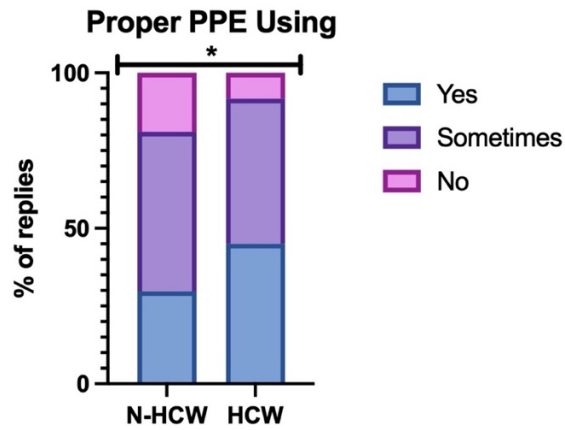
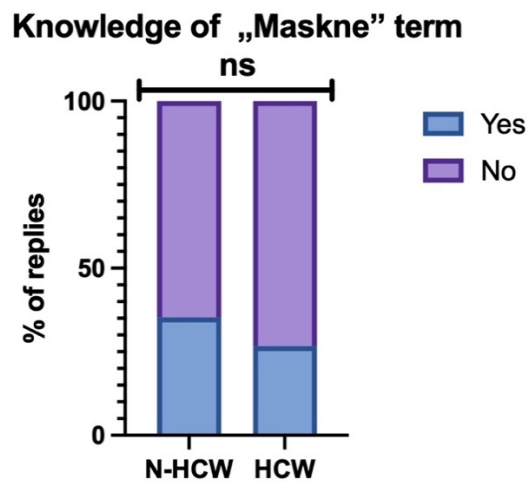


Fig. S5 There was no difference between studied groups in knowledge of the term maskne.



Supplementary Table

Table S1. Factors that correlated with developing maskne.

Parameter	Non-HCW		HCW	
	R Value	P Value	R Value	P Value
Age Group	-0.0955	ns	0.00792	Ns
Sex	-0.373	<0.0001	-0.103	ns
Presence of Skin Disease	0.211	0.0002	0.423	0.0008

Using the Dermatology Care Before the Pandemic	0.127	0.0279	0.264	0.0415
Treatment Compliance with Dermatologist	0.111	0.0559	0.269	0.0422
Face Disease Severity After Pandemic	0.737	<0.0001	0.631	<0.0001
Topical/Systemic Treatment	0.148	0.0104	0.245	0.0595
Visiting Dermatologist Due to the Pandemic	0.114	0.0492	0.202	Ns
Changing Diet Habits During the Pandemic	-0.0621	Ns	-0.125	Ns
Presence of Chronic Diseases	0.0907	Ns	0.228	0.0802
Type of Used PPE During the Pandemic	0.0689	Ns	0.0932	Ns
Reusing of Single-Used PPE	0.159	0.0437	-0.202	Ns
Disinfecting PPE After Every Single Use	0.221	Ns	0.17	Ns
Overall Time with Worn PPE	0.173	0.0026	0.211	0.098
Wearing Make-up when using PPE	0.156	0.0069	0.108	Ns
Touching Face and/or PPE While Wearing	-0.122	0.0346	-0.313	0.0147
Sanitizing Hands Before/After Touching PPE	-0.0893	Ns	-0.0584	Ns
Removing PPE Accordingly to the Sanitary Rules	-0.0013	Ns	-0.116	Ns
Presence of Face Skin Issues After Wearing PPE	0.372	<0.0001	0.265	0.0405
Knowledge of the Maskne Term	0.176	0.0022	0.0858	Ns
Presence of Skin Care Routine	0.296	<0.0001	0.165	ns

Questionnaire

The impact of personal protective equipment on the condition of the facial skin

The SARS-CoV-2 pandemic meant that wearing masks ceased to be associated only with medical personnel. With the passage of time and the increase in morbidity, there has been an obligation to cover the mouth and nose area in public spaces, and many types of personal protective equipment have appeared on the market.

Completing the questionnaire will allow you to answer the questions which personal protective equipment will protect us from infection, and at the same time will not deteriorate the appearance of the facial skin, and whether and how the formation of skin lesions can be minimized while wearing them.

The questionnaire was developed as part of the activities of the Student Scientific Society at the Clinic of Dermatology and Venereology at the Medical University of Białystok by Izabela Malczyńska and Gabriela Krych - 4th year students of medicine, under the supervision of dr hab. Anna Baran. It is completely anonymous and participation is voluntary. Completing the questionnaire is tantamount to consent to participate in the study. The survey results will be used only for collective scientific studies.

*Wymagane

1. I declare that I am over 18 years of age and agree to participate in an anonymous survey regarding the study "The impact of personal protective equipment on the condition of facial skin". Completing the survey can be stopped at any time without any consequences. *

Zaznacz tylko jedną odpowiedź.

Yes, I declare. [Przejdź do pytania 2](#)

General data

2. Gender *

Zaznacz tylko jedną odpowiedź.

Female
 Male
 Prefer not to say

3. Age *

Zaznacz tylko jedną odpowiedź.

- 18-24 years old
- 25-35 years old
- 36-50 years old
- >50 years old

4. City size *

Zaznacz tylko jedną odpowiedź.

- village
- city up to 50,000 residents
- city of 50,000 - 150,000 residents
- city of 150,000 - 500,000 residents
- city of more than 500,000 residents

5. Working sector *

Zaznacz tylko jedną odpowiedź.

- Health care
- Office work
- Uniformed services
- Commerce
- Education
- Agriculture
- Unemployed
- Student

Disease data

6. 1. What skin disease do you have? *

Zaznacz tylko jedną odpowiedź.

- Atopic dermatitis
- Rosacea
- Acne vulgaris
- Seborrheic dermatitis
- Psoriasis
- I don't have any skin disease

7. 2. Were you under the care of a dermatologist before the pandemic? *

Zaznacz tylko jedną odpowiedź.

- Yes *Przejdź do pytania 8*
- No *Przejdź do pytania 12*

8. 2.1 If you suffer from the above-mentioned skin disease, have you treated as prescribed by your dermatologist? *

Zaznacz tylko jedną odpowiedź.

- Yes
- A bit
- No

9. 2.2 What treatment was given? *

Zaznacz wszystkie właściwe odpowiedzi.

- Topical
- General

10. 2.3 If you remember the names of the drugs, please enter them below:

11. 2.4 Have you used skin care as recommended by a dermatologist? *

Zaznacz tylko jedną odpowiedź.

- Yes
- Sometimes
- No
- I don't remember
- I didn't have any

12. 3. Did you have any of the following facial symptoms prior to the pandemic? *

Zaznacz wszystkie właściwe odpowiedzi.

- Redness
- Itching
- Increased dryness
- Oily skin
- Increased exfoliation
- Increased sweating
- Blackheads
- Purulent lesions
- Loss of skin continuity (cracks, wounds)
- Telangiectasia
- None

13. 4. Did you have any of the following symptoms prior to the pandemic period, especially around your mouth, nose, and cheeks? *

Zaznacz wszystkie właściwe odpowiedzi.

- Redness
- Itching
- Increased dryness
- Oily skin
- Increased exfoliation
- Increased sweating
- Blackheads
- Purulent lesions
- Loss of skin continuity (cracks, wounds)
- Telangiectasia
- None

14. 5. Did you have any of the following symptoms all over the skin of your face during the pandemic? (Select Multiple): *

Zaznacz wszystkie właściwe odpowiedzi.

- Redness
- Itching
- Increased dryness
- Oily skin
- Increased exfoliation
- Increased sweating
- Blackheads
- Purulent lesions
- Loss of skin continuity (cracks, wounds)
- Telangiectasia
- None

15. 6. Did you have any of the following symptoms during the pandemic, especially around the mouth, nose, and cheeks? *

Zaznacz wszystkie właściwe odpowiedzi.

- Redness
- Itching
- Increased dryness
- Oily skin
- Increased exfoliation
- Increased sweating
- Blackheads
- Purulent lesions
- Loss of skin continuity (cracks, wounds)
- Telangiectasia
- None

16. 7. Did you visit a dermatologist during the pandemic due to the changes mentioned in questions 5 and 6? *

Zaznacz tylko jedną odpowiedź.

- Yes *Przejdź do pytania 17*
- No *Przejdź do pytania 21*
- I didn't have any changes *Przejdź do pytania 21*

17. 7.1 If so, has any treatment been given? *

Zaznacz tylko jedną odpowiedź.

- Yes *Przejdź do pytania 18*
- No *Przejdź do pytania 21*

18. If so, what was the treatment? *

Zaznacz wszystkie właściwe odpowiedzi.

- Topical
- General
- Skin care recommendations

19. If you remember the names of the drugs, please enter them below:

20. Was the treatment effective? *

Zaznacz tylko jedną odpowiedź.

- Yes
- Yes, but the changes have come back
- No

21. Did you change your diet during the pandemic? *

Zaznacz tylko jedną odpowiedź.

- Yes
- No

22. Do you suffer from other chronic diseases? *

Zaznacz tylko jedną odpowiedź.

- Yes *Przejdź do pytania 23*
- No *Przejdź do pytania 25*

23. 9.1 If so, are you receiving any treatment for this? *

Zaznacz tylko jedną odpowiedź.

- Yes *Przejdź do pytania 24*
- No *Przejdź do pytania 25*

24. 9.2 If so, have you changed your treatment regimen during the pandemic period? (e.g. altered therapy, different medications) *

Zaznacz tylko jedną odpowiedź.

- Yes
- No

Data on personal protective equipment

25. 10. What kind of personal protective equipment do you most often use? *

Zaznacz tylko jedną odpowiedź.

- Reusable mask *Przejdź do pytania 26*
- Disposable surgical mask *Przejdź do pytania 28*
- FFP2 / FFP3 / N95 mask without valve *Przejdź do pytania 29*
- FFP2 / FFP3 / N95 mask with valve *Przejdź do pytania 31*
- Face shield *Przejdź do pytania 33*
- Face shield + mask *Przejdź do pytania 36*
- Half-shield *Przejdź do pytania 47*
- Scarf *Przejdź do pytania 51*

26. If you used a reusable mask, was it washed after each use? *

Zaznacz tylko jedną odpowiedź.

- Yes *Przejdź do pytania 52*
- No *Przejdź do pytania 27*
- Never *Przejdź do pytania 52*

27. If not, after how long was it washed? *

Przejdź do pytania 52

28. Have you ever used a single-use mask many times? *

Zaznacz tylko jedną odpowiedź.

- Yes
- No
- Sometimes

Przejdź do pytania 52

29. Have you ever used the FFP2 / FFP3 / N95 mask without a valve many times? *

Zaznacz tylko jedną odpowiedź.

- Yes *Przejdź do pytania 30*
- No *Przejdź do pytania 52*
- Sometimes *Przejdź do pytania 30*

30. Have you scalded / disinfected the mask after each use? *

Zaznacz tylko jedną odpowiedź.

- Yes
- No
- I have not heard of such a possibility

Przejdź do pytania 52

31. Have you ever used the FFP2 / FFP3 / N95 mask with a valve many times? *

Zaznacz tylko jedną odpowiedź.

- Yes *Przejdź do pytania 32*
- No *Przejdź do pytania 52*
- Sometimes *Przejdź do pytania 32*

32. Have you scalded / disinfected the mask after each use? *

Zaznacz tylko jedną odpowiedź.

- Yes
- No
- I have not heard of such a possibility

Przejdź do pytania 52

33. What kind of material is the headband made of? *

Zaznacz tylko jedną odpowiedź.

- Felt
- Faux leather
- PET

34. Do you disinfect the helmet? *

Zaznacz tylko jedną odpowiedź.

- Yes *Przejdź do pytania 35*
- No *Przejdź do pytania 52*
- Sometimes *Przejdź do pytania 35*

35. How often do you disinfect the face shield? *

Zaznacz tylko jedną odpowiedź.

- more often than every 1 hour
- every 1-4 h
- every 5-8 h
- after a day
- I don't

Przejdź do pytania 52

36. What kind of material is the headband made of? *

Zaznacz tylko jedną odpowiedź.

- Felt
- Faux leather
- PET

37. Do you disinfect the face shield? *

Zaznacz tylko jedną odpowiedź.

- Yes
- No
- Sometimes

38. If so, how often do you disinfect the face shield? *

Zaznacz tylko jedną odpowiedź.

- more than once an hour
- every 1-4 h
- every 5-8 h
- after a day
- I don't

39. What kind of mask did you wear with the face shield? *

Zaznacz tylko jedną odpowiedź.

- reusable mask *Przejdź do pytania 40*
- disposable mask *Przejdź do pytania 42*
- FFP2 / FFP3 / N95 mask without valve *Przejdź do pytania 43*
- FFP2 / FFP3 / N95 mask with valve *Przejdź do pytania 45*

40. If you used a reusable mask, was it washed after each use? *

Zaznacz tylko jedną odpowiedź.

Yes

No

41. If not, after how long was it washed? *

Przejdź do pytania 52

42. Have you ever worn a disposable surgical mask many times? *

Zaznacz tylko jedną odpowiedź.

Yes

No

Sometimes

Przejdź do pytania 52

43. Have you ever used the FFP2 / FFP3 / N95 mask without a valve many times? *

Zaznacz tylko jedną odpowiedź.

Yes *Przejdź do pytania 44*

No *Przejdź do pytania 52*

Sometimes *Przejdź do pytania 44*

44. Have you scalded / disinfected the mask after each use? *

Zaznacz tylko jedną odpowiedź.

Yes

No

I have not heard of such a possibility

Przejdź do pytania 52

45. Have you ever used the FFP2 / FFP3 / N95 mask with a valve many times? *

Zaznacz tylko jedną odpowiedź.

- Yes *Przejdź do pytania 46*
- No *Przejdź do pytania 52*
- Sometimes *Przejdź do pytania 46*

46. Have you scalded / disinfected the mask after each use? *

Zaznacz tylko jedną odpowiedź.

- Yes
- No
- I have not heard of such a possibility

Przejdź do pytania 52

47. What type of half-shield do you most often use? *

Zaznacz tylko jedną odpowiedź.



open towards the nose

open towards the chin

48. What kind of material is the headband holding the half-shield made of? *

Zaznacz tylko jedną odpowiedź.

- Felt
- Faux leather
- PET

49. Do you disinfect the half-shield? *

Zaznacz tylko jedną odpowiedź.

- Yes *Przejdź do pytania 50*
- No *Przejdź do pytania 52*
- Sometimes *Przejdź do pytania 50*

50. If so, how often do you disinfect the face shield? *

Zaznacz tylko jedną odpowiedź.

- more often than every 1 hour
- every 1-4 h
- every 5-8 h
- after a day
- I don't

Przejdź do pytania 52

51. What type of material is the neck warmer / scarf made of? *

Zaznacz tylko jedną odpowiedź.

- Cotton
- Polyester
- Silk

52. How much time a day do you spend wearing personal protective equipment? *

Zaznacz tylko jedną odpowiedź.

- up to 1 h
- 1-4 h
- 5-8 h
- more than 8 h

53. Do you wear makeup while wearing PPE? *

Zaznacz tylko jedną odpowiedź.

- Yes
- No

54. When wearing personal protective equipment, have you ever touched the skin of your face and the protective equipment you are wearing with your hands, e.g. to correct its position? *

Zaznacz tylko jedną odpowiedź.

- Yes *Przejdź do pytania 55*
- Sometimes *Przejdź do pytania 55*
- No *Przejdź do pytania 56*
- I don't remember *Przejdź do pytania 56*

55. Did you disinfect your hands before and after touching the protective equipment and the skin of your face? *

Zaznacz tylko jedną odpowiedź.

- Yes
- No
- Sometimes
- I don't remember

56. Have personal protective equipment been put on and taken off in accordance with sanitary rules, i.e. washing and disinfecting hands before putting on / taking off and after putting on / taking off, holding the mask by the strings / rubber bands while putting it on / taking off? *

Zaznacz tylko jedną odpowiedź.

- Yes
- No
- Not always

57. When wearing personal protective equipment, do you feel: *

Zaznacz wszystkie właściwe odpowiedzi.

- Increased more than usual moisture of the face
- Friction
- Increased warmth / redness of the face than usual
- Increased sweating of the face than usual
- Irritation
- Itching
- Pain
- Increased seborrhea

58. Do you know what "maskne" is? *

Zaznacz tylko jedną odpowiedź.

- Yes, I experienced it myself
- Yes, but I have never experienced it
- I do not know what is it

Daily hygiene data

59. Do you brush your teeth? *

Zaznacz tylko jedną odpowiedź.

- yes, morning and evening
- yes, few times a day
- yes, in the morning
- yes, in the evening
- no, I do not

60. What is your daily facial skin care like? *

Zaznacz wszystkie właściwe odpowiedzi.

- I wash my face once a day - in the morning
- I wash my face once a day - in the evening
- I wash my face twice a day
- I don't wash my face
- I do peeling 1-2 times a week
- I do peeling more than 2 times a week
- I don't do peels
- I shave my face 1-2 times a week
- I shave my face more than 2 times a week
- I don't shave my face
- I use creams containing retinol
- I use creams containing SPF
- I use moisturizing creams

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