

# Use of the NLR SkinApp

## 1. Purpose

This Standard Operating Procedure (SOP) describes the use of the [NLR SkinApp](#) to help in the screening, diagnosis and treatment of skin diseases.

## 2. Scope

This SOP applies to all aspects of an intervention that involves the use of the NLR SkinApp, such as in training of health workers as well as in support of diagnosing and managing skin diseases.

## 3. Target group

This SOP applies to health workers involved in screening, diagnosing and managing skin diseases.

## 4. Procedure

The NLR SkinApp is a mobile phone application which can help identify common, NTD- and HIV/AIDS-related skin diseases with which patients present at the peripheral health care level. It can be downloaded free of charge from the [Google Play Store](#) for Android smartphones and the [Apple Store](#) for iPhones. It is functional off-line, so after downloading the SkinApp, connection to internet is not needed when using it. It can be used as a supporting tool for diagnosis and as a source of information on signs and symptoms, the management of skin diseases and referral advice. A training module is available for health staff using the SkinApp.

### **Header menu**

In the header menu, symbols help you find the home page, disclaimer, contact information, and a search bar. More information on how to use the app can be found under the '?' symbol, on the top left of the screen (Figure 1).

### **Homepage**

When looking for the most likely (differential) diagnosis of your patient, you can either start by clicking on the '*Signs & symptoms*' button or on the '*Locations*' button on the SkinApp homepage. To get more information on diagnosis and management of skin diseases, click on the '*Diagnoses*' button (Figure 1).

### **Start with '*Locations*'**

Click the '*Locations*' button and then click on the body map to select one or more locations that correspond with the location of the skin condition on the body of the person you are screening (Figure 2). To see the back of the body map, press the button '*Rear view*'. You can also tick the box '*generalized*' if the skin signs have a generalized distribution (all over the body).

When all affected areas of the skin as you see them on your patient are highlighted on the body map, click '*next*'. In the next screen, the '*Signs & symptoms*' menu, select one or more signs and/or symptoms that correspond with the condition of your client (Figure 3). Click '*next*'. The most likely diagnoses can be found in the '*Diagnoses*' menu. Click on a diagnosis to get more information about the skin disease and the management options (Figure 4), or if the most likely diagnosis is not listed, click '*other*' to get general advice.

### **Start with '*Signs & symptoms*'**

Tap the '*Signs & symptoms*' button and select from the list one or more signs and/or symptoms (Figure 3). Click '*next*'. In the next screen, the '*Locations*' screen, click on the body map to select one

or more locations that correspond with the location of the skin condition on the body of your client. When all affected areas of the skin as you see them on your patient are highlighted on the body map, click *'next'*. The most likely diagnoses can be found in the *'Diagnoses'* menu. Click on a diagnosis, to get more information about the skin disease and the management options. If the most likely diagnosis is not listed, click *'other'* to get general advice.

### More information on diagnoses

Tap the *'Diagnoses'* button and select a disease (Figure 4). At the *'Images'* tab, swipe to the left to see more images of the disease. Select *'Diagnosis'* for more information on the diagnosis, including the signs and symptoms. Select *'Management'* for more information on treatment and/or referral. Select *'Follow up'* for more information on the next steps. You can tap the orange *'Feedback'* button to give feedback on the application.



Figure 1: Homepage and header menu

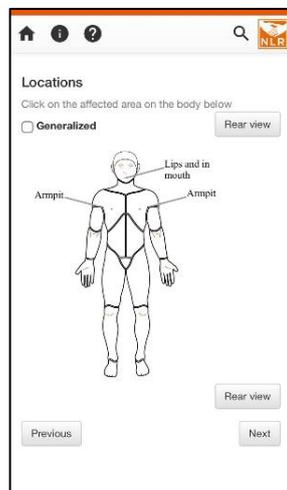


Figure 2: 'Locations' menu

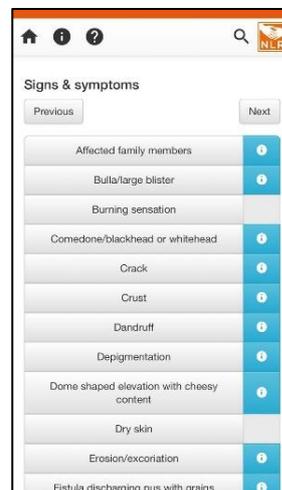


Figure 3: 'Signs & symptoms' menu

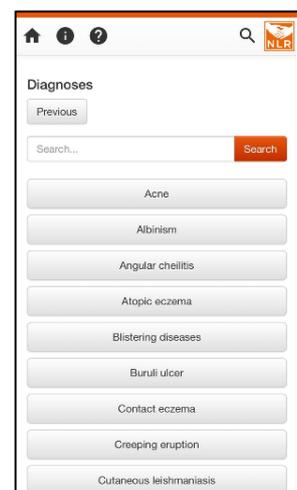


Figure 4: 'Diagnoses' menu

### Extra general information buttons

From the home screen, tap *'Glossary'* to find a definition of the dermatological signs/efflorescences (generally used clinical descriptions of skin disease symptoms, like: 'bullae: large blisters'). Tap the *'How to manage'* button to find more information on how to manage general skin problems (e.g. 'dry scaly skin'). At the *'Further reading'* button, links can be found which are referring to articles and websites for more in-depth information (Figure 5-7).

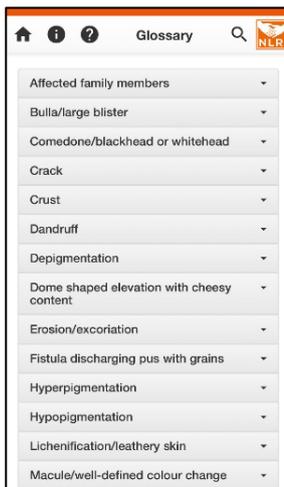


Figure 5: 'Glossary' menu

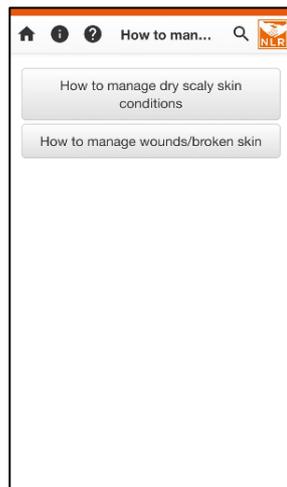


Figure 6: 'How to manage' menu

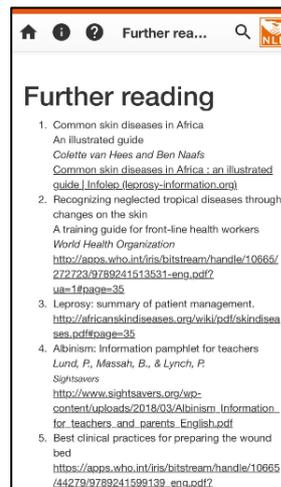


Figure 7: 'Further reading' menu

## 5. WHO Skin NTDs App

NLR's SkinApp has been integrated into the [WHO Skin NTDs App](#). The WHO app operates offline and is designed to assist frontline health workers in diagnosing and managing skin-related NTDs. The app also includes a learning section, offering training materials derived from the WHO's guide on [Recognizing neglected tropical diseases through changes on the skin: A training guide for front-line health workers](#) (1). The WHO's app can be downloaded free of charge for [Android](#) and [iOS](#). The combination of the NLR SkinApp and the WHO Skin NTDs App provides users with a multifunctional support tool when diagnosing and treating patients with skin diseases, including skin NTDs.

## 6. Definitions and abbreviations

An overview of all definitions and abbreviations can be found in the document **'Introduction, content and definitions'**.

## 7. Related SOPs

- *SOP 3: Eligibility criteria for SDR-PEP and screening of contacts*
- *SOP 5: Referral of contacts in case of (possible signs or symptoms of) tuberculosis or leprosy*
- *SOP 7: Referral in case of suspicion of skin diseases (other than leprosy)*
- *SOP 8: Skin medication*
- *SOP 10: Siilo usage*

## 8. References

1. World Health Organization. Recognizing neglected tropical diseases through changes on the skin: a training guide for front-line health workers. World Health Organization. 2018;