



SCIN trial Skin care intervention in nurses

Development of a hand photography protocol

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SCIN trial
Skin care intervention in nurses

NHS

Guy's and St Thomas'
NHS Foundation Trust

Study hypothesis:

A bespoke behavioural change package(BCP) plus provision of moisturisers will reduce the prevalence of hand dermatitis after one year, when compared to standard care, in at-risk nurses working in the NHS

- 35 participating sites
- 2042 participants (student nurses and intensive care nurses)

Task: To develop a hand photography method was needed to support the implementation of a multi-centre randomised controlled trial (SCIN 'skin care intervention in nurses' trial)

STANDERM



Assessment of hand dermatitis

SCIN TRIAL

PIN: P

D.O.B: (mm/yy) /

SEQUENCE CODE: 7 1

Coenraads et al photographic
severity guide
clear | almost clear | moderate
severe | very severe

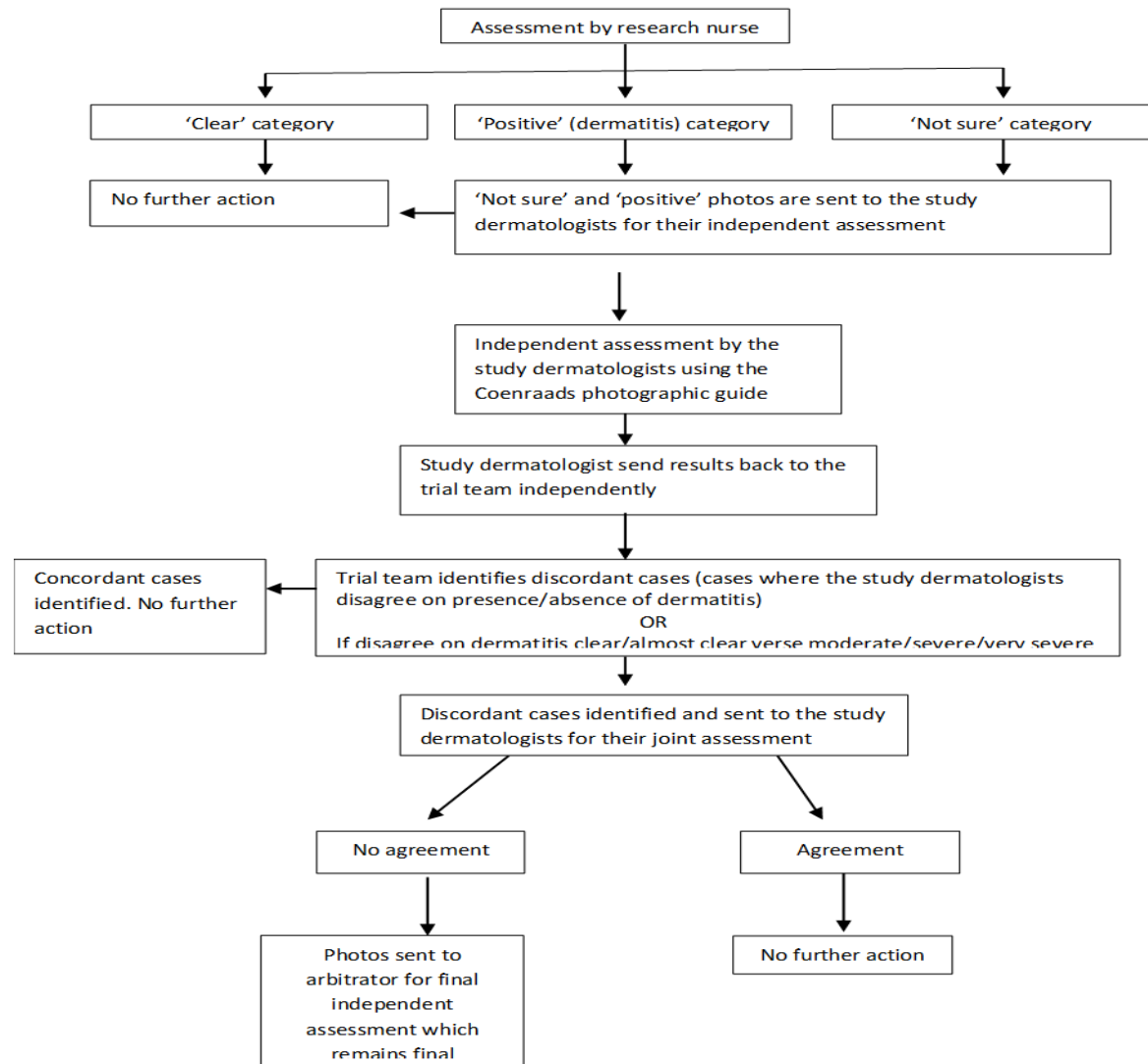


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Diagram 1: Flowchart for assessing hand photographs





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Method: Development of hand photography protocol comprised of 3 stages:

1. Standardised procedure for collecting hand photographs
2. Three-step validation process to establish agreed “consensus” rules dermatologists would for diagnosing and determining severity hand dermatitis
3. Training of a nurse to screen out ‘clear’ cases

Results:

Stage 1: 97 fieldworkers from 35 participating sites trained in how to take standardised hand photographs

Stage 2: Establishing agreed assessment rules (see below) for diagnosing hand dermatitis and for ascertaining severity.

This included a stepwise validation process:

Step 1: Dermatologists agreed on 66/70 (94%) cases and disagreed on 4/70 (6%) (kappa 0.30). (Assessed from a sample of photographs from the study)

Step 2: Dermatologists agreed on 42/71 (59%) cases and disregard on 29/71 (41%) (kappa -0.14)
(Assessed from a sample with fewer cases of dermatitis as initially assessed by the chief investigator)

Step 3: 88% agreement was reached following independent assessment and the remaining 12% of discordant cases which required joint deliberation to reached consensus

Stage 3: Training of a nurse to screen out ‘clear’ cases





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FINAL OUTPUT: MINI RULES

Guiding rules of dermatologists to diagnose dermatitis

Main purpose is to decide dermatitis yes/no in the enriched sample screened by the nurse.

Dermatitis (positive):

- Given that damaged skin barrier to subclinical dermatitis to overt dermatitis is a continuum, the greatest challenge is in defining a reasonable threshold for clinically significant dermatitis. The rule adopted was ill defined erythema that had to be associated with surface change (scaling, lichenification or vesicles) in the same lesion

Dermatitis (negative):

- Dryness alone (which is common in nurses who wash their hands 30-40 times a day) was NOT deemed to be dermatitis present
- Other clinically obvious skin diseases that are not dermatitis e.g. psoriasis or lichen planus or vitiligo
- Isolated paronychia or ragged cuticles
- Erythema of knuckles with increased skin markings ('wear and tear' knuckles from increased manual work)

Guiding rules for nurse screening out 'clear' cases

- Scan the image of the hands quickly using a pattern-recognition approach rather than focussing down on specific areas
- If the eye detects something possibly abnormal (erythema) then focus in on that area
- Enlarge image to no more than life size to avoid over-interpretation of normal 'wear and tear' dryness in nurses hands
- Task is only to screen out clear cases and not to decide whether dermatitis is present or not
- End decision is 'clear', 'not sure' or 'dermatitis'

