Nurse Led Phototherapy Treatment

This guidance does not override the individual responsibility of health professionals to make appropriate decision according to the circumstances of the individual patient in consultation with the patient and /or carer. Health care professionals must be prepared to justify any deviation from this guidance.

Introduction

Phototherapy and Photo chemotherapy (PUVA) are now widely used treatments for skin disease in many hospitals.

It is prescribed by Dermatologists with treatment usually carried out by trained nurses
Treatments are carried out in the dermatology department
Both forms of treatment can be very effective and may transform a patient's life by clearing their skin disease

This guideline is for use by the following staff groups :

Registered Nurses

Lead Clinician(s)

Niharika Bansal	Consultant Dermatologist
Phillip Preston	Consultant Dermatologist
Approved by Surgical Directorate Meeting on:	10th September 2021
Review Date:	10th September 2024

This is the most current document and should be used until a revised version is in place

Key amendments to this guideline

Date	Amendment	Approved by:
July 2018	Document approved for two years	Dermatology Directorate Meeting
July 2020	Document extended for 6 months during COVID 19 period	QGC/Gold Meeting
February 2021	Document extended as per Trust agreement 11.02.2021.	
September 2021	Document approved for three years with no amendments	Surgical Directorate Meeting incl max fax, ENT and dermatology

INTRODUCTION

Phototherapy and Photo chemotherapy (PUVA) are now widely used treatments for skin disease in many hospitals.

It is prescribed by Dermatologists with treatment usually carried out by trained nurses. Anyone delivering this intervention must have relevant qualification or work based training.

Both forms of treatment can be dramatically effective and may transform a patient's life by clearing their skin disease.

However, acute and chronic adverse reactions are not infrequent and expertise is required for the safe and effective delivery of these treatments.

The recognition of potentially serious adverse effects, in particular skin malignancy, has shifted the climate of opinion worldwide towards more controlled use of Phototherapy and PUVA.

For the patient, Phototherapy remains one of the most user friendly and socially acceptable treatments, despite 2 or 3 journeys to hospital each week for at least 6 – 8 consecutive weeks.

The end result is usually clearance of the skin disease (not cure) and an improvement in their quality of life
Clinicians are required to complete Royal College of Nursing / British Dermatological Nursing competencies for phototherapy, against a performance criterion. (APPENDIX 1), and should have two years dermatology experience. These competencies should be signed off by a supervisor / mentor who has a recognised qualification in Phototherapy.

Each member of staff should complete a 3 day residential course at a recognised establishment such as

Newport Phototherapy Training
An Educational Division of The Private Phototherapy Clinic
ClearSkin Dermatology Clinic,
870 Newport Road,
Cardiff CF3 4LJ

Thereafter the member of staff should be updated annually to keep abreast of current trends

Clinicians who administer phototherapy treatment are responsible for machine maintenance and know how to contact company who provide the maintenance contract. (APPENDIX 2)

All qualified staff working in phototherapy should be aware of the existence of these guidelines and the location of where a copy of the protocol is kept. All staff working in phototherapy should have attended an external introduction course to phototherapy and ensure maintenance of knowledge and skills by attending a yearly external update course, internal yearly competencies and independent learning.

Staff Training

Staff should demonstrate knowledge of:

- Anatomy and physiology of skin
- Recognition of skin diseases
- Skin Assessment
- Understanding photo-responsive diseases
- Patient education regarding skin care and use of topical therapies
- Understanding of the psychological impact of chronic skin disease
- Staff should attend an external introduction course to phototherapy and a once yearly update course.
- Staff should complete WAHT competency training for all phototherapy modalities prior to delivering phototherapy and maintain this yearly.
- Provide evidence based treatment and update guidelines accordingly.
- Referral
- All referrals for phototherapy must be provided from dermatology clinic consultants & their team, or another appropriate practitioner working under supervision of a Consultant dermatologist.

These treatments will be adapted to meet patients with special needs e.g. children, vulnerable adults, to ensure patient safety at all times.

A referral form or letter will be provided including the following information

- Patient details
- Diagnosis
- Skin Type
- Current Medication
- Screening for exclusion, contraindications & UV changes
- Treatment requested
- Exposure Sites

Routine referrals will aim be seen within 6 weeks of the date the referral is received in the phototherapy department.

Urgent referrals will be clearly stated and aim to be seen within 2 weeks of the date the referral is received in the phototherapy department.

UV Dosimetry

- Annual maintenance and UV calibration by an engineer approved by the manufacturer must be done.
- The Dermatology department and Siemens will keep a copy of these visits and UV calibration results.
- All UV lamps must be covered by acrylic.
- Units must be checked for electrical safety annually.
- Guidelines based on evidence based research and local factors must be used within phototherapy department and reviewed with updates at regular intervals.
- The following treatment protocols will be used but each individual needs and response to treatment will be reviewed and adaptions made according to this and any research evidence evaluated by the treating clinician.

Protective Wear with UV treatment

Oral Psoralen - Eye Protection

- Adults should wear protective eye wear whilst outside in daylight hours for 24 hours after taking the Psoralen medication.
- Protective eye wear should cover the eye effectively therefore may need to be wrap round or have eyeshields.

Protective eye wear will be checked on the UVA lamps using a hand held UV metre. The protective eye wear are deemed acceptable if the metre reads between 0.1-0.2 Mw/cm^2 with the lens in place.

Sunglasses

- To meet UV400 protection as will then block wavelength UVB & UVA.

Lens

- Coated lens required of UV400 protection.
- Clear safety spectacles
- Clear polycarbonate glasses can be used.

Gel Psoralen – Protective clothing

- All patients will be advised in daylight hours to wear gloves and closed foot wear for 24 hours after gel Psoralen has been applied for hand and feet UVA treatment.

Medications

- Warfarin and phenytoin are reported to have drug interactions with oral Psoralen and therefore it is strongly advised not to have oral PUVA but the patient may receive bath PUVA.
- Retinoids may be used in conjunction with phototherapy to reduce the cumulative dose and number of treatments to gain clearance.

Guideline.

This guideline is to be used by Registered Nurses (RN) to administer phototherapy treatment. All patients referred to this nurse led service will have been seen by a Consultant Dermatologist / Specialist Registrar/P with a special interest or designated other e.g.Medinet Consultant and be diagnosed as having a skin disease suitable for Phototherapy, either TL01, UVB or PUVA.

Patients covered

Patients who have been diagnosed with photo-responsive skin disease such as:

- Chronic Plaque Psoriasis
- Guttate Psoriasis
- Atopic Dermatitis (Eczema)
- Mycosis Fungoides / Cutaneous T cell Lymphoma
- Vitiligo
- Polymorphic Light Eruption- desensitisation
- Actinic Prurigo
- Nodular Prurigo
- Pityriasis Lichenoides
- Lichen Planus
- Pruritis

- Grannuloma Annulara
- Necrobiosis Lipoidica
- Morphea

Exclusion criteria

Reasons that might prevent patients having phototherapy include: -

- Unable to attend regularly for treatment
- Unable to stand unaided for up to 10 – 12 minutes
- Skin condition made worse by natural sunlight
- Skin condition made worse by drugs e.g. chemotherapy, drug inplants
- Xeroderma Pigmentosum
- Lupus Erythematosus
- Skin Cancer
- Medication which suppresses the immune system, for example – Methotrexate, Cyclosporin
- Epilepsy
- Pregnancy – safe with TLO1, contraindicated with UVA

Ultra Violet Radiation

Artificial sources of Ultraviolet Radiation can cause injury to the skin and eyes:

- Patients must wear UV protective goggles whilst in the cabinet and a protective visor must be worn if no facial disease. The patient will have the same pair of goggles throughout their treatment thus preventing cross infection.
- Male patients must protect genitalia with a black sock, because these areas are particularly susceptible to carcinogenetic effects of UV light.
- Both male and female patients are advised not to use deodorants, aftershave, perfumes prescribed topical treatments and emollients before treatment as these can interact with the light and again make patients skin red and sore.
- The patient must always stand in the same position within the cabinet. For example lifting arms after a few treatments will expose skin that hasn't been treated and cause soreness. Likewise the patient during the course of treatments should not change hairstyle or get a new haircut which would otherwise expose the neck area. Wear long hair up.
- All jewellery must be removed except for a wedding band.
- Systemic PUVA patients should minimise direct exposure to sunlight for 24 hours after taking Psoralen as skin will be light sensitive. They should wear sun block and cover up.

Protection of Staff

- The safest policy in a phototherapy unit is to ensure that all persons not being treated are completely shielded from UV by working behind screens and curtains.
- In practice modern cabinets emit minimal UVR's outside the cabinet and the curtains in the unit are for privacy not safety. Staff, however must protect their eyes in the same way that patients do if directly exposed to UVR when using unenclosed hand / foot units i.e. PUVA 181 / 200
- The risk to staff is relatively low providing the above rules are adhered to.
- Staff more than 30cms from the edge of a cabinet at the ceiling are at virtually no risk at all.

- Staff should not enter the cabinet whilst lights are on unless wearing goggles and appropriate skin protection.

Role of the Phototherapist

The Phototherapist will explain the proposed treatment and procedure, the benefits and possible risks and complications that may occur in a language and manner the patient / carer understands, emphasising the close collaboration with the referring consultant. Written information is given, appointments are agreed and there is an opportunity for questions.
On the 1st visit a comprehensive assessment questionnaire (APPENDIX 3) is completed by the patient and member of staff.
The Phototherapist will respect the patient's rights to privacy and dignity at all times.
The patient has the right to request a chaperone during examination and staff should adhere to this for the patients and their own protection.

The phototherapy nurse plays a vital role in providing and reinforcing information, assessing the patient's skin at every visit for any treatment response and side effects, and asking for medical support if necessary. The patient should be encouraged to be an active participant in their treatment.

Consent

Consent should be obtained by the referring consultant, on the referral form appropriate to the condition.

If this is not done the nurse/phototherapist doing the initial assessment should obtain consent, having explained the treatment and potential issues which may arise.

Consent should be obtained via e-consent or on an approved printed consent form,

The patient should be given a copy for their records.

Verbal consent should be obtained before each treatment.

The patient can withdraw their consent at any time, without prejudice.

Narrow Band UVB (TL01) Phototherapy Protocol

- All patients will complete a pre assessment questionnaire, DLQI and PASI (app.3) to assess risk factors and contraindications to TL01 UVB before undergoing a course of treatment.
- Skin Type must be determined using the Boston Skin Type Classification: -

Skin Type,	History
I,	White skin always burns never tans
II,	Red then tans
III,	Sometimes Red, always tans
IV,	Never burns always tans
V,	Moderately and Heavily pigmented i.e. ASIAN
VI,	Afro Caribbean Black Skin

- Determine regime by consulting chart for skin types and 20% increments reduce to 10% PRN (Royal Gwent Hospital Guidelines)
  Dose will increase at each treatment session, depending on how skin has responded.
- UVB treatments to be given 3 times a week – Monday / Wednesday / Friday
- Photo therapist must document administered dose of light and keep tally of cumulative dose at each visit.
- Reason for non administration of treatment must be documented and action taken

Male patients to wear genital protection at all times.
All patients to wear UV protection goggles and visor in the cabinet
Face visor should also be worn unless significant skin lesions on face

Increment regime:
Increments will be given at each visit based on a percentage of the previous dose and erythema response as follows:

GRADE	DEFINITION	ACTION
EO	No erythema and no report of erythema after last treatment	20 % increment
EO +	Patient reports erythema after last treatment, but now resolved	Repeat previous dose
E 1 (Mild)	Barely perceptible, pink asymptomatic erythema	Repeat previous dose then consider 10 % increments
E 2 (Moderate)	Well defined erythema possibly causing discomfort	Postpone 1 treatment to let skin settle. Reduce to 10 % on restarting. Use Betnovate RD to settle symptoms BD
E 3 (Severe)	Well defined symptomatic painful erythema	No treatment. Arrange for review with consultant. Betnovate RD BD. When completely settled restart at 10 %
E 4 (Very Severe)	Painful oedematous blistering skin	No treatment regard as an urgent referral to consultant. Apply Betnovate RD to affected areas

1. Adverse events must be recorded on patient documentation and also in the Adverse Events Register kept in the department. A clinical incident form should be completed for E 3 and E 4.

2. If a patient develops small areas of erythema apply sun block but continue to treat at the previous dose.

3. If a patient develops ‘itch’ encourage the use of emollients at least twice daily preferably kept in refrigerator.

4. Emollients should be used on a regular basis as treatment will dry skin out over a period of time.

5. The usual course of treatment consists of 6 – 8 consecutive weeks. Maximum dose per treatment is 3 Joules / cm [review at 500 treatments and consider skin cancer surveillance and recalculate risk/benefit ration. As per BAD Phototherapy Guidelines 2017)]

6. Should the patient miss or cancel treatment see protocol for missed treatment. (APPENDIX 4)

At completion of treatment paperwork is to be completed sent for scanning to EZ notes. The number of sessions and clinical response should be documented clearly and copied into medical records. A card system is also in place to capture cumulative lifetime dose and treatment sessions with a brief recording of clinical response.

Discharge Guidelines

On completion of treatment discharge will be at the discretion of the phototherapist, the patient will be referred either back to primary care with an accompanying letter or back to the referring Consultant depending upon clinical response.

SYSTEMIC PUVA PHOTOTHERAPY PROTOCOL

All patients will be assessed for risk factors and contra indications to systemic PUVA before undergoing a course of treatment.

- 8 – METHOXYSPORALEN (8 - MOP) will be used at a dose rate of 0.6 mg per kg body weight according to Crawford Pharmaceutical Instructions.
  If side effects are intolerable change to 5 – MOP, at a dose of 0.5mg per kg body weight or bath PUVA.
- Tablets should be taken 2 hours before treatment after food. If ingested on an empty stomach the drug will be absorbed rapidly causing nausea for up to 24 hours.
- The skin will be ultra violet sensitive for approximately 24 hours, therefore patients must be instructed to wear sun glasses protection (checked in department) to ensure no UV getting through and also wear long sleeved clothing / hats and sun block as necessary.
- Skin Type must be evaluated for skin phototype to determine initial dose

Skin Type,	History
1,	White skin always burns never tans
II,	Red then tans
III,	Sometimes Red, always tans
IV,	Never burns always tans
V,	Moderately and Heavily pigmented i.e. ASIAN
VI,	Afro Caribbean Black Skin

- Treatment regime follows the Royal Gwent Guidelines – see table

Dose in J/cm²
0.25
0.25
0.5
0.5
1.0
1.0
1.5
1.5

2.0
2.0
2.5
2.5
3.0
3.0
3.5
3.5
4

- The above table would be adhered to, but taking into consideration the clinical findings on the day of treatment so that dose can be adjusted accordingly.
- PUVA treatment will usually be given twice a week Mon / Friday with a minimum of 72 hours interval between treatments.
- Usual course of treatment 6 – 8 consecutive weeks.
- Maximum number per course 30.
- Consider review at 200 treatments, commence skin cancer surveillance and recalculate risk/benefit ratio as per BAD Phototherapy Guidelines 2017

- Goggles and face visor to be worn unless significant skin lesions on face.
- Photo therapist must document administered dose of UVA. Reason for non administration of treatment must be documented.

Modifications to treatment dose if erythema present.

GRADE	**DEFINITION**	**ACTION**
EO	No erythema and no report of erythema after last treatment	20 % increment
EO +	Patient reports erythema after last treatment, but now resolved	Repeat previous dose
E 1 (Mild)	Barely perceptible, pink asymptomatic erythema	Repeat previous dose then consider 10 % increments
E 2 (Moderate)	Well defined erythema possibly causing discomfort	Postpone 1 treatment to let skin settle. Reduce to 10 % on restarting. Use Betnovate RD to settle symptoms BD
E 3 (Severe)	Well defined symptomatic painful erythema	No treatment. Arrange for review with consultant. Betnovate RD BD. When completely settled restart at 10 %
E 4 (Very Severe)	Painful oedematous blistering skin	No treatment regard as an urgent referral to consultant .Apply Betnovate RD to affected areas

- Adverse events must be recorded on patient documentation and also in the Adverse Events Register kept in the department. A clinical incident form should be completed for E 3 and E 4.
- If a patient develops small areas of erythema apply sun block but continue to treat at the previous dose.
- If a patient develops 'itch' encourage the use of emollients at least twice daily preferably kept in refrigerator.
- Emollients should be used on a regular basis as treatment will dry skin out over a period of time.
- The usual course of treatment consists of 6 – 8 consecutive weeks. Maximum dose per treatment is 3 Joules / cm [reassess at 200 treatments]
- If patient misses / cancels treatment – see missed treatment protocols (APPENDIX 4)

Patients will be discharged on completion of treatment at the discretion of the phototherapist, either back to Primary Care or the referring Consultant depending upon clinical response.

Photochemotherapy (Gel PUVA)

- Patients will receive a UV/light treatment phototherapy leaflet with initial appointment letter and on attendance to initial assessment a specific phototherapy treatment leaflet.
- Prior to phototherapy being delivered an initial assessment and DLQI (App. 4) must be recorded using the appropriate assessment sheets including any appropriate outcome measures.
- Patients will sign the checklist and consent form at the initial assessment.
- A gloved hand should be used to apply a thin layer of 0.005% Psoralen gel to the affected area and UVA exposure given 30 minutes later.
- Patients will be evaluated for skin phototype to determine the initial dose:
- Gel PUVA treatment will be given twice a week, with a minimum of 72 hours between treatments.
- Patients will wear goggles.
- Protect skin not to be treated, if treating only palmar/plantar skin use a towel or double tubigrip to protect dorsal skin surfaces.

Grade	Definition	Action
E0	No erythema seen/reported	20% increment
E0+	Erythema reported after last treatment but now resolved	Repeat previous dose
Barely perceptible	E1	Repeat previous dose, then 10% increments
Mild	Asymptomatic erythema	Postpone treatment
E2	Well defined erythema, possibly causing manageable discomfort	Postpone 1 treatment, decrease to 10 % increments
E3	Well defined, symptomatic painful erythema. oedema	No treatment, Dr review, once settled 50% previous dose and consider increment decrease
E4	Painful erythema, oedema and blistering	No treatment and urgent Dr review

- Adverse events must be recorded on patient documentation and also in the Adverse Events Register kept in the department. A clinical incident form should be completed for E 3 and E 4.
- If a patient develops small areas of erythema apply sun block but continue to treat at the previous dose.
- If a patient develops 'itch' encourage the use of emollients at least twice daily preferably kept in refrigerator.
- Emollients should be used on a regular basis as treatment will dry skin out over a period of time.
- The usual course of treatment consists of 6 – 8 consecutive weeks. Maximum dose per treatment is 3 Joules / cm [reassess at 200 treatments, as per BAD Phototherapy Service Guidance 2017]
- If patient misses / cancels treatment – see missed treatment protocols (APPENDIX 4)
- At the end of a course of treatment the lifetime record cards will be completed and kept within the department.
- Discharge as discharge protocol.

Treatment Protocol Adaptions

Atopic Eczema

- At end of successful treatment taper course as below:

TL01

2 weeks	Twice weekly	Hold dose
2 weeks	Twice weekly	20% reduction each treatment

PUVA

2 weeks	Once weekly	Hold dose
2 weeks	Once weekly	20% reductions each treatment

Palmopustular Pustolosis

- Taper course of treatment

3 weeks	Once weekly	Hold dose
3 weeks	Once weekly	20% reductions each treatment

Vitiligo

- Treat as skin type I, 20% increments, each increment repeated twice
- Use TLO1 unless otherwise indicated.
- 4 month or 50 treatment trial then review in clinic, to consider stopping if improvement not seen.
- After the treatment is complete seek consultant review for treatment continuation. if improvement seen or if no improvement discharge to clinic team. 2008 BAD guidelines mention an arbitrary limit of 200 treatments with UVB for phototypes I-III, with the possibility of more for higher skin types. PUVA limit is 150 treatments. UVB should be used in preference to PUVA.

- Continue with increments until area responds with erythema E1, hold doses until erythema fades. Then continue on 10% increments holding if erythema E1 occurs and the again once faded continue with 10%.
- If eyelids involved ensure patient closes eyes for treatment and removes goggles for some or all of treatment time until area regimented.
- Maximum treatment 12 month period

Mycosis Fungoides

- Use TL-01 for patch MF or maintenance phototherapy, & systemic PUVA if thicker plaque phase or TLO1 fails.
- No changes to increment regime required.
- Life time limits do not apply in these patients
- If eyelids involved ensure patient closes eyes for treatment and removes goggles for some or all of the treatment time until lesion cleared.

Polymorphic Light Eruption (PLE)

- Desensitisation treatment to be given from February onwards.
- Treatment is three times per week, 6 weeks of treatment in total.
- TL-01 - Treat as skin type I, 20% increments, each dose twice and reduce to 10% if indicated.
- If mild PLE develops advise patient to use emollients and topical steroids whilst continuing with treatment.

- If severe flare up PLE stop treatment until resolves and the recommence at lower dose protocol. Encourage patient to keep their tolerance post treatment completion with regular safe sun-exposure throughout the summer.

Skin Cancer Surveillance

- It will be the responsibility of the phototherapist to record cumulative dose and number of treatments in the discharge letter and then the consultant team's responsibility to arrange skin cancer surveillance as viewed appropriate.
- Patients will be reviewed at 500 treatments for TL01 and 200 for PUVA and risk/benefit recalculated.
- Patients will receive education about sun awareness.

Discharge

Patients will be discharged:

- On receiving 24-30 treatments
- Maximum dose is achieved with no further resolution
- After presentation clears with minimal residual activity for 4 further sessions
- Adverse reaction resulting in cessation treatment
- DNA on a regular basis.

At the completion of patient's treatment paperwork is to be completed and sent for scanning to EZ notes. A card system is also in place within the department to capture cumulative lifetime doses and treatment sessions together with a brief recording of clinical response.

Short term side effects of phototherapy include:

- Itch
- Dry skin
- Nausea from Psoralen
- Cold sore reactivation
- Worsening of skin condition

Potential long term side effects of phototherapy include:

- Premature Skin aging
- Skin cancer

PHOTOTHERAPY AND CHILDREN.

Children can be treated with TL01 for eczema and Psoriasis.

Children must have been seen by a consultant and a letter of referral sent, preferably with a referral form.

Any child having TL01 will have been seen by a substantive dermatologist (no direct referrals from DMC or other community provider)

As discussed with Mel Chippendale, ANP/Children's clinic manager, countywide, the following applies to children

- Treat children in the department
- Both child and parent must consent
- Ensure the child understands what will happen
- Consent form 3 should be used, parent will sign
- Use a children's DLQI (appendix 3)
- If the child is not happy or is anxious, paediatric support is available via Mel Chippendale or the children's clinic
- A paediatric nurse or play leader is available on an ad hoc basis
- Any problems or issues should be documented, as well as what has been done for the child.
- All staff treating children should have done level 3 safeguarding children and be up to date.
- The parent/guardian of the child should be in the room when treatment is done
- If they are not available a suitable chaperone should be used.
- The child's skin type should be assessed using the Boston skin type classification and treated accordingly
- Use caution with increments and monitor skin carefully, adjusting dose as needed
- The rest of the adult protocol for TL01 applies equally to children
- On discharge make a follow up appointment for review.

Monitoring Tool

This should include realistic goals, timeframes and measurable outcomes.

How will monitoring be carried out?

Annually by reviewing patient records.

Who will monitor compliance with the guideline?

Clinical Nurse Specialist Nichola Holden

STANDARDS	%	CLINICAL EXCEPTIONS
All patients treated have a confirmed diagnosis given by a Consultant Dermatologist that is within the inclusion list	100%	NONE
Patients will have no more than the recommended sessions	100%	NONE
All nurses providing the phototherapy treatments have completed the WAHT competencies	100%	NONE
All patients receiving phototherapy treatment have completed documentation in notes	100%	NONE
Annual manufacturers maintenance equipment check	100%	NONE
All patients who have reached or exceeded lifetime guidelines to have annual skin cancer check	100%	NONE
All adverse responses more serious than E1 to be discussed at dermatology meetings with action and outcome recorded in minutes	100%	NONE
Average clinical clearance or improvement to be above 75% on phototherapy discharge to dermatology team	80%	Adverse reaction to treatment and PLE patients
All phototherapy notes will have a referral letter/ form	100%	

References

Addo HA, Sharma SC. (1987) UVB phototherapy and photochemotherapy (PUVA) in the treatment of polymorphic light eruption and solar urticaria. Br JDermatol; 116: 539-47

Attherton DJ, Carabott F, Glover MT, Hawk JLM. (1988) The role of psoralen photochemotherapy (PUVA) in the treatment of severe atopic eczema in adolescents. Br J dermatol; 118: 791-5

Baron ED, Stevens SR. (2003) Phototherapy for cutaneous T-cell lymphoma. Dermatologic Therapy; 16 (4): 303-310

Bilsland D, George SA, Gibbs NK, Aitchinson T. (1993) A comparison of narrow-band phototherapy (TL-01) and photochemothwerapy (PUVA) in the management of polymorphic light eruption. Br J Dermatol; 129: 708-12

British Association of Dermatologists. Protective Eyewear for Photochemotherapy. (1) Notes for patients who are undergoing photochemotherapy (PUVA). (2) Explanatory note for dermatologists. London: British Association of Dermatologists.

British Photodermatology Group. (1994) British Photodermatology Group guidelines for PUVA. Br J Dermatol; 130: 246-255

British Photodermatology Group (1997) An appraisal of narrowband (TL-01) UVB phototherapy . British Photodermatology Group Workshop Report (April 1996). Br J Dermatol 1997; 137: 327-330

British Association of Dermatologists (2012) Working party report on minimum standards for phototherapy services. British Association of Dermatologists

British Association of dermatologists, Photodermatology Group. Phototherapy Service Guidance. March 2017

Buckley DA, Healy E, Rogers S. (1995) A comparison of twice-weekly MPD-PUVA and three times weekly skin typing-PUVA regimens for the treatment of psoriasis. Br J Dermatol; 133 (3): 417-22

Buckley DA, Phillips WG. (1997) Comment on; 8-MOP PUVA for psoriasis: a comparison of a minimal phototoxic dose-based regimen with a skintype approach. Br J Dermatol; 136 (5): 800-1

Cameron H, Dawe RS, Yule S (2002) A randomized, observer blinded trial of twice vs. three times weekly narrowband ultraviolet B phototherapy for chronic plaque psoriasis. Br J Dermatol; 147 (5): 973-8

Carabott FM, Hawk JL. (1989) A modified dosage schedule for increased efficiency in PUVA treatment of psoriasis. Clin Exp Dermatol; 14(5): 337-40

Clark C, Dawe RS, Evans AT, Lowe G, Ferguson J. (2000) Narrowband TL- 01 phototherapy for patch-stage mycosis fungoides. Arch Dermatol;136(6):748-52.

Collins P, Ferguson J. (1995a) Narrowband (TL-01) UVB air-conditioned phototherapy for atopic eczema in children. Br J Dermatol; 133 (4): 653-5

Collins P, Ferguson J. (1995b) Narrowband UVB (TL-01) phototherapy: an effective preventive treatment for the photodermatoses. Br J Dermatol; 132: 956-63

Collins P, Wainwright NJ, Amorim I, Lakshmipathi T, Ferguson J. (1996) 8-MOP PUVA for psoriasis: a comparison of a minimal phototoxic dose-based regimen with a skin-type approach. Br J Dermatol; 135 (2): 248-54

Cox NH, Farr PM, Diffey BL. (1989) A comparison of the dose-response relation ship for psoralen-UVA erythema and UVB erythema. Arch Dermatol; 125 (12): 1653-7

Cox NH. (1990) A modified dosage schedule for increased efficiency in PUVA treatment. Clin Exp Dermatol; 15 (4): 318-9

Das S, Lloyd JJ, Farr PM. (2003) Measurement of the minimal phototoxic dose is important for optimal psoralen plus ultraviolet A treatment of psoriasis. Br J Dermatol; 149 (Suppl 64): 2

Davey JB, Diffey BL, Miller JA. (1981) Eye protection in psoralen photochemotherapy. Br J Dermatol; 104: 295-300

Dawe RS, Wainwright NJ, Cameron H, Ferguson J. (1998) Narrow-band (TL-01) ultraviolet B phototherapy for chronic plaque psoriasis: three times or five times weekly treatment? Br J Dermatol; 138 (5): 833-9

Diederen PV, van Weelden H, Sanders CJ. (2003) Narrowband UVB and psoralen-UVA in the treatment of early stage mycosis fungoides: a retrospective study. J Am Acad Dermatol; 48 (2): 215-9

Diffey BL, Miller JA. (1980) A comment on the routine testing of sunglasses in photochemotherapy. Br J Dermatol; 102: 665-668

Diffey BL.(1996) Eye protection for PUVA patients. Br J Dermatol; 135: 654-5
Drummond A, Torley D, Jamieson CA, Bilsland D. (2003) Narrowband ultraviolet B for psoriasis: ‘to MED or not to MED’, that is the question. Br J Dermatol; 149 (Suppl 64): 2

EU (2006) Non-binding guide to good practice for implementing Directive 2006/25/EC ‘Artificial Optical Radiation’ European Commission. Luxembourg: Publications Office of the European Union 2011ISBN 978-92-79-16046-2 doi:10.2767/74218

George SA, Bilsland DJ, Johnson BE, Ferguson J. (1993) Narrow-band (TL-01) UVB air-conditioned phototherapy for chronic severe adult atopic dermatitis. Br J Dermatol; 128: 49-56
Green C, Ferguson J, Lakshmipathi T, Johnson BE. (1988) 311nm UVB phototherapy – an effective treatment for psoriasis. Br J Dermatol; 119 (6): 691-6

Gruss C, Behrens S, von Kobyletzki G. (1998) Effects of water temperature on photosensitization in bath-PUVA therapy with 8-methoxypsoralen. Photodermatol Photoimmunol Photomed; 14:145-7

Halpern SM, Anstey AV, Dawe RS. (2000) Guidelines for topical PUVA: a report of a workshop of the British Photodermatology Group. Br J Dermatol; 142: 22-31

Hofer A, Fink-Puches R, Kerl H, Wolf P. comparison of phototherapy with near vs. far erythemogenic doses of narrow-band ultraviolet B in patients with psoriasis. Br J Dermatol 1998; 138: 96-100

HSE (2006) Five steps to risk assessment. HSE booklet INDG 163(rev2), ISBN 0 7176 6189 X. Available to download from: http://www.hse.gov.uk/pubns/indg163.pdf

Hudson-Peacock MJ, Diffey BL, Farr PM. (1996) Narrow-band UVB phototherapy for severe atopic dermatitis. Br J Dermatol; 135 (2): 332

Ibbotson SH, Farr PM. (1999) The time-course of psoralen ultraviolet A (PUVA) erythema. J Invest Dermatol; 113 (3): 346-50

Ibbotson SH, Dawe RS, Farr PM. (2001) The effect of methoxsalen dose on ultraviolet-A-induced erythema. J Invest Dermatol;116(5):813-5.

Ibbotson SH, Bilsland D, Cox NH (2004) An update and guidance on narrowband ultraviolet B phototherapy: a British Photodermatology Group Workshop Report. Br J Dermatol; 151 (2): 283-97

Konya J , Diffey BL, Hindson TC. (1992) Time course of activity of topical 8-methoxypsoralen on palmo-plantar skin. Br J Dermatol; 127: 654-5

Kwok YK, Anstey AV, Hawk JL. (2002) Psoralen photochemotherapy (PUVA) is only moderately effective in widespread vitiligo: a 10-year retrospective study. Clin Exp Dermatol; 27 (2): 104-10

Leslie KS, Lodge E, Garioch JJ. (2004) A comparison of narrowband (TL- 01) ultraviolet B-induced erythemal response at different body sites. Br J Dermatol; 151 (Suppl. 68): 103-4 (Abstr.)

Lloyd JJ. (2004) Variation in calibration of hand-held ultraviolet (UV) meters for psoralen plus UVA and narrow-band UVB phototherapy. Br J Dermatol; 150(6):1162-6

Makki S, Quencez E, Humbert P. (1989) 5-methoxypsoralen pharmacokinetics in psoriatic patients. In: Psoralens: Past, Present and Future of Photochemoprotection and other biological activities. Eds Fitzpatrick TB, Forlot P, Pathak MA, Urbach F. John Libbey Eurotext Paris pp. 167-174

Man I, Dawe RS, Ferguson J. (1999) Artificial hardening for polymorphic light eruption: practical points from ten years' experience. Photodermatol Photoimmunol Photomed; 15: 96-99

Man I, Kwok YK, Dawe RS, Ferguson J, Ibbotson SH. (2003) The time course of topical PUVA erythema following 15- and 5-minute methoxsalen immersion. Arch Dermatol;139(3):331-4

Man I, McKinlay J, Dawe RS, Ferguson J, Ibbotson SH. (2003) An intraindividual comparative study of psoralen-UVA erythema induced by bath 8- methoxypsoralen and 4, 5', 8-trimethylpsoralen. J Am Acad Dermatol; 49 (1): 59-64

Man I, Dawe RS, Ferguson J, Ibbotson SH. (2004) The optimal time to determine the minimal phototoxic dose in skin photosensitised by topical 8 methoxypsoralen. Br J Dermatol: 151: 179-182

Marsland AM, Chalmers RJ, Hollis S, Leonardi-Bee J, Griffiths CE.(2006) Interventions for chronic palmoplantar pustulosis. Cochrane Database Syst Rev.; CD001433.

Martindale (2005) 34th ed The Complete Drug Reference Pharmaceutical press London

Mclelland J, Fisher C, Farr PM, Diffey BL, Cox NH. (1991)The relationship between plasma psoralen concentration and psoralen-UVA erythema. Br J Dermatol; 124 (6): 585-90

Morison WL, Parrish JA, Fitzpatrick TB. (1978a) Oral psoralen photochemotherapy of atopic eczema. Br J Dermatol; 98: 25-30

Morison WL, Parrish JA, Fitzpatrick TB. (1978b) Controlled study of PUVA and adjunctive topical therapy in the management of psoriasis. Br J Dermatol. Feb;98(2):125-32.

Moseley H, Cox NH, MacKie RM. (1988) The suitability of sunglasses used by patients following ingestion of psoralen. Br J Dermatol; 118: 247- 253

Moseley H, Jones SK. (1990) Clear ultraviolet blocking lenses for use by PUVA patients. Br J Dermatol; 123: 775-781

Moseley H, Perkins W. (1992) Clear eyewear for PUVA patients. Br J Dermatol; 127: 657-658

Mountford PJ. (1990) A comparative assessment of the ultraviolet radiation transmission of sunglasses for patients receiving photochemotherapy. Clin Phys Physiol Meas; 11: 333-341

Murphy GM, Logan RA, Lovell CR, Morris RW, Hawk JLM, Magnus IA. (1987) Prophylactic PUVA and UVB therapy in polymorphic light eruption – a controlled trial. Br J Dermatol; 116: 531-8

Natta R, Somsak T, Wisuttida T, Laor L. (2003) Narrowband ultraviolet B radiation therapy for recalcitrant vitiligo in Asians. J Am Acad Dermatol; 49 (3): 473-of polymorphic light eruption. Clin Exp Dermatol; 29(2): 141-3.

Rhodes LE, Friedmann PS.(1992) A comparison of the ultraviolet-B induced erythemal response of back and buttock skin. Photodermatol Photoimmunol Photomed; 9: 48-51

Roelandts R. (1995) Photo(chemo)therapy and general management of erythropoietic protoporphyria. Dermatology; 190: 330-1

Roenigk (1977) Photochemotherapy for mycosis fungoides. Arch Dermatol 1977; 113: 1047-1051

Ros AM. (1988) PUVA therapy for erythropoietic protoporphyria. Photodermatol.;5:148-9

Royal College of Nursing / British Dermatological Nursing Group. Phototherapy Competencies 2004

Sakuntabhai A, Farr PM, Diffey BL. (1992) Variable photosensitivity and clinical response of psoriasis to PUVA with conventional 8-methoxypsoralen dosage. Br J Dermatol; 127: 421 (Abstr.)

Sakuntabhai A, Sharpe GR, Farr PM. (1993) Response of psoriasis to twice weekly PUVA. Br J Dermatol; 128 (2): 166-71

Sakuntabhai A, Matthews JNS, Farr PM. (1994) Improved prediction of the minimal phototoxic dose in PUVA therapy. Br J Dermatol; 130: 604-9

Sarkany R, Palmer R, Garibaldinos T, Hawk J (2009) Phototherapy guidelines. Dowling Treatment Unit, St. John's Institute of Dermatology, St Thomas' Hospital, London.

Seedhouse, D. (1997) Health promotion: philosophy, prejudice and practice. Chichester, John Wiley.

Sheehan MP, Atherton DJ, Norris P, Hawk J. (1993) Oral psoralen photochemotherapy in severe childhood atopic eczema: an update. Br J Drmatol; 129 (4): 431-6

Edwards C. (2009) Gwent Healthcare NHS Trust: Phototherapy & photodynamic therapy service, standards and protocols. Gwent Health Care Trust, Gwent

Tjioe M, Gerritsen MJ, Juhlin L, van de Kerkhof PC. (2002) Treatment of vitiligo vulgaris with narrow band UVB (311nm) for one year and the effect of addition of folic acid and vitamin B12. Acta Derm Venereol; 82 (5): 369-72

Wainwright, Dawe RS, Ferguson J. (1998) Narrowband ultraviolet B (TL-01) phototherapy for psoriasis: which incremental regimen? Br J Dermatol; 139 (3): 410-4

Warren LJ, George S. (1998) Erythropoietic protoporphyria treated with narrow-band (TL-01) UVB phototherapy. Australasian J Dermatol; 39: 179- 182

Waterston K, Naysmith L, Rees JL. (2004) Physiological variation in the eryhtemal response to ultraviolet radiation and photoadaptation. J Invest Dermatol; in press.

Westerhof W, Nieuweboer-Krobotova L. (1997) Treatment of vitiligo with UV-B radiation vs topical psoralen plus UV-A. Arch Dermatol; 133 (12): 1525-8

Whittaker SJ, Marsden JR, Spittle M, Russell Jones R. (2003) Joint British Association of Dermatologists and UK Cutaneous Lymphoma Group guidelines for the management of primary cutaneous T-cell lymphomas. Br J Dermatol; 149: 1095-1107

Yones SS, Palmer RA, Garibaldinos TT, Hawk JL. (2006) Randomized double-blind trial of the treatment of chronic plaque psoriasis: efficacy of psoralen-UV-A therapy vs narrowband

Contribution List

Key individuals involved in developing the document

Name	Designation
Nichola Holden	Dermatology Specialist Nurse
Sherrie Warner	Dermatology Specialist Nurse
Louise Pearson	Matron
Sonya Murray	Workforce Development Lead

Circulated to the following individuals for comments

Name	Designation
Dr. Niharika Bansal	Consultant Dermatologist
Dr. Phillip Preston	Consultant Dermatologist
Mrs Louise Pearson	Matron, Head and Neck, Dermatology and ENT
Charlotte Gray	Nurse Consultant
Name	Directorate / Department
Lorna Bell	Directorate Manager
Rebecca Pritchard	General Management assistant

Circulated to the chair of the following committee's / groups for comments

Name	Committee / group

APPENDIX 1

Worcestershire Acute Hospitals NHS Trust

Performance Criteria for Assessment of Competency for Phototherapy
Dermatology Directorate
Redwood Suite / Kidderminster Treatment Centre/ Alexandra Hospital

PERFORMANCE CRITERIA	COMPETENT – mentor initials & date				
1. Preparation of equipment	1	2	3	4	5
Correct check of Waldmann cabinet output by completing check cycle as per Waldman guidelines recording data in correct documentation					
Ensure equipment is clean and in good working order					
Preparation of changing areas ensuring they are clean and well stocked					
2. Patient preparation					
Correct patient identified					
Explanation of procedure given and verbal/written consent obtained when appropriate					
Ensure patient has been provided with appropriate written patient information leaflets					
3. Procedure					
Completes pre-treatment Nursing Assessment Documentation					
Patient Assessment to include Boston Skin classification, Erythema Grading					
Identifies treatment regime, based on patient assessment and treatment protocol					
Demonstrates ability to use phototherapy equipment safely and according to RCN / BDNG guidelines					
Advises patient on basic skin care – emollients / topical therapy					
Maintains privacy and dignity at all times during treatments					
4. Follows infection control procedures according to Trust guidelines •					
5. Correct documentation of all relevant information, including consent, maintaining confidentiality at all times •					
Mentor Initial and date					

	Nurses Signature & date	Mentor Signature & date
6. Knowledge base		
Demonstrates an understanding of the anatomy and physiology of the skin		
Demonstrates an understanding of the effects of UV light on the skin		
Demonstrates an understanding of common skin diseases that are responsive to UV therapies		
Demonstrates an understanding of the differences between broadband UVB, narrowband UVB and PUVA		
Describes and discusses the different types of psoralens used in PUVA and their effects on the skin		
Describes and discusses common potential photosensitisers and their interaction with psoralens		
Discusses basic principles of metering dosimetry and skin types		
Discuss basic principles of health and safety in relation to equipment and environmental factors		
7. Interventions		
Demonstrates an understanding of the Boston skin typing method		
Demonstrates an understanding of erythema grading		
Demonstrates an understanding of the principles of minimal erythemal dose / minimal phototoxic dose (MED/MPC) testing		
Demonstrates ability to use phototherapy equipment safely under supervision		
Follows treatment protocols under direct supervision		
Discusses acute adverse effects of UV therapy and action to take		
Demonstrates ability to empathise with patient and provide psychological support		

	Nurses Signature & date	Mentor Signature & date
8. Patient Management		
Completes pre-treatment nursing assessment documentation under supervision		

Identifies and discusses the principles of informed consent		
Identifies and discusses the importance of pre-treatment skin assessment		
Provides patient with appropriate written patient education information		
Advises patient on basic skin care		
Ensures privacy and dignity during treatments and provides a quality service for patients at all times		

Clinical Mentor (please print) .... Signature..... ..... Date	Registered Nurse (please print) .... Signature..... ..... Date .....

Competencies taken from the Royal College of Nursing in collaboration with the British Dermatological Nursing Group = July 2005
Clinical Mentor/ Supervisor must have a recognised Phototherapy Course e.g. Royal Gwent Phototherapy Course

If the RN feels they lack confidence / competence during or at anytime following completion of training they should discuss this with their mentor for further training and support required

APPENDIX 2

PHOTOTHERAPY MACHINE MAINTENANCE

The Dermatology Directorate has an on-going contract with Arthrodax.

Athrodax Health Care International
Hawthorn Business Park
Dry brook
Gloucestershire
GL17 9HP
Telephone: 01594 544440

The machines are serviced annually and documented and a record is kept in each department (& by Siemens at WRH)

Clinicians who are using the machine will:

1. Inspect the cabinet and lamps at the commencement of each treatment session
2. Run lamp for 3 minutes for UVB / UVA and output recorded at the start of each session in both Joules and milliwatts
3. Ensure walls and floors are cleaned as per departmental / trust guidance

Tube replacement

If a tube needs replacing in the machine then estates department (Siemens at WRH) should be contacted to arrange a suitable time and date for the replacement ensuring patients treatments are not disrupted.

Worcestershire NHS
Acute Hospitals NHS Trust

APPENDIX 3
DERMATOLOGY DEPARTMENT

Redwood Suite

Alexandra Hospital

Please attach patient sticker here or record:

Name:.....
NHS No: | | | | | | | | | | |
Hosp No: | | | | | | | | | | |
D.O.B:..... Male Female
Consultant:..... Ward:.....

PATIENT ASSESSMENT QUESTIONNAIRE

QUESTION	YES	NO
Do you require a chaperone whilst undergoing treatment?		
Have you had light treatment before? If yes where?		
Glasses checked?		
Have you received an information leaflet?		
Have you received your tablets and understood you must take them after food and 2 hours before treatment? (PUVA patients only)		
Have you developed any new problems, skin or otherwise since your consultation?		
Have you ever had skin cancer?		
Have you ever had radiotherapy (x-ray treatment) if so which part of the body?		
Have you ever had any reaction to drugs in the past or do you have any allergies?		
Have you ever had any eye problems i.e. cataracts or loss of a lens?		
Have you ever had liver problems?		
Have you any heart or blood pressure problems?		
Have you any medical problems that require you to stay out of the sun?		
Are you diabetic?		
Are you epileptic?		
Are you pregnant? Date of last period:		
Are you using contraception?		
Male genital protection? Sock		
Do you suffer from cold sores (herpes)?		
Are you taking any drugs or medicines, prescribed or bought over the counter including any current topical treatments or any herbal remedies? If so what are they?		
Have you ever had any reaction to drugs in the past?		
Do you have any allergies?		

Do you understand the treatment you are going to receive?		
Do you wish to proceed with the light treatment		
Do you have any infectious diseases e.g. Hepatitis, HIV		
Do you drink alcohol? How much?		
Do you smoke? How many per day?		
Do you use recreational drugs? If yes which and how often?		

Patient signature: ..... Date: .....

Clinician signature: ..... Date: .....

DERMATOLOGY LIFE QUALITY INDEX

DLQI
Hospital No: Date:

Name: Score:
Address:

Diagnosis:

The aim of this questionnaire is to measure how much your skin problem has affected your life OVER THE LAST WEEK. Please tick □□one box for each question.

1.	Over the last week, how itchy, sore, painful or stinging has your skin been?	Very much A lot A little Not at all	□ □ □ □
2.	Over the last week, how embarrassed or self conscious have you been because of your skin?	Very much A lot A little Not at all	□ □ □ □
3.	Over the last week, how much has your skin interfered with you going shopping or looking after your home or garden?	Very much A lot A little Not at all	□ □ □ □ Not relevant □
4.	Over the last week, how much has your skin influenced the clothes you wear?	Very much A lot A little Not at all	□ □ □ □ Not relevant □
5.	Over the last week, how much has your skin affected any social or leisure activities?	Very much A lot A little Not at all	□ □ □ □ Not relevant □
6.	Over the last week, how much has your skin made it difficult for you to do any sport?	Very much A lot A little Not at all	□ □ □ □ Not relevant □
7.	Over the last week, has your skin prevented you from working or studying?	Yes No	□ □ Not relevant □
	If "No", over the last week how much has your skin been a problem at work or studying?	A lot A little Not at all	□ □ □
8.	Over the last week, how much has your skin created problems with your partner or any of your close friends or relatives?	Very much A lot A little Not at all	□ □ □ □ Not relevant □
9.	Over the last week, how much has your skin caused any sexual difficulties?	Very much A lot A little Not at all	□ □ □ □ Not relevant □

10.	Over the last week, how much of a problem has the treatment for your skin been, for example by making your home messy, or by taking up time?	Very much A lot A little Not at all	□ □ □ □ Not relevant □

PSORIASIS AREA AND SEVERITY INDEX (PASI)

DATE

SCORE

PATIENT LABEL

SCORE	0	1	2	3	4	5	6
	None	some	moderate	severe	very severe		

ERYTHEMA

INDURATION

SCALING

TRUE AREA% NONE 1-9% 10-29% 30-49% 50-69% 70-89% 90-100%

Score erythema, induration and scaling from 0-4.

HEAD (H) SCORE

Erythema _____

Induration _____

Scaling _____

Sum _____

x area score _____

= _____

x0.1 _____

TRUNK (T) SCORE

Erythema _____

Induration _____

Scaling _____

Sum _____

x area score _____

= _____

x0.3 _____

UPPER LIMBS (UL) SCORE

Erythema _____

Induration _____

Scaling _____

Sum _____

x area score _____

= _____

x0.2 _____

LOWER LIMBS (LL) SCORE

Erythema _____

Induration _____

Scaling _____

Sum _____

x area score _____

= _____

x0.4 _____

PASI = (H)_____ + (T)_____+(UL)_____+(LL)_____

TOTAL SCORE PASI = _____

CHILDREN'S DERMATOLOGY LIFE QUALITY INDEX

Hospital No
Name: Diagnosis: CDLQI
Age: SCORE:
Address: Date:

The aim of this questionnaire is to measure how much your skin problem has affected you OVER THE LAST WEEK. Please tick ✓ one box for each question.

1.	Over the last week, how **itchy**, **"scratchy"**, **sore** or **painful** has your skin been?	Very much Quite a lot Only a little Not at all
2.	Over the last week, how **embarrassed** or **self conscious**, **upset** or **sad** have you been because of your skin?	Very much Quite a lot Only a little Not at all
3.	Over the last week, how much has your skin affected your **friendships**?	Very much Quite a lot Only a little Not at all
4.	Over the last week, how much have you changed or worn **different** or **special clothes/shoes** because of your skin?	Very much Quite a lot Only a little Not at all
5.	Over the last week, how much has your skin trouble affected **going out**, **playing**, or **doing hobbies**?	Very much Quite a lot Only a little Not at all

6. Over the last week, how much have you avoided **swimming** or **other sports** because of your skin trouble?

Very much
Quite a lot
Only a little
Not at all

7. Last week, was it **school time?**

OR

was it **holiday time?**

If school time: Over the last week, how much did your skin problem affect your **school work**?

Prevented school Very much
Quite a lot
Only a little
Not at all

If holiday time: How much over the last week, has your skin problem interfered with your enjoyment of the **holiday**?

Very much
Quite a lot
Only a little
Not at all

8. Over the last week, how much trouble have you had because of your skin with other people **calling you names**, **teasing**, **bullying**, **asking questions** or **avoiding you**?

Very much
Quite a lot
Only a little
Not at all

9. Over the last week, how much has your **sleep** been affected by your skin problem?

Very much
Quite a lot
Only a little
Not at all

10. Over the last week, how much of a problem has the **treatment** for your skin been?

Very much
Quite a lot
Only a little
Not at all

Please check that you have answered EVERY question. Thank you.

Calculation of Palmoplantar Pustular Psoriasis Area and severity Index (PPASI)

Score	0	1	2	3	4	5	6
Erythema E	none	slight	moderate	severe	Very severe		
Pustules P	none	slight	moderate	severe	Very severe		
Desquamation D	none	slight	moderate	Severe	Very severe		
Area affected %	0	10	10 < 30	30 < 50	50 < 70	70 < 90	90-100

RIGHT PALM E……+ P…….+ D……x 0.2 =……..

LEFT PALM E……+ P……..+ D……x0.2 =……..

RIGHT SOLE E……+ P……..+ D……x0.3 =……..

LEFT SOLE E……+ P……..+ D…… x0.3=…….

Copyright 2001 BAD

Published in British Journal of Dermatology 2001;**145**:546-553

APPENDIX 4

WORCESTERSHIRE ACUTE HOSPITALS NHS TRUST

MISSED TREATMENT PROTOCOL

Ensure treatments have not been cancelled or missed due to erythema (ring patient), if so follow appropriate protocol increment regime.

This guideline applies to all modalities of phototherapy / photochemotherapy (PUVA)

Dose increments to be administered after missed treatments.

MISSED TREATMENTS	ACTION
Patient misses 1 treatment	UVB - Continue with previous increments PUVA - Repeat previous dose
Patient misses 2 treatments	Repeat previous dose
Patient misses 3 treatments	Give dose before previous dose
Patient misses 4 treatments	Give 50 % of previous dose
Patient misses 5 – 6 treatments	Discharge back to GP or referring Consultant

Supporting Document 1 - Equality Impact Assessment Tool

To be completed by the key document author and attached to key document when submitted to the appropriate committee for consideration and approval.

		Yes/No	Comments
1.	**Does the policy/guidance affect one group less or more favourably than another on the basis of:**		
	• Race	No	
	• Ethnic origins (including gypsies and travellers)	No	
	• Nationality	No	
	• Gender	No	
	• Culture	No	
	• Religion or belief	No	
	• Sexual orientation including lesbian, gay and bisexual people	No	
	• Age	No	
2.	**Is there any evidence that some groups are affected differently?**	No	
3.	**If you have identified potential discrimination, are any exceptions valid, legal and/or justifiable?**	No	
4.	**Is the impact of the policy/guidance likely to be negative?**	No	
5.	**If so can the impact be avoided?**	No	
6.	**What alternatives are there to achieving the policy/guidance without the impact?**	No	
7.	**Can we reduce the impact by taking different action?**	No	

If you have identified a potential discriminatory impact of this key document, please refer it to Human Resources, together with any suggestions as to the action required to avoid/reduce this impact.

For advice in respect of answering the above questions, please contact Human Resources.

Supporting Document 2 – Financial Impact Assessment

To be completed by the key document author and attached to key document when submitted to the appropriate committee for consideration and approval.

	Title of document:	**Yes/No**
1.	Does the implementation of this document require any additional Capital resources	No
2.	Does the implementation of this document require additional revenue	No
3.	Does the implementation of this document require additional manpower	No
4.	Does the implementation of this document release any manpower costs through a change in practice	No
5.	Are there additional staff training costs associated with implementing this document which cannot be delivered through current training programmes or allocated training times for staff	No
	Other comments:	

If the response to any of the above is yes, please complete a business case and which is signed by your Finance Manager and Directorate Manager for consideration by the Accountable Director before progressing to the relevant committee for approval.