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Photonet National Standards QAP

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Photonet National Standards QAP

1. Introduction

This document forms the basis of the Quality Assurance Programme for the National Managed Clinical Network for Phototherapy (Photonet), which:

- Sets the standards for the care of patients receiving Phototherapy and/or PUVA treatment
- Assists the MCN in assessing the performance of phototherapy services against the standards

Photonet provides a framework to facilitate the delivery of standardised, high-quality patient care across phototherapy sites throughout Scotland. The Network aims to ensure that patients are managed in accordance with evidence-based procedures and protocols. It audits practice and outcomes across all centres against agreed standards, providing a basis for continuous improvement in the quality and safety of care. The Network also supports the monitoring of patients with extensive cumulative exposure to ultraviolet radiation for skin cancer surveillance. Educational opportunities are provided to enhance the knowledge, skills, and confidence of staff delivering phototherapy services.

This document is intended for healthcare professionals and staff involved in the planning, delivery, governance, and audit of phototherapy services. This includes dermatologists, phototherapists, nurses, medical physicists, multidisciplinary team members, service managers, commissioners, and those with responsibility for quality assurance and clinical governance.

Photonet is delivered as part of national services within NHS Scotland and is managed through the National Clinical Network within Public Services Delivery Scotland.

2. Phototherapy in Scotland

Phototherapy is the treatment of a wide variety of inflammatory skin conditions by the administration of increasing increments of ultraviolet light to the skin in a precise and controlled fashion. The patient's whole body or a localised area can be treated.

Referrals for Phototherapy should only be made by a Dermatologist. There are a range of phototherapies available: UVB, UVA1 and photochemotherapy (PUVA).

Phototherapy and photochemotherapy (PUVA) are therapies that involve exposing the skin to ultraviolet irradiation. With PUVA, UVA irradiation is combined with the agent Psoralen. Phototherapy is administered by trained Phototherapists.

3. Phototherapy Standards

Standard 1 Patient and Parent/Carer Information and Education

Standards Statement 1a - All patients treated with UVB or PUVA and their parent/carers have equitable access to information tailored to individual needs and their specific condition.

Rationale

Patient knowledge of the possibility of minor adverse effects (such as generalised mild erythema) makes such events during treatment easier to manage, and patients more likely to continue to successful completion of a treatment course. Side effects such as localised erythema caused by exposure of previously untreated skin (e.g. if his or her hair is cut) can be avoided if patients are warned.

Essential Criteria

1a	>95% of patients will have received relevant Patient Information Leaflets prior to commencing treatment.
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Standard Statement 1b - Written patient information is presented in a format that can be readily understood by those without dermatological training.

Rationale

Patients should be fully involved in treatment decisions. Part of the process of giving patients adequate information to participate fully in their care is the provision of written information.

Essential Criteria

1b	Written patient information is reviewed by patients and / or patient representatives and will have undergone plain English review. Leaflets will be provided in other languages on request.
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Standard Statement 1c - Phototherapy services will ascertain service user feedback to inform development and improvements in service provision.

Rationale

Involvement with the public/patients/carers will develop the ability of the service to take effective action to improve services and to ensure clear, effective communication.

Reference/s: CEL (2010) Informing, engaging and consulting people in developing health & community care services.

Essential Criteria

1c	All patients/parents/carers are offered a Patient Experience Questionnaire.
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Standard 2: Multi-disciplinary Working

Standard Statement 2 - There is an appropriate and functioning multidisciplinary team at the clinic sites and the treatment centres.

Rationale

The management of patients receiving phototherapy requires the co-ordinated contribution of various healthcare and other professionals

Essential Criteria

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|----|--|
| 2. | A Lead Dermatologist with appropriate experience and a Lead Phototherapist are identified in each centre providing phototherapy treatment. |
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Standard 3: Staff Education and Training

Standard Statement 3a - All health care professionals delivering phototherapy will be adequately trained and competent and undertake speciality specific professional development. Staff administering phototherapy are members of a professional regulatory body, eg Nursing and Midwifery Council (NWC), Health & Care Professions Council (HCPC).

Rationale

The delivery of quality multidisciplinary care depends on competent health care professionals who are up to date.

To ensure optimal effectiveness and safety phototherapy must be administered by phototherapists with an adequate knowledge of the treatments, and of the conditions being treated. Many Phototherapy Units also act as chronic skin disease (predominantly psoriasis and atopic dermatitis) treatment units, with patients given advice on necessary concomitant treatments (e.g., topical scalp psoriasis therapies, and topical therapies for dermatitis).

Essential Criteria

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|------|---|
| 3a.1 | All phototherapists charged with delivering phototherapy treatment in their department should be trained and competent. They will have undergone appropriate Continuous Professional Development (CPD) activities (eg Photonet National Meeting, Photonet online course, local training event) within the previous 3 years. |
| 3a.2 | 100% of all phototherapy units have at least one trained and competent phototherapist in the department whenever patients are being treated. |

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Standard 4: Quality of Clinical Care

Standard Statement 4a – All patients treated with UVB or PUVA are treated according to optimally effective, and safe, regimens based on the best available study evidence, adapted as necessary to be appropriate for each individual patient, and to local Phototherapy Unit circumstances.
All adverse incidents are recorded and reported.

Rationale

Treatment regimen variables (including starting dose, incremental dosage regimen, treatment frequency, concomitant therapies, and how decision to stop a course of treatment is made) influence the efficacy of treatment, acute side effects, and the cumulative exposures and ultraviolet dose s required (thereby probably affecting risk of skin cancer as a late side effect).

Reference/s:

- Collins P, Wainwright NJ, Amorim I et al. 8-MOP PUVA for psoriasis: a comparison of a minimal phototoxic dose-based regimen with a skin-type approach. Br J Dermatol 1996;135:248-54
- Wainwright NJ, Dawe RS, Ferguson J. Narrow-band ultraviolet B (TL-01) phototherapy for psoriasis: which incremental regimen? Br J Dermatol 1998; 139: 410-14
- Dawe RS, Wainwright NJ, Cameron H, Ferguson J. Narrow-band (TL-01) ultraviolet B phototherapy for chronic plaque psoriasis: three times or five times weekly treatment? Br J Dermatol 1998; 138: 833-39.
- Cameron H, Dawe RS, Yule S, et al. A randomized, observer-masked, trial of 2x vs 3x weekly narrow-band ultraviolet B phototherapy for chronic plaque psoriasis. British Journal of Dermatology 2002; 147: 973-978.
- Dawe RS, Cameron HM, Yule S, Ibbotson SH, Moseley HH, Ferguson J. A randomized comparison of methods of selecting narrowband UV-B starting dose to treat chronic psoriasis. Arch Dermatol. 2011 Feb;147(2):168-74. doi: 10.1001/archdermatol.2010.286. Epub 2010 Oct 18.
- Parlak N, Kundakci N, Parlak A, Bengu NA. Narrowband ultraviolet B phototherapy starting and incremental dose in patients with psoriasis: comparison of percentage dose and fixed dose protocols. PPP 2015; 31: 90-7.

Essential Criteria

4a.1	> 70% of completed UVB courses for whole body psoriasis have an outcome of clearance/near clearance (minimal residual activity).
4a.2	The median number of UVB treatments per successful clearance / minimal residual activity) whole-body treatment course for psoriasis is <30 in all centres.
4a.3	Written evidence-based protocols for all relevant forms of phototherapy are available, and used, in every centre. (Actions updated 17 September 2010).

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Standard Statement 4b - All serious adverse incidents are recorded and reported.

Rationale

Reports of serious adverse incidents should be made available, so that all centres can benefit from the lessons learned.

Essential Criteria

4b.1	Incident reports and risk assessments reviewed and actioned by each Centre with any events of National significance being reported to the Network Office to ensure best practices are communicated to the entire Network.
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Standard 5 – Clinical Management Systems, Audit & Monitoring

Standard Statement 5a - All patients receiving phototherapy and PUVA are placed on a clinical management system (Photosys). This system holds details of each episode of treatment and allows for ongoing useful clinical information to be recorded for use in direct patient care and service audit.

Rationale

Information is at the core of phototherapy and PUVA care for individuals, for service planning and for assessing patient compliance.
Data collection and audit facilitate effective healthcare since outcomes can be monitored and lead, where necessary, to improvement in the quality of treatment and care.

Essential Criteria

5a.1	There is an up-to-date population based clinical management system of all patients receiving phototherapy.
5a.2	The clinical management system is available throughout all Health Boards.
5a.3	Data is collected using the clinical management system for regular audit and quality assurance. The quality of the data is also regularly audited.

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Standard Statement 5b - Each phototherapy centre will have robust and accurate systems in place for ultraviolet dosimetry (i.e. the measurement and delivery of ultraviolet radiation).

Written protocols are in place, which take account of currently available guidelines and local factors (e.g. BPG Guidelines, 2015; Scottish UV Dosimetry Guidelines, 2001; IPEM Report 101 Phototherapy Physics: Principles, Dosimetry, Sources and Safety).

Rationale

Robust and accurate systems of ultraviolet exposure measurement and delivery are necessary to ensure the rapid clearance of disease with minimum risk of excessive erythema. Accurate exposure measurements also facilitate the introduction of new treatment regimes, allow the inter-comparison of results between centres, and assist in the safe transfer between units of patients and/or staff.

Essential Criteria

5b.1	A medical physicist is responsible for UV measurements in all phototherapy centres.
5b.2	Written dosimetry protocols are available and subject to regular review in all Medical Physics Departments.
5b.3	Expanded uncertainty of the calibration of the meters used for irradiance measurements should be less than 15%.
5b.4	Inter-centre comparisons of >90% of Phototherapy centres is performed every 18-24 months. (Effective from audit year 2019/2020).
5b.5	One member of staff from each Medical Physics Department attends at least one of the bi-annual Photophysics Group meetings.
5b.6	Each Medical Physics Department is able to provide documented evidence of staff training in Phototherapy and documented evidence of continual competence.
5b.7	Variations in irradiance measurements between the Photonet measurement and the local centre measurement should be <20%.

Standard 6 – The Patient's Journey

Standard Statement 6a - Assessment

Assessment for phototherapy treatment should only be carried out at a Dermatology clinic.

Rationale

Most non-dermatologists do not have sufficient knowledge about phototherapy, and alternative therapies, for psoriasis (and all the other phototherapy indications) to prescribe these treatments.

Essential Criteria

6a	Patients referred for phototherapy are referred by a clinician working with a local dermatology clinic.
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Standard Statement 6b - Referral

Phototherapy is prescribed by a trained dermatologist or another practitioner working under the supervision of a local (same Health Board) Dermatologist.

Rationale

Phototherapy should be offered by the clinician/phototherapist to patients who have diseases for which this is, at the time of presentation, the treatment of choice when other treatments have failed, e.g. simple topical therapy for psoriasis.

Essential Criteria

6b.1	A referral form is used to prescribe phototherapy. Relative contra-indications and risk factors for adverse effects are recorded on this form.
6b.2	90% of all referrals will start treatment within six weeks of referral from Dermatology Outpatients.

Standard Statement 6c – Urgent referrals

Patients referred urgently for phototherapy by a dermatologist will start treatment within 3 weeks.

Rationale

If the patient is considered to require treatment urgently, then treatment should be started quickly to reduce patient discomfort and avoid the need for hospital admission.

Essential Criteria

6c	90% of urgent referrals will start treatment within three weeks of referral from Dermatology Outpatients.
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Standard Statement 6d – Knowledge

The prescribing doctor must have up to date information available, about risk factors for phototherapy complications, including cumulative exposures, when the decision to prescribe phototherapy is made.

Rationale

An accurate diagnosis and assessment of risk factors for complications with phototherapy, or alternatives, is required before the decision to prescribe phototherapy can be made.
In order to assess whether or not a further course of phototherapy is indicated, it is essential to have information on previous UVB and PUVA treatment.

Essential Criteria

6d	A computer-generated summary sheet including information on lifetime cumulative UVB and PUVA exposures is updated following each treatment course.
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Standard Statement 6e – Consent

All patients treated with UVB or PUVA give written informed consent relating to each treatment course, after receiving appropriate information (see Standard 3). Those patients that cannot give written informed consent, consent will be sought from the spouse/carer/guardian.

Rationale

Patients have a right to know why UVB or PUVA has been recommended, about possible alternative therapies, and about possible adverse effects of the treatment. The need for informed consent exists for all therapies, but because of the common misconceptions that UVB is “artificial sunlight”, and that “nature” = “safe”, it is prudent to obtain written consent to help ensure that all patients are appropriately informed.

Essential Criteria

6e	The consent form, which is combined with the referral form, is signed by 100% of patients (or on behalf of patients) prior to starting each course of UVB or PUVA treatment and is filed in patient’s record.
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Standard Statement 6f – Treatment

All patients will be assessed prior to the commencement of phototherapy.

Rationale

Comprehensive assessments ensure safety; each patient must be assessed individually and their suitability for treatment determined by the Phototherapist. Patients with special needs e.g. children, learning difficulties, language barriers, will have phototherapy treatment suitably adapted to ensure safety of the patient at all times.

Essential Criteria

6f.1	Each patient will have a phototherapy assessment carried out prior to commencing treatment, which will include assessment of special needs.
6f.2	A record of this phototherapy assessment will be filed in every patient’s Phototherapy notes.

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Standard Statement 6g – Discharge

All units should have a clear protocol to guide those administering treatment on when a course should be stopped.

Rationale

Discharge should be after an appropriate number of treatments for each individual's condition. Early discharge leads to inadequate improvement in the condition treated (and may lead to early relapse). Delayed discharge exposes patients to unnecessary risks of adverse effects, and wastes resources.

Essential Criteria

6g.1	A discharge protocol is in place in 100% of units and is followed by phototherapists. It contains guidance on when to stop treatment, and when to seek dermatologist's advice on when to stop a course of treatment.
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Standard Statement 6h

Patients should be able to access treatment if needed for any relapse in their presenting condition following phototherapy.

Rationale

The majority of indications for UVB and PUVA are chronic diseases that can be controlled but not cured. Most patients will experience recurrence of their condition some time following phototherapy, although this will sometimes be mild and amenable to home management. Patients need to know how to obtain advice if their condition recurs.

Essential Criteria

6h.1	On discharge patients have information, tailored to individual needs, on access to assistance and follow-up services.
6h.2	A letter is sent to the patient's GP within 3 weeks following completion of a course of phototherapy. A copy of this letter is filed within the patient's notes.

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Standard Statement 6i - All patients at significantly increased risk of skin cancer as a result of UVB and/or PUVA treatment are made aware of their increased risk, their GP is informed and they are offered annual tumour surveillance skin examination by the individual centres.

Rationale

PUVA treatment causes an increased risk of skin cancer. Although follow-up of patients treated with narrowband UVB has not as yet detected a skin cancer risk, it is probable that with long enough follow up of those who have had many exposures a risk will be identified. The increased risk is related to overall numbers of treatments and ultraviolet doses administered. It is the responsibility of those prescribing these treatments to alert patients to the risks, and to offer follow-up to identify any skin cancers or pre-cancers at early, readily treatable, stages.

Essential Criteria

6i.1	Each centre uses a database system to allow generation of lists of at risk patients.
6i.2	Data on all treatment courses is entered into a database to ensure this is complete.
6i.3	All patients who have received >200 whole-body PUVA treatments and/or >500 whole-body UVB treatments are invited for annual skin cancer screening review.
6i.4	Compliance with this standard is monitored through the annual Skin Surveillance Audit. Audit reports are issued to all treatment centres for review, and centres evidence appropriate follow-up action for patients identified as requiring additional surveillance based on cumulative ultraviolet exposure.

4. Definitions

Table 1. Table used to define words and/or acronyms used throughout the document.

Definition	Definition Description
Assessment	The process of measuring patients' needs and/or the quality of an activity, service or organisation.
Audit	Systematic review of the procedures used for diagnosis, care, treatment and rehabilitation, examining how associated resources are used and investigating the effect care has on the outcome and quality of life for the patient.
Chronic	Extended duration.
Clinical Governance	A framework through which NHS organisations are accountable for both continuously improving the quality of their services, and

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Definition	Definition Description
	safeguarding high standards of care, by creating an environment in which excellence in clinical care will flourish.
Concomitant	Occurring together.
Criterion(S)/ Criteria(PI)	Provide the more detailed and practical information on how to achieve the standard, and relate to structure, process or outcome factors.
Dermatologist	A specialist in the diseases of the skin.
Desirable (Criterion/Criteria)	Good practice that is being achieved in some parts of the service and demonstrates levels of quality to which other providers of a similar service should strive.
Diagnosis	Identification of an illness or health problem by means of its signs and symptoms. This involves ruling out other illnesses and causal factors for the symptoms.
Dosimetry	The science of the measurement of radiation doses.
Essential (Criterion/Criteria)	A criterion that should be met wherever a service is provided.
Evaluation	The study of the performance of a service (or element of treatment and care) with the aim of identifying successful and problem areas of activity.
GP	General Practitioner.
Guidelines	Statements, which help in deciding how to treat particular conditions.
Healthcare Professional	A person qualified in a health discipline.
IPEM	The Institute of Physics and Engineering in Medicine is a Registered Charity, which exists to promote, for the public benefit, the advancement of physics and engineering applied to medicine and biology; to advance public education in the field; and to represent the needs and interests of engineering and physical sciences in the provision or advancement of health care.
Irradiance	The power of light per unit area, usually expressed in mW/cm ² .
Medical Physicist	A person qualified in physics or a related discipline who is professionally engaged in the application of physics to medicine.
Methodology	Methods used in a particular field.

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Definition	Definition Description
Minimal Residual Activity	Clearance/near clearance of skin condition.
Monitoring	The systematic process of collecting information on clinical and non-clinical performance. Monitoring may be intermittent or continuous. It may also be undertaken in relation to specific incidents of concern or to check key performance areas.
MRA	See Minimal residual activity.
Multidisciplinary	A multidisciplinary team is a group of people from different disciplines (both healthcare and non-healthcare) who work together to provide care for patients with a particular condition. The composition of multidisciplinary teams will vary according to many factors. These include: the specific condition, the scale of the service being provided, and geographical/socio-economic factors in the local area.
National Services Division (NSD)	The National Services Division has a responsibility for ensuring the provision of both national screening programmes and specialist services on behalf of NHS Scotland.
NHS	National Health Service.
NHS Board	NHS Boards have responsibility for delivering strategic and operational services across their areas. The overall purpose of NHS Boards is to ensure the efficient and accountable governance of the local NHS system, and to both provide strategic leadership and direction and effective service delivery, focusing on agreed outcomes.
NHS Scotland	The National Health Service in Scotland.
Patient	A person who is receiving care or medical treatment. A person who is registered with a doctor, dentist, or other healthcare professional, and is treated by him/her when necessary. Sometimes referred to as a user.
Photochemotherapy	The treatment of disease with a chemical compound or drug (usually psoralen) that reacts with ultraviolet (usually ultraviolet A – see PUVA), which is administered after the drug, is given.
Phototherapist	Specialist administering phototherapy.
Phototherapy	Exposure to light for therapeutic purposes.
Protocol	A policy or strategy, which defines, appropriate action in specific circumstances. Protocols may be national or agreed locally to take into account local requirements.

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Definition	Definition Description
Psoralen	A drug which when applied to the skin or taken in tablet form enhances the skin's responses to ultraviolet light.
PUVA	The combination of a psoralen, applied locally or taken in tablet form, and ultraviolet A: Psoralen Ultraviolet A, = PUVA
Quality Assurance (QA)	Improving performance and preventing problems through planned and systematic activities including documentation, training and review.
Rationale	Scientific/objective reason for taking specific action.
Referral	The process whereby a patient is transferred from one professional to another, usually for specialist advice and/or treatment.
Risk Management	Risk management is a new financial risk sharing arrangements for both clinical and non-clinical risks.
Scottish Intercollegiate Guidelines Network (Sign)	SIGN was established in 1993 by the Academy of Royal Colleges and Faculties in Scotland, to sponsor and support the development of evidence-based clinical guidelines for NHS Scotland. For further information relating to SIGN guidelines or the methodology by which SIGN guidelines are developed, contact: SIGN Executive, Royal College of Physicians, 9 Queen Street, Edinburgh EH2 1JQ. Website address: www.sign.ac.uk/
Sign	See Scottish Intercollegiate Guidelines Network.
SIGN Guideline	Scottish Intercollegiate Guidelines Network guideline. See also guideline.
Standard Statement	An overall statement of desired performance.
UVA	Ultraviolet radiation in the waveband 315 – 400nm
UVA1	Ultraviolet radiation in the waveband 340 – 400nm
UVB	Ultraviolet radiation in the waveband 280 – 315nm

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5. Document Change History

For activation dates, refer to IQM

Table 2. Table to list historical versions and change details of this document.

Version	Change Details
1	Initial document
2	Reviewed as per scheduled review date – Updated to new template
3	Reviewed as per scheduled review date - No Changes
4	Reviewed as per scheduled review date – No Changes
5	Reviewed as per scheduled review date – Updated to new template

6. Appendix 1 Evidence base for developing standards

The evidence base used in the development of this framework includes:

- Photonet Treatment Protocols.
- Clinical Resource and Audit Group (CRAG) recommendations.
- CEL (2010) Informing, engaging and consulting people in developing health & community care services.
- SIGN guideline 121: Diagnosis and management of psoriasis and psoriatic arthritis in adults. October 2010.
- Relevant randomised studies:
 - Collins P, Wainwright NJ, Amorim I et al. 8-MOP PUVA for psoriasis: a comparison of a minimal phototoxic dose-based regimen with a skin-type approach. Br J Dermatol 1996;135:248-54
 - Wainwright NJ, Dawe RS, Ferguson J. Narrow-band ultraviolet B (TL-01) phototherapy for psoriasis: which incremental regimen? Br J Dermatol 1998; 139: 410-14
 - Dawe RS, Wainwright NJ, Cameron H, Ferguson J. Narrow-band (TL-01) ultraviolet B phototherapy for chronic plaque psoriasis: three times or five times weekly treatment? Br J Dermatol 1998; 138: 833-39.
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 - Parlak N, Kundakci N, Parlak A, Bengu NA. Narrowband ultraviolet B phototherapy starting and incremental dose in patients with psoriasis: comparison of percentage dose and fixed dose protocols. PPP 2015; 31: 90-7.