

# Photonet Managed Clinical Network for Phototherapy in Scotland

Annual Report 2023/24

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# Introduction

Photonet provides a framework to facilitate the delivery of standardised quality patient care at the many different phototherapy sites throughout Scotland. The network aims to ensure that patients are managed according to evidence-based procedures and protocols. It audits the practice and outcomes of every centre against agreed standards, hence providing a basis for improving the quality of care. Photonet also provides the sites with information on patients who have extensive exposure to ultraviolet sources for skin cancer monitoring. Educational opportunities are provided to increase the knowledge and confidence of staff delivering phototherapy.

The network vision is that all patients with skin conditions that respond to light therapy will be offered appropriate phototherapy wherever they live in Scotland. This phototherapy will be as effective and safe as possible.

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 a 'light' treatment. PUVA is a drug treatment but with a drug activated by 'light', ensuring treatment effects are targeted to the skin.

# **Current position**

The majority of targets within the workplan have been delivered, albeit in some cases with extended timescales due to staff capacity.

96% of Business as Usual objectives were achieved with one outstanding to recruit a new lead clinician. This is currently paused.

91% of Service Development Plan objectives were achieved. Finalising a Standard Operating Process (SOP) for the annual cancer audit will be carried forward to 24/25 due to availability of experienced staff.

## **Highlights**

#### **Covid Recovery**

5,513 patients received treatment throughout Scotland during this annual reporting period and 5,801 courses of phototherapy were administered. 2019 was a higher treatment year as patients may have finished their courses of phototherapy early due to covid.

The excellent data capture of Photosys (Figures 1 & 2) allows visualisation of the treatment numbers, which are slowly increasing year on year but are still not at precovid levels.







Fig 2

#### **Incident Reporting**

Photonet maintains a secondary risk register for incidents relating to phototherapy care in Scotland which includes information on incidents that may be potentially relevant on a Scotland-wide basis. The purpose of this is to ensure that learning from any incidents is shared and can be implemented across Scotland. These reports are submitted for discussion at Photonet Steering Group meetings and six incidents were discussed during this reporting period. Centres highlighting incidents have already complied with local Health Board reporting procedures.

#### **Photonet Annual Meeting**

The annual Photonet education event was held in person for the first time since the pandemic in Perth Royal Infirmary on 25<sup>th</sup> May 2023 with 68 people attending. The evaluation response was positive with many attendees noting the value of meeting in person.

- 98% strongly agreed or agreed that the event met the objective of keeping people up to date on Photonet and phototherapy
- 98% strongly agreed or agreed that the event was relevant to their educational needs
- 86% indicated their practice would or may change as a result of the learning

#### **Identifying Skin Clearance Poster**

Photonet produced two posters to assist staff in identifying skin clearance at the end of a course of treatment for psoriasis and atopic eczema. This will support more consistent data entry across Scotland.



#### **Review & Development of Guidelines and Supporting Documentation**

The network has a timetable for the review and development of guidelines and documents. During 2023/24 the following were reviewed:

- Photosys User Guide
- Phototherapy Incident Form
- Photonet Lamp Replacement Protocol
- Photosys Data Request Form

All documentation is published on the photonet website.

#### **Climate Sustainability**

The network continued to make use of technology and remote communications to progress work this year. This has continued to be effective, saving time on travel and promoting economic and climate friendly practices.

#### Phototherapy and Photochemotherapy Learnpro Course

144 staff from across Scotland have enrolled and 71 have successfully completed since the course was re-launched on TURAS. There is also a requirement for all new phototherapists to undertake a mentoring programme alongside the TURAS course which can also be signed-off by the mentor online. The course is available to NHS colleagues from other areas of the UK.

#### Photonet Audit Cycle 2023/24

Photonet continues to implement a comprehensive audit cycle (fig. 4), including capturing and processing data within the annual reporting year using the Photonet dashboard.

# Photonet Audit Cycle 2023/24



#### **Medical Physics Audit**

The network audits against the endorsed medical photophysics standards every year. Results were submitted by all medical physics departments across Scotland and were discussed at the Photophysics Sub-Group meeting in April 2024. It was noted that all the standards were met.

Medical physics engagement in the network continues to be high, with excellent communication and information sharing between health boards.

#### Photonet Specialist Technologist Update

One of the reasons for setting up Photonet was the marked variation in dosimetry around the country. Improving this has depended on yearly Photonet dosimetry visits undertaken by the Photonet Technician. A report highlighting the results from these visits is available in *Appendix A*.

#### **Skin Surveillance Audit**

Treatment centres were sent the annual list of patients generated from Photosys who met the minimum Photonet criteria for skin monitoring.

**Phototherapy Dashboard Data:** Data entered to Photosys continues to be presented using the Photosys Dashboard, which is available to all treatment centres in Scotland. The network supports boards to use this data by providing individual reports of how their treatment centre has performed, including information on treatment numbers of how their area compares against others in Scotland. They are encouraged to investigate any amber or red results to determine why a target has not been achieved and are signposted to the dashboard for more detailed information. 36 Units completed the audit, and 32 units took the opportunity to comment on their 2022/23 reports. Their feedback was included in the final reports sent to health board chief executives along with a separate health board report.

Figure 5 below shows the types of phototherapy, conditions and areas treated, along with treatment outcomes. There have been no significant changes in the Treatment or Diagnosis Type or the Treatment Area.

Photonet	TREATMENT TYPE				
Use the below filters to view data by TC or HB by	UVB 90%	PUVA 9%		UVA1 1%	
Financial Year	DIAG TYPE		TREAT AREA		
TC / Health Board Treatment Centre Financial Year 22/23	Psoriasis 51%		Whole Body 88.2%		
	Others 20%		Hands Only 6.3%		
Patients	Atopic Eczema 2496		Feet Only 3.1%		
4,838					
5,127	Polymorphic Light E 2%	ruption	Localised area 0.7%		
OUTCOME					
Clearance/MRA : 61% DNA : 13%	Chron Urticar 196	ia	Upper body 0.5%		
Moderate Clearance : 11%	Vitiliao		Scalp Only		
Min Improvement : 5%	196		0.8%		
N/A : 296	Mycosis & Pre	-M	Legs only 0.296		
Worse : 2%	196				

Fig: 5

# Outcomes against 5 quality standards for 2023/24 by Treatment Centre

MEDIAN TREATMENTS PER COURSE AND CENTRE OUTCOMES Referrals within 6 weeks Clearance Rate Localised Erythema Generalised Erythema								
Arran War Memorial Hospital					_			
Campbeltown Hospital								
Heathfield Suite Avr	29	h	112	66%		75%	2%	1%
University Hospital Crosshour	28	f.	137	22%		74%		
Borders General Hospital	27	1	21	57%		80%	5%	1
Dumfrier & Galloway DI	25	-	117	65%		52%	376	1
Galloway Community Hospita	20			226		3679		
Oueen Margaret Hespital	20	-	3	53% 62%		ACS	2082	102
Queen Margaret Hospital	20	ť.	147	0370		40%	2379	1
Victoria Hospital Kirkcaldy	26	-	187	8/%		8570	1%	1
Forth Valley Royal Hospital	28	₽	1/9	51%		/8%	1%	1
Glenochil HM Prison			1	100%	_			
Stirling Community Hospital	26		172	80%		69%		1%
Glasgow Royal Infirmary	25		169	53%		79%	3%	J
Inverclyde Royal Infirmary	20	L	53	51%		68%		
New Victoria Hospital Glasgo	30		177	47%		81%		1%
Queen Elizabeth University Ho	25		229	60%		76%		_
Royal Alexandra Hospital	26		208	84%		69%	1%	]
Stobhill Hospital	25		100	38%		78%		
Vale of Leven District General	24		85	26%		68%		
West Glasgow Ambulatory Ca	25		210	38%		63%		
Aberdeen Royal Infirmary	28	ž	306	45%		76%		
Dr Gray's Hospital	22	di	78	32%		89%		
Lawson Memorial Hospital	21	5	35	97%		68%		
Lorn & the Islands Hospital	25	8	14	79%		89%		
Mid Argyll Community Hospita								
Raigmore Hospital	22		127	46%		78%		
University Hospital Hairmyre:	27		204	54%		70%		
University Hospital Monkland	27	ŧ.	479	33%		77%	0%	1
University Hospital Wishaw	26	ĩ	260	42%		86%		-
East Lothian Community Hosp	26		71	18%		69%	10%	1%
Royal Infirmary of Edinburgh	29	h.	375	25%		78%	2%	0%
St John's Hospital	26	ĩ	60	13%		50%	15%	2%
Western General Hospital		1						
Dounby Surgery	29	h	38	42%		71%		3%
Gilbert Bain Hospital	21	۴-	35	83%		76%		
Arbroath Infirmary		$\vdash$			_			
Crieff Community Hospital	29	Η.	6	50%		50%		
Ninewalls Hospital	28	ŧ.	000	31%		68%	0%	1
Darth Doval Informan	26	ť	126	274		77%	202	1
Peron Royal Infirmary	20	h -	130	2170		67%	270	1
St Andrew's Community Hospital	27	Ľ	5	764		70%		164
Streamber Viscott	27		84	7070		0.05%		170
Stracathro Hospital	21	Ł	8/	43%		80%		
Tayside Home Phototherapy	29	₽	30	13%		60%		
Western Isles Hospital								
Median whole body L	VR tres	tma	ante	for peoriasis	wit	h outcome (	of clearance	or MRA <30
Reduct whole body over reductions for poor asis with outcome of clearance of MICA <50								
<b>90%</b> of all referrals should start treatment within six weeks of referral from Dermatology Outpatients. <b>(Over 90% : Green) (Between 80%-89% : Amber) (Under 80% Red)</b>								
Clearance/near-clearance of whole body UVB psoriasis is the outcome of greater than 70% of completed courses (>70%:Green) ( >60%:Amber) ( <60%: Red)								
Localised Ervthema percentage above 4% will trigger a Red Status								
	GIUCIILE	ige	abu		.99			
Generalised Erythema	a perce	nta	ge a	bove 2% wil	l tri	igger a Rec	Status.	
Fig: 6								

# National outcomes against 4 Quality Standards for 2023/24 by Health Board Area

Clearance Rate	Time to Treat Outcome	Localised Erythema	Generalised Erythema
73%	47%	2%	0%
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Fig: 7

# Looking forward – 2024/25

Priorities will include:

- Holding an annual Photonet conference
- Delivering the annual audit cycle for Photonet
- Development of Phototherapy page for NHS Inform
- Development of Paediatric Leaflet
- Development of general guidance around safe delivery of phototherapy treatment and evidence-based risks and benefits to support patients who are considering private treatment.
- Development of patient FAQ section on website.

# Finance

The network spent £922 of its £5000 budget on the Photonet Conference.

# **Risks and issues**

#### Lead Clinician Recruitment

The current Lead Clinician, Dr Ewan Eadie's, term ended on 31<sup>st</sup> March 2024. Recruitment is currently paused for the post and there is a risk that the network will not be able to achieve its full programme of work without a lead clinician in post.

## **Appendix A**

# **Photonet Specialist Technician Report**

In the 2023/24 survey year, 94% of the active sites were visited by the Photonet technologist, against a target of 80%. This encompassed 96% of the UVB cabinets, 97% of the UVA cabinets, 100% of the UVB hand and foot units and 96% of the UVA hand and foot units. The absolute median percentage difference between Photonet and local measurements for UVB cabinets was 6.5%, compared to 7.7% in 2022/23. Similarly, the difference was 13.23% for UVA cabinets, compared to 12.49% in 2022/23. For hand and foot units, the difference was 8.84% for UVB units, compared to 7.44% for 2022/23 and 8.95% for UVA units, compared to 5.77% for 2022/23. Only one site; War Memorial Hospital, Arran, remains unvisited since the start of the Covid-19 pandemic, however, the ongoing issues with the CalMac ferries are making planning a visit to this site problematic.

The new dosimetry phantom has now completed three full survey years and is showing very good overall consistency. The combined absolute median percentage difference for the 2023/24 survey year was 7.1%, compared to 8.5% in 2022/23 and 7.46% in 2021/22. However, while the overall result is both consistent year on year and an improvement over the overall result seen historically using the direct method, the results for the UVA cabinets have not met expectations. The working theory for this is that the panels of the phantom are more reflective in the UVA region than in the UVB. Laboratory tests have shown promising results and an alteration; application of black cloth, has been made to the phantom for the 2024/25 survey year.

Phase two of the phantom development project is still ongoing and awaiting costing and a timescale being provided by the Glasgow MDU.

The first draft of the dosimetry paper has been written and work is currently underway on cleaning up the historical Photonet data, to allow for more detailed analysis. Unfortunately, due to the current status of the UVA comparisons, submission to a journal will be delayed until we can produce a full year's results that show an improvement on the historical average.

lain Foggarty Photonet Specialist Technologist