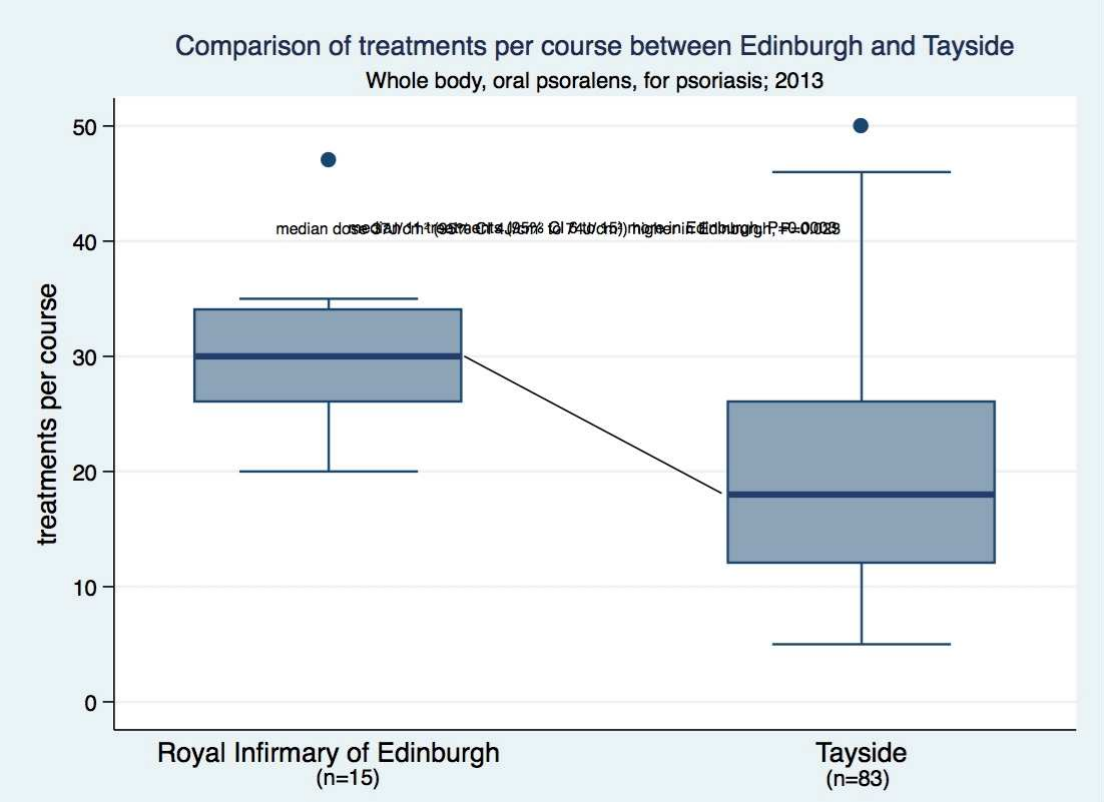
Anonymised Minutes of Phototherapy Near Misses Meeting (2014)

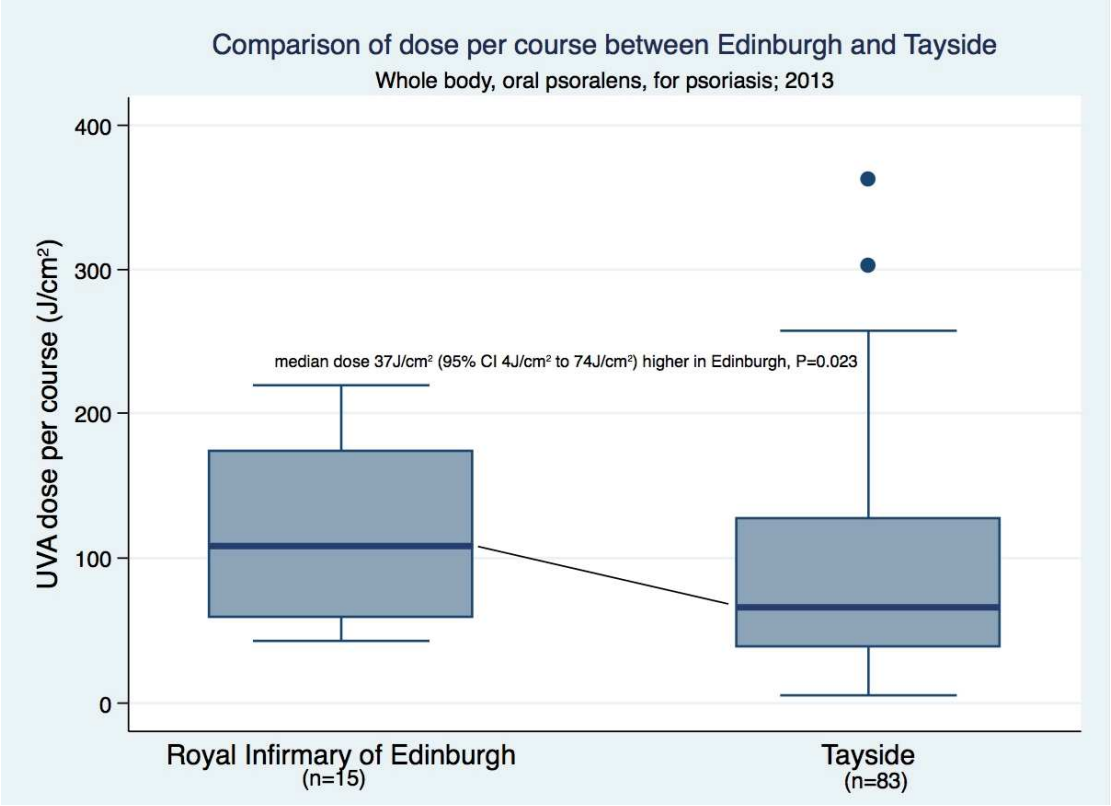
In attendance: 15 Doctors, phototherapy nurses & medical physicist
1. Apologies: 4

2. Minutes of previous meeting: these were accepted as an accurate record.

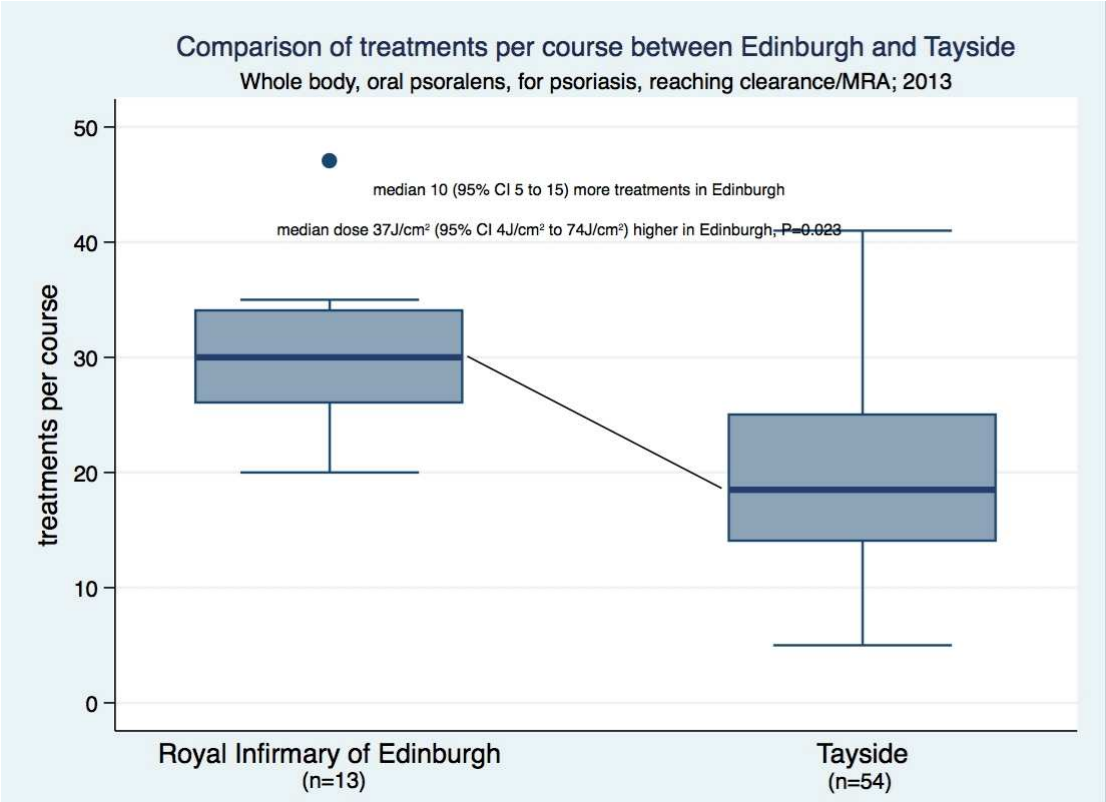
3. Matters arising from previous minutes: all action points have been completed apart from the following:
(i) MPD tester replacement: "X" is exploring the use of the new hand and foot UVA units for MPD testing. **ACTION: "X"**
(ii) Review of PUVA treatment protocol: "X" presented the following comparative data for whole body PUVA treatment with oral psoralens of psoriasis in 2013 in Tayside (83 courses) and RIE (15 courses):



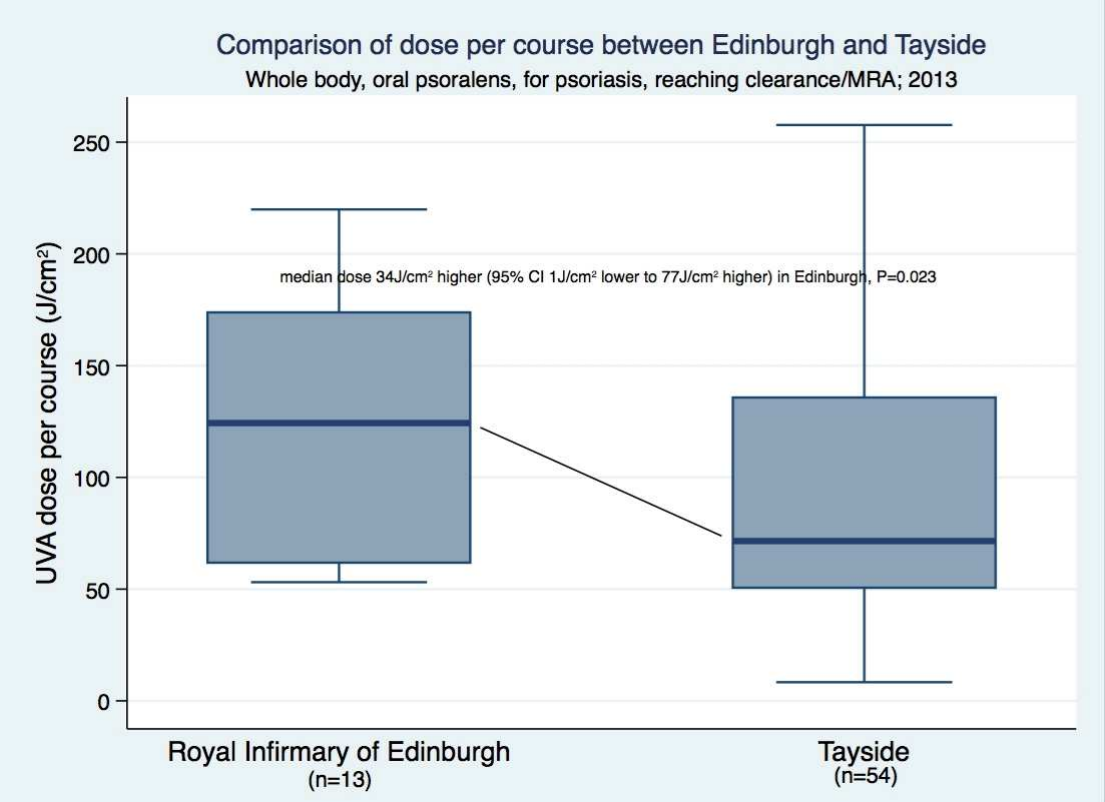
Although there were significant differences between the centres for numbers of treatments per course it was acknowledged that there were differences in treatment protocols and patient selection/disease severity. Tayside use an erythema grade guided incremental protocol of 40%-->20%-->10% and RIE use a non-erythema grade-based geometric decrimental protocol starting at 40% (by 5th Tx 16%→ 5%@10th Tx → 2%@15th Tx)



Despite the significant difference in number of treatments there was more overlap of total doses per course between the 2 centres.



It was noted that 87% courses achieved clearance/MRA in RIE and 65% in Tayside.



X suggested that the phototherapy registrar audit all Photonet centres data for whole body PUVA with oral psoralens. **ACTION: "X"**

(iii) MPDs on soles of feet: MPDs on soles of feet will be explored in patients attending for whole body PUVA – ethical approval will be required. **ACTION: "X"**

(iv) Hand & foot flowchart: this is still being considered (e.g. patch tests, mycology, optimising topical treatments); once agreed by all consultants it would be mandatory prior to referral for H&F UVB or PUVA otherwise referral would be rejected. **ACTION: "X"**

(v) Protocol for patients starting essential new medication during UV: "X" will write a protocol (expose one arm only at previous dose provided no adverse reactions or missed treatments; to use same protocol regardless of perceived potential of drug to photosensitise). **ACTION: "X"**

(vi) Electronic E3 proforma: "X" is exploring this and will check use of UPI with Caldicott Guardian. The proforma would be accessible on the dermatology shared drive. **ACTION: "X"**

(vii) Translation requirements: telephone translators are being used if required. "X" reiterated NHS Lothian policy to desist using relatives or friends of patients (members of staff can be used). Although a snapshot of patients attending for phototherapy only revealed 3 patients requiring translators (Spanish, Polish & Mandarin) it is important to offer translated written patient information leaflets and we are still awaiting demographic information from NHS Lothian. We are audited externally by Photonet and one of their

performance standards (Standards Statement 2a) is that 'all patients treated with UVB or PUVA and their parents/carers have equitable access to information tailored to individual needs and their specific condition' and that patients 'will have received relevant Patient Information Leaflets prior to commencing treatment'.
If the requested Lothian demographic information is not forthcoming a Freedom of Information request may be required. The aim is to provide translated PIL for the 5 commonest languages in the Lothian area.

ACTION: "X"

(viii) 10 year audit of RIE whole body UVB treatment of eczema: ongoing

ACTION: "X"

(ix) E2 audit: ongoing **ACTION: "X"**

(x) Phototherapy department educational meetings: very positive feedback was received from the nursing staff following the inaugural meeting (presentations by "X" & "X"). The next meeting will be on Wed 4th February 2015. "X" will give a presentation on systemic treatments for psoriasis and he will invite "X" to give an update on his UV research projects.

ACTION: "X"

"X" will be invited to present her phototherapy audits.

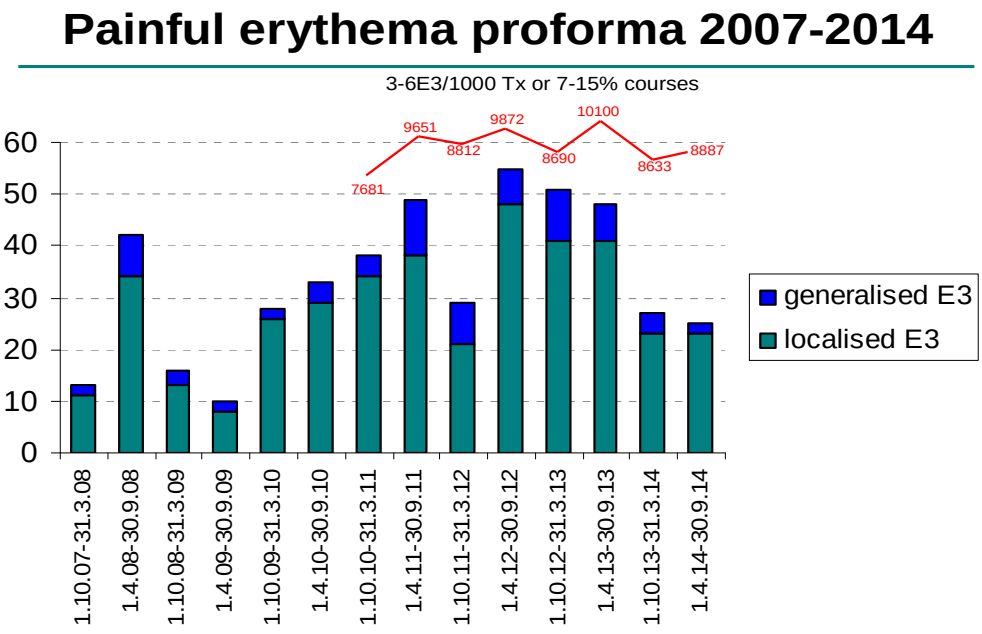
ACTION: "X"

4. <u>Sources of near misses 1.4.14-30.9.14</u>

(i) Datix: there were no incidents in DDTC

(ii) Painful erythema proformas:

- 26 episodes from 8,887 treatments(2 generalised & 24 localised**); 0.02% risk of generalised painful erythema**
- Similar total number of painful erythema episodes to preceding 6 months (27) but gave 3% more treatments



Figures in red show number of treatments given per 6 month period; marked reduction in painful erythema episodes in past year.

(iii) Photonet Annual Report: the most recent report is from 2012-13. Our erythema episodes triggered a "red light" as they were greater than 4% but this includes localised and generalised erythema episodes. It was noted that 11 of the 32 Photonet centres in Scotland reported no erythema episodes. "X" has already raised the issue of unreliability of database entry and the inclusion of localised erythema in reporting. "X" requested that these issues are highlighted again at the next Photonet Steering Group meeting in December 2014. **ACTION: "X"**

Erythema episodes

Erythema episodes are recorded in different ways in different centres. In an attempt to assess important episodes in a way that will be comparable in time across centres, over the past year there has been a facility in PhotoSys to tick a box if an important (painful) erythema occurred during a course of treatment. It is likely that this year there will still be variation in recording of painful erythema caused by variation in definition rather than true variation in important erythema rates. Although not a Photonet standard, the network strives to reduce the number of erythema episodes.

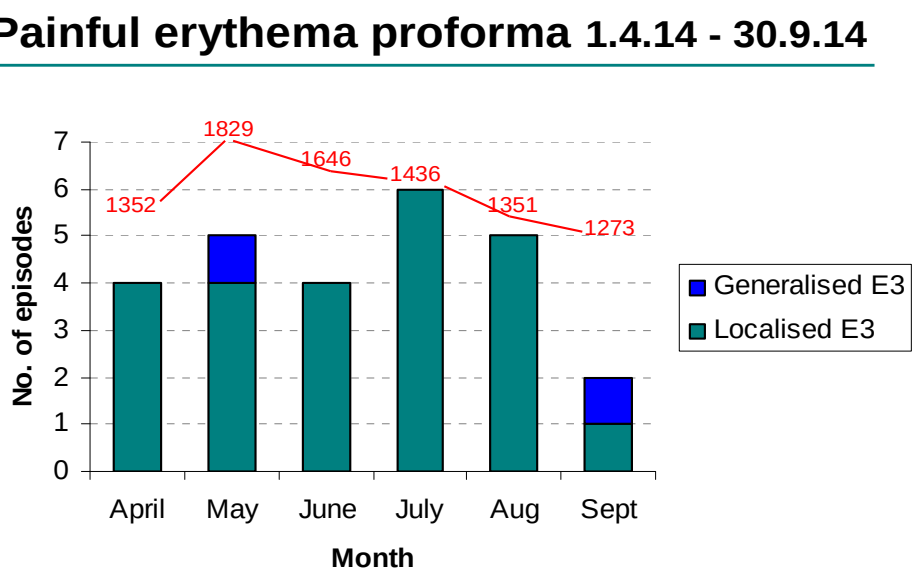
	Status:	Comments
The Photonet Steering Group has determined that an erythema % above 4% should trigger a Red Status.	R	61 UVB courses (8.8%) recorded at least one localised erythema. This is outwith the target set by the steering group. 17 UVB courses (2.8%) recorded at least one generalised erythema which is within the target set by the steering group.

Arbitrary Centre Number	UVB All Treatment Areas Total Courses	Number of UVB Courses recorded with at least one localised erythema	% Number of UVB Courses recorded with at least one localised erythema	UVB Whole Body Treatment Total Courses	Number of UVB Courses recorded with at least one generalised erythema	% Number of UVB courses recorded with at least one generalised erythema
1	121	2	1.7	121	1	0.8
2	282	0	0.0	279	0	0.0
3	560	6	1.1	444	2	0.5
4	32	7	21.9	31	10	32.3
5	178	0	0.0	176	2	1.1
6	94	5	5.3	90	1	1.1
7	6	0	0.0	6	0	0.0
8	108	4	3.7	107	2	1.9
9	171	0	0.0	171	0	0.0
10	285	3	1.1	200	0	0.0
11	25	1	4.0	25	1	4.0
12	30	0	0.0	30	0	0.0
13	224	0	0.0	223	0	0.0
14	156	21	13.5	151	4	2.6
15	43	0	0.0	43	0	0.0
16	394	6	1.5	304	2	0.7
17	313	10	3.2	310	2	0.6
18	107	2	1.9	105	2	1.9
19	113	0	0.0	112	0	0.0
20	168	3	1.8	167	0	0.0
21	1	0	0.0	1	0	0.0
22	83	2	2.4	80	3	3.8
23	*140*	0	0.0	*108*	0	0.0
24	121	1	0.8	107	2	1.9
25	183	32	17.5	182	5	2.7
26	347	0	0.0	341	0	0.0
E.R.I.	697	61	8.8	610	17	2.8
28	276	7	2.5	228	0	0.0
29	140	3	2.1	132	0	0.0
30	146	1	0.7	135	0	0.0
31	261	8	3.1	209	7	3.3
32	226	11	4.9	225	1	0.4

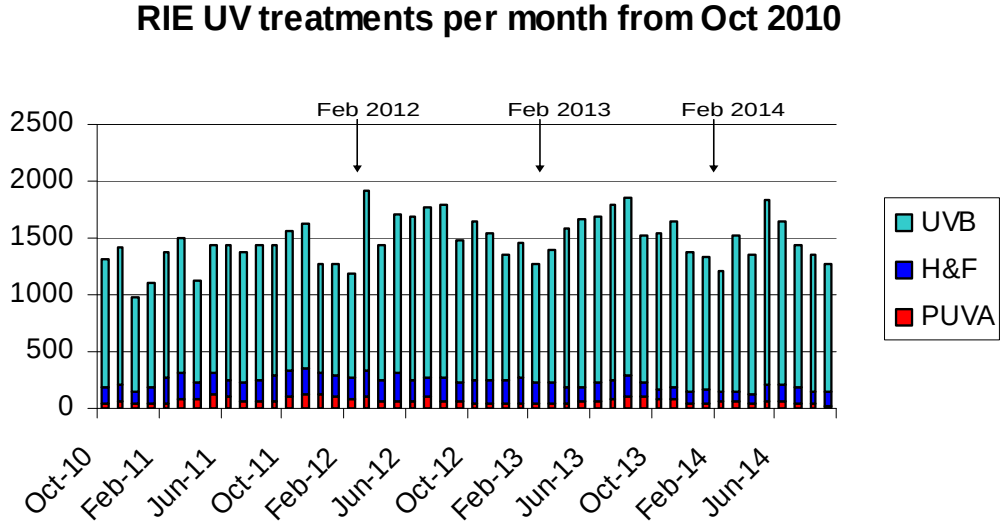
Further to the meeting “X” raised this issue at the Photonet Steering Group Meeting on 4th December 2014 and there was agreement to change the rate of painful erythema that will trigger a red light. Currently, all painful erythema >4% triggers a red light. For the 2013-14 annual reports the erythema types will be separated and **localised painful erythema > 4%** will trigger a red light as will **generalised painful erythema >2%.** All units reporting no episodes of painful erythema will be asked to explain this.

5. Audit of painful erythema proformas:

(i) Numbers of episodes per month 1.4.14-30.9.14 total numbers of treatments in red; no significant correlation



(ii) Numbers of UV treatments per month 2010-2014:



This graph shows peaks in summer and troughs in winter. Enforced closures over festive period, possible adverse weather conditions and missed treatments due to intercurrent illnesses may account for some reduction in numbers treated over winter months. UV courses tend not to be started in the second half of December and are deferred until the New Year.

(iii) Patient demographics:

- 17 males and 9 females (preceding 6 months =)
- age range 27-80 years; median 49 (previous 6 months median 47)
- skin type (small numbers but broadly representative of total workload)

I	6	(23% *cf* 20% workload)
II	12	(46% *cf* 42% workload)
III	7	(27% *cf* 35% workload)
IV	1	(4% *cf* 2% workload)
V	0	(0% *cf* 1% workload)

(iv) Diagnosis per episode:

psoriasis	19 (73% E3 *cf* 73% workload)
eczema	3 (12% E3 *cf* 16% workload)
nodular prurigo	2
PPP	2

This continues to validate our eczema protocol which was devised in Nov 2011 following doubling of eczema E3s *cf* workload. Data for whole body UV treatment of eczema for the past 10 years is being audited.

ACTION: "X"

(v) Cabinets (figures in brackets show numbers of treatments given in the 6 month audit period):

NB1	7 (1968)
NB2	8 (2069)
NB3	3 (1819)
NB4	5 (2032)
PUVA	0 (294)
H&F UVB	0
H&F PUVA	3 (705*)

* total H&F (16% increase on preceding 6 months workload)

No specific medical physics issues were noted during the 6 month audit period although the H&F PUVA units were replaced in March 2014 so there was a period when we did not start any new referrals.

(vi) Treatment frequency:

2x week	23
5x week	0
not recorded	3

(vii) Number of treatments when painful erythema occurred:

range 3-28; median 17 (previous 6 months median 15)
continues to validate our start dose protocol

(viii) Preceding grade 2 erythema (E2):

11/26 (42%) *cf* 12/27 (44%) preceding 6 months
number of treatments range for 1st E2 4-15; median 8 (previous 6 months median 8)
number of E2s (6 month audit period included festive public holidays)
6 had 1 E2
5 had 2E2s
We don't know how many patients who don't develop an E3 or E4 have a preceding E2 so don't know how significant this is. "X" will audit a sample of 100 attending patients and record the numbers of E2s.

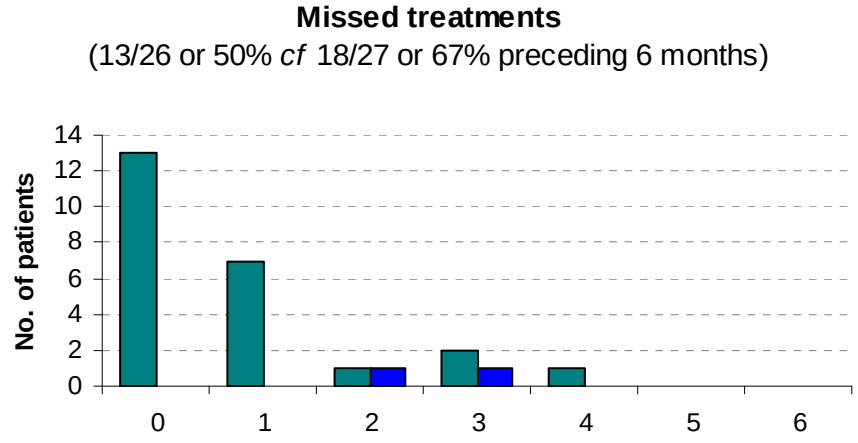
ACTION: "X"

(ix) Preceding grade 3 erythema (E3):

2 *cf* 0 previous 6 months (occurred at 13th & 14th treatments)

(x) Missed treatments: *see graph below (localised E3 in green and generalised E3 in blue);* 50% missed treatments *cf* 67% in previous 6 months but the latter included festive public holidays and therefore enforced missed treatments; majority missed one or 2 treatments.

Painful erythema proforma 1.4.14 - 30.9.14



(xi) Change in column from start of whole body UVB to time of E3; figures in brackets show expected start column indicated by skin type alone but actual numbers reflect diagnosis and photosensitiser start dose protocols; trend is for shift to lower columns for start dose and to higher columns by time of E3; 6/23 (26%) developed E3 in column D or E; all 4 in column D had type II skin; one in column E had type III and one had type IV skin. The 2 generalised E3 occurred in columns 2left of A and E. We don't know how

many patients who don't develop E3 or E4 are treated in columns above those indicated by skin type so don't know the significance of this.

Painful erythema 1.4.14 – 30.9.14

(23 receiving whole body treatments)

	start column	column at time of E3
3L of A	0	1
2 L of A	5	2 (1x E3G)
1L of A	1	3
A	3(6)	2
B	9(11)	4
C	5(6)	5
D	0	4 (all E3L)
E	0	2 (1xE3G)

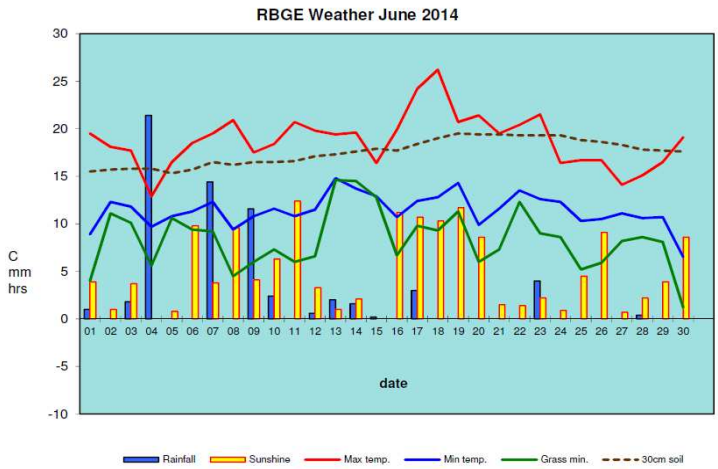
(xii) Site of painful erythema for whole body UVB:

2 generalised

21 localised – 6 on trunk, 4 on face/neck, 3 in axillae (?related to changing position of hands on cabinet handles), 3 on arms, 3 on legs and 3 on buttocks.

(xiii) Photosensitising medication: this is the first audit period that no patients were on antihistamines – validates our policy of requesting patients to avoid "prn" antishistamines and to either take them regularly or not at all during course of UV; 11/26 patients were on systemic photosensitisers; the commonest photosensitisers were ACE inhibitors, SSRI, diuretics and statins. The 2 patients who developed generalised E3s were on ACE inhibitors and SSRIs.

(xiv) Sun exposure: only one patient reported recent sun exposure as a possible contributing factor to developing a painful erythema. Interestingly all 4 cases of localised painful erythema in June were reported on the same day.



6. Case presentations:
The 2 cases of generalised E3 and 3 cases of hand & foot E3 were presented and it was agreed that correct protocols had been followed in each case.

Case 1: skin type I 66 year old ♀ with psoriasis; on Losartan and thyroxine from start of course; reported E3 at next scheduled visit after 26th whole body NB UVB; as patient was not seen when she had symptoms the erythema was not confirmed; the PhotoSys database will be checked and amended if required.

ACTION: "X"

A note will be made on the red sticker on the patient's notes stating that they should not have further UV unless they agree to attend for urgent review if they develop a further episode of painful erythema.

ACTION: "X"

Before patients embark on a course of phototherapy they must be informed that any episodes of painful erythema must be reported to the nurses as soon as possible to enable urgent review, accurate grading of erythema, identification of possible cause and instigation of appropriate treatment. If patients fail to report painful erythema until their next scheduled appointment or decline urgent review, their course of UV will be stopped. There may need to be some flexibility regarding episodes occurring at weekends but patients should be encouraged to take photographs and seek medical advice from their GP or NHS 24. This information should be reinforced after a few treatments. **ACTION: Phototherapists**

Only confirmed episodes of painful erythema (localised and generalised) will be recorded on the painful erythema proforma and the PhotoSys database. Unconfirmed episodes will be recorded in the phototherapy case notes only.

ACTION: "X"

Photographs should be obtained for all episodes of generalised painful erythema and in patients having localised hand and foot UV.

ACTION: Phototherapists

Case 2: skin type III 42 year old ♀ with psoriasis; on lisinopril and fluoxetine from start of course; generalised painful erythema occurred on 9th September 4hours after 23rd treatment with whole body NB UVB (8'55"); developed erythema on face as well as body despite wearing a visor and it was not a sunny day; also had earache and felt unwell but denied taking photosensitisers such as NSAID; missed preceding treatment so repeated dose of 8'55" which had not resulted in any erythema when first given; concluded that outcome was unexplained but probably unavoidable and that the coincidental viral infection probably contributed to symptoms.

Case 3: skin type III 49 year old ♂ with PPP; on alitretinoin, lisinopril and Adalat from start of UV course; seen by on-call dermatology SpR - one blister dorsum [R] hand and several insipient blisters at finger tips after 18th treatment with 8MOP oral PUVA (9.2J/cm2); probable cause was reaching threshold due to concomitant alitretinoin.

Case 4: skin type II 54 year old ♂ with atopic eczema of hands and feet; not on any drugs; developed blisters and painful erythema on palms and soles after 21st treatment with 8MOP oral PUVA (11J/cm2); seen by phototherapy doctor; no obvious triggers, thought to have reached threshold; future courses to be limited to maximum dose of 9.2J/cm2.

Case 5: skin type II 51 year old ♀ with PPP; not on any drugs; reported painful erythema on palms at next scheduled visit after 17th treatment (9.2J/cm2); language difficulties noted; probable cause was reaching threshold; as painful erythema was not confirmed it should not be recorded on PhotoSys – database will be checked and amended if required.
ACTION: "X"

7. Patient involvement: "X" proposed engaging patient representation in the process and outcomes of near misses meetings and has suggested identifying a suitable candidate. **ACTION: "X"**
A meeting will be arranged between "X", "X", "X" and the patient representative. **ACTION: "X"**

8. MPD readings: if no reading is obtained, check that correct dose of tablets were taken and there was no vomiting then repeat with higher dose of psoralen. If a very strong MPD reading (6 marks) is obtained use 10% increments. **ACTION: Phototherapists/Doctors**

9. Hand & foot PUVA: MPD will be performed to check absorption of psoralens. Maximum dose 11J/cm2. **ACTION: Phototherapists**
Treatment documentation will be reviewed. **ACTION: "X"**

10. Psoralen tablets: the new prescribing and issuing process seems to be working well but there have been a few cases of confusion about quantity of tablets to be taken. Phototherapists to reinforce that patients must always take the same dose. Any problems with the new process or with patients running out of tablets unexpectedly should be logged on Datix.
ACTION: Phototherapists

11. Hand & foot UVB: new units are due in January 2015; the treatment protocol will be reviewed by "X", "X", "X", "X" & "X". **ACTION: "X"**
Treatment documentation will be reviewed. **ACTION: "X"**

12. Eye protection in cabinets: "X" reinforced that all patients must wear goggles even if they have eyelid disease. **ACTION: Phototherapists**
Several patients have reported discomfort with the new goggles from Arthrodax which are used throughout the UK but no other Photonet centres are aware of problems. Most other centres use a set of goggles for an individual patient rather than wash and re-use each set – we will adopt the former. **ACTION: Phototherapists**
"X" has sourced some smaller, more comfortable goggles. These will be tested by Medical Physics. **ACTION: "X"**

13. Date of next meeting: tbc (May 2015)