SJUKHUSFYSIKERN

INFORMATION FRÅN SVENSKA SJUKHUSFYSIKERFÖRBUNDET – SEKTION INOM SVERIGES NATURVETAREFÖRBUND, BOX 760, 131 24 NACKA.
TEL: 08-716 28 55

Nr 2 1991

Innehåll:

ISSN 0281-7659
Årgång 14
Upplaga: 240 ex

Redaktör:
Lars Johansson

Ansvarig utgivare:
IngerLena Lamm

Det har sedan juli bjudit mig emot att ge ut ett nummer utan annan information än att vi inte har någon att förmedla. Så mycket trevligare är det då att kunna rapportera att vår ordförande nyligen företog en uppenbarligen mycket givande resa till EFOMP-mötet i Wien och återkom med mängder av intressant information.
Av alla kurserna vill jag framför allt fästa uppmärksamheten på den om växelverkan i Trodheim. Det är ett gott tecken på konstruktivt nordiskt samarbete att man anlitar svenska föreläsare och enligt vad som har försports kommer detta initiativ att fortsätta nästa höst då Linköpingsinstitutionen kommer att vara behjälplig med dosimetri-kursen.
Apropå det akademiska så blev i varje fall jag mycket överraskad över att Bertil Persson till slut lyckades få fram en ny professur i Lund. Det torde vara svårt att finna någon stockholmare, som inte är lika förvånad - och avundsjuk - över att man i Skåne inom en cirkel med en radie av knappt 5 km finner tre (3!) professurer i radiofysik, medan man t ex i hela landet inte har fler än 6 professorer i röntgendiagnostik - om jag nu räknat rätt på fingrarna.
Årsmötet förläggs även i år till Älvsjö och denna gång ska alla morgonpigga få en chans. Glöm inte det nuklearmedicinska årsmötet samma dag. Kommer man kl 12.30 i sal K16 att lyckas välja en ny styrelse, något som inte gick att göra i Hälsingborg i våras? Tyvärr kan det bli tomt i sal E 4 där samtidigt radiofysikföreningen börjar sina vetenskapliga förhandlingar. Kalle Vikterlöf-föreläsningen börjar 14.00 och hålls av professor Barry Wessels om "Current concepts in radiolabeled antibody dosimetry".
Bertil Axelsson har varit vänlig nog att sammanfatta vad som sades i Norrtälje om ekonomiska styrsystem, ett ämne somvi alla kommer att tvingas ta itu med under åren som kommer. Det finns mycket mer att sammanfatta från Norrtäljemötet - styrelsen ska göra ett försök vid ett möte i Malmö i oktober.
Låt mig t v uttrycka vad många andra gjort: Kalle Vikterlöf hade en osedvanligt stor del i att diskussioner-na blev så konstruktiva under de två dagarna. Tack Kalle! Dina kolleger kommer nog att behöva kalla på dig även i framtiden!
Jag fick härom dagen i min hand några nummer av SSI:s interntid-ning "Curieren" och gladdes åt Jonas Karlbergs dissektion av några typiska floskler. Om även andra delar mir uppskattning av hans inlägg har han lovat att återkomma.
Det ryktas att SSI har fått en inbjudan att förlägga nästa kontaktmöte till Malmö våren 1992.
Glöm inte att besvara enkäten om olyckor och incidenter. Tack!
Nästa två nummer bör nå er 1 november och kring jul. Tacksam för bidrag, både gamla utlovade och nya!

Lasse J.

KALLELSE TILL ÅRSMÖTE

Medlemmarna i Svenska Sjukhusfysikerförbundet kallas härmed till årsmöte fredagen den 29 november, 1991, kl 9.30 i sal K 14 på Stockholmsmässan i Älvsjö. Mötet sker i anslutning till Svenska Läkarsällskapets Riksstämma.

DAGORDNING

1. Val av ordförande för årsmötet.
2. Val av vice ordförande, sekreterare och två justeringsmän för årsmötet.
3. Styrelsens årsberättelse.
4. Revisorernas berättelse.
5. Fråga om ansvarsfrihet för styrelsen.
6. Fastställande av årsavgift.
7. Val av styrelse.
8. Val av två revisorer och en suppleant.
9. Val av valberedningen om två ledamöter, varav en sammankallande.
10. Övriga ärenden.

(Förslag, som rör de 9 först nämnda stadgeenliga ärendena och som årsmötet kan komma att ta ställning till genom omröstning, skall skriftligen vara styrelsen tillhanda senast 5 veckor före årsmötet. Frågor av allmän karaktär, som kan komma att behandlas under "övriga ärenden" skall likaså lämnas in skriftligen 5 veckor före årsmötet.)

VÄLKOMNA!

NYA EKONOMISKA STYRSYSTEM

Några av de synpunkter som framfördes vid mötet i Norrtälje

För tio år sedan skulle ansvars- och beslutsfunktioner delegeras till mindre enheter för att åstadkomma en decentralisering av styrningen. Medelstilldelningen skedde dock genom beslut i central enhet som t.ex. sjukvårdsstyrelse. Enligt nuvarande trend skall i stället ansvars- och beslutsbefogenheter centraliseras till större enheter för att underlätta styrningen. Däremot skall medelstilldelningen från centralt håll minimeras och de ekonomiska medlen fördelas i stället till enheter nära patienten som t.ex. primärvårdsenheter. Pendeln svänger alltså och kan om tio år ha svängt tillbaka igen. Detta kan vara bra att hålla i minnet när man diskuterar lämpliga modeller för ekonomiska styrsystem och hur vi skall anpassa oss till dessa nya system.
Fördelningen av medel till "gräsrotsnivå" för köp av tjänster från specialavdelningar innebär att ASF måste komma överens med onkologi, radiologi m.fl. om prissättningen för sjukhusfysikertjänster inom respektive område. Kostnadsberäkning åtgärd för åtgärd är för direkt patientrelaterad verksamhet inte så komplicerat. System för beräkning av kostnader finns (för exempel se bilaga från KS) och vid vissa avd. har sådana beräkningar redan gjorts (se bilaga från Östersund). En stor del av verksamheten (utredningar ,konsultverksamhet) täcks emellertid inte in via ett sådant system. Denna del måste regleras via kontrakt med avnämarna om vissa insatser i mandagar räknat. Eventuellt kan kontrakten utformas så att de även innefattar direkt patientrelaterade åtgärder. Glöm inte räkna in "overheadkostnader" vid utformningen av kontrakten .
Verksamhet direkt relaterad till strålskyddsföreskrifter finansieras via "koncernbidrag" från sjukvårdsstyrelsen. Det ansågs allmänt vara en fördel om en stor del av budgeten reglerades via sådana koncernbidrag. Det ansågs som en "säker" inkomstkälla. Synpunkter framfördes dock att verksamhet finansierad via kontrakt med avnämarna förmodligen har större potential i tillväxthänseende, om verksamheten sköts på ett bra sätt.
Den centraliserade organisationen kan även påverka resursfördelningen om divisionschefen, chöl, ges befogenheter till omfördelning mellan i divisionen ingående enheter. Enighet nåddes inte om risken för att chölen skall tilldelas sådana befogenheter i en nära framtid. Illavarslande signaler från olika håll talar dock om divisionschefer med ganska vittgående ekonomiska befogenheter. Chölens eventuella inflytande över de ekonomiska realiteterna begränsas dock av strålskyddslagstiftningen och föreskrifter som innebär att ASF självständigt ansvarar för denna del. Detta skulle kunna manifesteras genom inrättande av parallellbefattningen chös, cheföversjukhusfysiker enligt förslag från Berndt Söderborg.
Diskussion kan uppstå om ansvaret för isotopverksamheten och viss del av dosplaneringsverksamheten. Systemet med patientansvarig läkare PAL, bör tillsammans med strålskyddsorganisationen kunna lösa även dessa problem på ett för sjukhusfysikavdelningen lämpligt sätt. D.v.s klar uppdelning mellan patientansvar och administrativt ansvar.

Modell för kostnadsberäkning (Karolinska sjukhuset)

A. Kostnader direkt relaterbara till prestation
kostnader för förbrukningsmaterial
kostnader för arbetstid

B. Kostnader gemensamma för hela kliniken
kostnader för förråd-inköpsverksamhet
kostnader för data/ADB-verksamhet
kostnader för gemensam personal
kostnader för lokaler

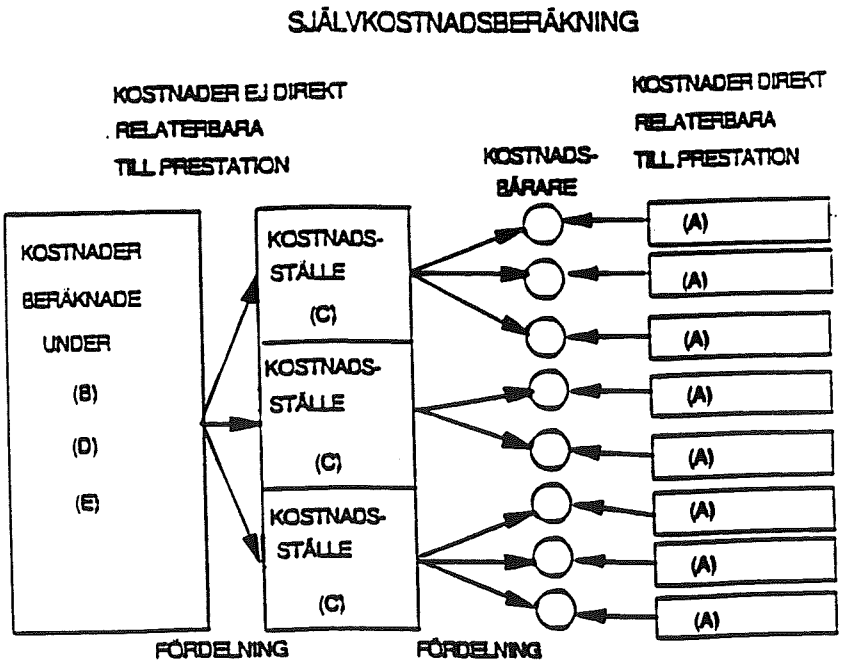
C Kostnader ej direkt relaterbara till enstaka prestation men som kan hänföras till ett specifikt kostnadsställe och specifika grupper av prestationer
kostnader för personal
kostnader för städning, tvätt, avfallshantering mm
kostnader för serviceavtal, reparationer och underhåll av inventarier
kostnader för vissa leasingavtal

D. Kapitaltjänstkostnader
avskrivningar
räntor
leasingkostnader (som ej ingår i driftbudget)

E. Kostnader för central administration

F. Metodutveckling
För utveckling av metoder för sjukvården görs ett pålägg på 10 % av det beräknade priset

G Forskning/Undervisning
Dessa kostnader är anslagsfinansierade och skall inte ingå i kalkylen



X

11071

Lasse,
Håll till godo.
Hälsningar
Viktor

Totalt belopp inkl lokalhyra: 1520200

varav lokalhyra: 0
personalkostnad: 982200

Antalet tillgängliga procedurer under året: 27
varav med gammakamera: 23
och med provväxlare: 2

Ange FILNAMN (max 12 tecken): PIX.DAT

Totalt: 73560 min
Kronor per min (personal+lokal): 13.35
Totalt antal utförda procedurer: 1744
varav med gammakamera: 1613
Kostnad per min för gammakamera: 4.57

Antal	Kronor	Procedur	Undersökn/behandling
[illegible]1	873	1	Hjärnscint+cirk
5	2252	2	Ceretec
121	617	3	Tyr med Tc
72	1105	4	Tyr med I-131
142	783	5	Lung perf
11	1324	6	Lung inhal
43	1414	7	Gallgång
54	617	8	Lever
759	956	9	Skelett
51	617	10	Mjälte
5	816	11	Meckel
143	966	12	Renografi
30	866	13	Renografi+furosemid
25	587	14	Resurin
33	497	15	Reflux till njure
6	1344	16	Trombos
[illegible]6	3558	17	Myokard
4	607	18	Shunt-Hjärta
1	986	19	EF-Muga
1	1295	20	Helkropps med I-131
0	2366	21	Likvorläckage
0	1524	22	Paratyr
0	587	23	Esofagus
96	1122	1	Clearance
11	1181	2	Schilling
18	900	1	Beh. tyreoid
6	700	2	Beh. benmärg

Summa kostnad för undersökn med gammakamera: 1622925
Summa kostnad för undersökn med provväxlare: 120722
Summa kostnad för behandlingar: 20411

Summa total kostnad: 1764060 Balans: 243860

Institution som skall debiteras ?
Ja = Dess namn <RTN> ; Nej = N N

KORT RAPPORT FRÅN EFOMP-MÖTET I WIEN 14-15 SEPTEMBER

Sommarskolan på Irland hade varit mycket lyckad, med 29 deltagare från 17 länder (tre från Sverige). 1992 års sommarskola i Sevilla behandlar radioterapi, och 1993 planeras en "röntgenskola".

En Advanced School on Medical Physics äger rum i Como Italien i maj 1992 (se bifogad kort information). Utförlig information kommer också att sändas ut direkt till sjukhusfysiker (via avdelningschef/motsvarande).

För tysktalande fysiker ordnar tyska och österrikiska föreningarna för medicinsk fysik vinterskola i nuklearmedicin och fysikaliska mätmetoder (se bifogad information).

Det är dags att skicka in ansökningar till 1992 års EFOMP stipendium; ansökningarna skall vara inne vid årsskiftet. Ansökningspapper kan rekvireras hos

Dr Philip P Dendy
Medical Physics Dept
Addenbrookes Hospital
Hills Road, Cambride CB2 2QQ, UK

Det går också bra att använda förra årets papper (se även EFOMP News).

Ett något reviderat förslag till "Criteria for the number of physicists in a medical physics department" antogs och skall utges som ett EFOMP policy document (bifogas). Kriterierna gäller för radioterapi, nuklearmedicin och delvis för diagnostisk radiologi, där lagstiftningen enligt ett EEC direktiv kräver medverkan av en fysiker, som har status som "Qualified Expert in radiation physics" inom dessa discipliner.

Ett förslag till definition av "sophisticated department", som förekommer i EEC-direktivet kring strålskydd av patienter, diskuterades och antogs i reviderad form (bifogas).

Dessa båda förslag skall, tillsammans med beskrivningen av "Qualified Expert in Radiophysics", diskuteras vidare vid ett CEC-möte den 13 december i år (prel datum). EFOMP är EG:s expertorgan på radiofysik, och förhoppningsvis kommer även "icke-EG EFOMP medlemmar" att få tillfälle att deltaga i detta möte, liksom i det föregående mötet 1989.

Ett förslag till en policy kring organisation av "medical physics departments", ansvarsförhållanden etc, skall utarbetas. Diskussionen var livlig, och många av de synpunkter som kom fram kunde ha varit direkt tagna från vårt eget "förändringsmöte" i våras! Enigheten kring nyttan av en officiell EFOMP policy i dessa frågor var massiv.

Saragossa-olyckan diskuterades också, varvid behovet av klart definierade rutiner-procedurer och ansvarsfördelning ytterligare belystes. Notera den enkät om säkerhet, som bifogas detta nummer. Resultatet av denna enkät kommer att redovisas vid EFOMP-mötet i Teneriffa 1993.

En sammanställning av intressanta möten delades ut (bifogas).

Lund 1991-09-22

Inger-Lena Lamm

ADVANCED SCHOOL ON MEDICAL PHYSICS

Como, Italy May 1992

An advanced school on Medical Physics, jointly sponsored by EFOMP, AIFB (The Italian Association of Biomedical Physics) and the University of Milan will be held in Villa Olmo, Como, Italy from 25th. to 29th. May, 1992.

The Advanced School is intended for research workers in Medical Physics, and aims to explore in some detail the latest developments in the field.

In order to stimulate discussion and to increase the personal contact, the number of partecipants will be limited to 30 or 40. Similarly, the number of speakers will be limited, to allow adequate time for thorough treatment of the various topics.

The registration fee will be Lit 400.000

The title of the Advanced School will be:

"Metabolism studies using Magnetic Resonance Spectroscopy and Positron Emission Tomography".

The topics covered will be the following:

MRS

a) Introduction in cellular biology and biochemistry
(Structures, membranes, metabolic processes etc)

b) Physics and instrumentation in MRS

c) Determination of experimental parameters
(chemical shift, coupling, relaxation times etc)

d) 2-D spectroscopy
Volume selective spectroscopy

e) Chemical shift imaging
Medical applications of MRS
(routine and medical research)

PET

a) Physics and instrumentation

b) Production of radiopharmaceuticals

c) Scanner performances

d) Data processing and image reconstruction

e) Quantitative determinations

f) Compartment model analysis

g) Medical applications of PET
(routine and medical research)

There will be a Round Table on:
"Complementary apects of investigations with MRS and PET"

A not yet completely confirmed list of speakers is:

MRS

a)	J. Seelig	University of Basel (Switzerland)
b)	P. Maraviglia	University of Roma (Italy)
c)	J.M. Lhoste	Orsay / Saclay (France)
d)	C. Leibfritz	Bremen (Germany)
e)	D. Gadian	London (U.K.)

PET

a)	A. Del Guerra	University of Napoli (Italy)
b)	J. Clark	London (U.K.)
c)	L. Eriksson	Karolinska Hospital, Stockholm (Sweden)
d)	M. Defrise	University of Louvain (Belgium)
e)	R. Jordan	Hannover (Germany)
f)	Wienhard	Koeln (Germany)
	or Lammertsmaa	London (U.K.)
g)	P. Sirota	Hosp. Curie Orsay (France)

For further details, please contact:

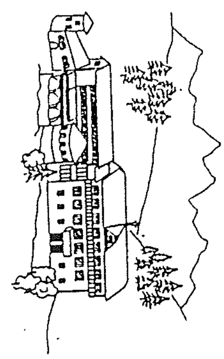
Prof. Niky Molho
Dipartimento di Fisica
Via G. Celoria 16
20133 Milano
Italy
Tel: 0039 2 2392243 - 245
Fax: 0039 2 2392208

Deutsche Gesellschaft für Medizinische Physik
IV. Winterschule in Pichl/Steiermark
Österreichische Gesellschaft für Medizinische Physik

MEDIZINISCHE PHYSIK IN DER NUKLEARMEDIZIN

UND

PHYSIKALISCHE MESSMETHODEN IN DER MEDIZIN



Pichl / Steiermark
13. - 17. und 20. - 24. Januar 1992

Die Deutsche Gesellschaft für Medizinische Physik (DGMP) und die Österreichische Gesellschaft für Medizinische Physik (ÖGMP) bieten für interessierte Physiker, Ingenieure und Ärzte zwei Fortbildungskurse an, die die Themenkreise **"Medizinische Physik in der Nuklearmedizin"** und **"Physikalische Meßmethoden in der Medizin"** behandeln.

Die Kurse dauern jeweils von Montag bis Freitag und erfüllen die Anforderungen der DGMP an Teilleistungen zur Fachanerkennung als Medizinphysiker. Die Themen entsprechen auch dem Hochschullehrgang "Medizinische Physik" der Universität Wien.

Die wissenschaftliche Leitung für den ersten Kurs haben *Prof.Dr. H. Bergmann* (Abteilung für Nuklearmedizin / 2. Medizinische Universitätsklinik Wien) und *Dr. J. Kretschko* (Medizinische Physik und Strahlenschutz / Nuklearmedizinische Klinik der TU München) und für den zweiten Kurs *Dr. L. v. Klitzing* (Klinisch-Experimentelle Forschungseinrichtung / Medizinische Universität zu Lübeck) und *Prof.Dr. B. Rassow* (Abteilung für Medizinische Optik/ Universitäts-Augenklinik Hamburg).

Als Vortragende konnten anerkannte Fachleute gewonnen werden, die in ihren Vorlesungen die Vermittlung von Grundlagenwissen in den Mittelpunkt stellen, aber auch auf jeweils aktuelle Probleme des entsprechenden Gebietes eingehen werden.

Interessenten erhalten das ausführliche Programm und Anmeldungsunterlagen bei:

Dr. L. v. Klitzing
Medizinische Universität zu Lübeck
Klin.-Exp. Forschungseinrichtung
Ratzeburger Allee 160
D-2400 LÜBECK 1

AUSZUG AUS DEM PROGRAMM DER WINTERSCHULE

Kurs 1: 13. - 18.1.1992

Medizinische Physik in der Nuklearmedizin

Physikalische Grundlagen und Herstellung von Radionukliden
Radiopharmaka für die Nuklearmedizin und deren Biokinetik
Dosisberechnung bei Inkorporation von Radionukliden
Nuklearmedizinische Meßtechnik einschließlich Ganzkörperzähler und Schnittbildverfahren (SPECT, PET)
Bildverarbeitung (Faktoranalyse, Fourier-Analyse, Funktionsbilder)
Rekonstruktionsverfahren und Qualitätssicherung
Nuklearmedizinische in vivo-Untersuchungen
Nuklearmedizinische in vitro-Diagnostik
Nuklearmedizinische Therapie
Planung und Einrichtung nuklearmedizinischer Abteilungen
Strahlenschutz des Patienten und des Personals

Kurs 2: 20. - 24.1.1992

Physikalische Meßmethoden in der Medizin

Mechanische und elektrische Meßgrößen
Elektronische Signalverarbeitung und Digitalisierung
Datenkompression und Schnittstellen
Auswertung und Fehleranalyse
Meßwertausgabe und Dokumentation
Temperaturverteilung und Temperaturbeeinflussung
EEG, EKG und rechnergestützte Auswertung
Evozierte Potentiale und synchrone Meßwertbildung
Audiometrische und optometrische Verfahren
Erzeugung und Ausbreitung von elektromagnetischen Feldern
Wechselwirkung von elektromagnetischen Feldern mit Materie und biophysikalische Wirkungsmechanismen
Magnetokardiographie und SQUID
Wirkung magnetischer Felder auf Biosignale

Programme Committee

G. Drexler	GSF, Neuherberg and ICRP
E. Guibelalde	Univ. Madrid
W. Leitz	SSI, Stockholm and IEC
B.M. Moores	RPS, Liverpool
R. Padovani	USL, Udine
J. Richter	Univ., Würzburg and EFOMP
F.E. Stieve	GSF, Neuherberg
D. Teunen	CEC, Luxembourg
A. Todd-Pokropek	SHFJ, Orsay
A. Wambersie	UCL, Brussels and ICRU

Scientific Secretariat

N. Petoussi	GSF, Neuherberg
H. Schibilla	CEC, Brussels

For exhibition coordination please contact:

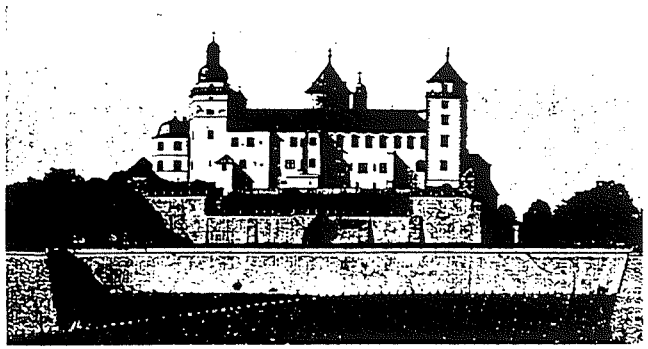
Dr D. Regulla
GSF - Forschungszentrum für Umwelt
und Gesundheit, GmbH
Institut für Strahlenschutz
Ingolstädter Landstr., 1
D-8042 Neuherberg
Tel: 89/3187-2224
Fax: 89/3187-2517

For further information please contact:

Dr Nina Petoussi
GSF - Forschungszentrum für Umwelt
und Gesundheit, GmbH
Institut für Strahlenschutz
Ingolstädter Landstr., 1
D-8042 Neuherberg
Tel: 89/3187-2791
Fax: 89/3187-3373

Venue

The Workshop will be held in Würzburg where Roentgen discovered X-rays. Information on accomodation will be sent with the confirmation of the registration.



Workshop location: Festung Marienberg

CEC

Commission of the European Communities
Directorate-General for Science, Research and Development
Radiation Protection Research

Directorate-General for Environment, Nuclear Safety
and Civil Protection
Radiation Protection

Workshop

Test Phantoms and Optimisation in Diagnostic Radiology and Nuclear Medicine

Würzburg (FRG)

15-17 June 1992

First Announcement

GSF - Forschungszentrum
für Umwelt und Gesundheit, GmbH

ICRU
International Commission
on Radiation Units and Measurements

EFOMP
European Federation
of Organisations for Medical Physics

16/1991/IIX

Test Phantoms and Optimisation in Diagnostic Radiology and Nuclear Medicine

Würzburg (FRG) 15-17 June 1992

This Workshop is jointly organised by the Commission of the European Communities, the GSF-Forschungszentrum für Umwelt und Gesundheit, GmbH, Neuherberg (FRG), the ICRU, International Commission on Radiation Units and Measurements, and EFOMP, European Federation of Organisations for Medical Physics.

Radiological equipment must be subject to a meticulous and regular monitoring to assure high diagnostic image quality and reasonable patient exposure. The CEC Council Directive on Radiation Protection of the Patient therefore stipulates that all installations in use must be kept under strict surveillance with regard to radiological protection and quality control of appliances. During earlier workshops (Brussels, Oxford 1988 and Luxembourg 1991), the most relevant physical and technical parameters to be controlled were defined. As a next step, methods to monitor these parameters under comparable and reproducible conditions must be established. To this end, one needs appropriate phantoms to assess image quality, equipment performance and patient exposure, as well as computational models to evaluate optimal conditions and assess doses and dose distribution. Numerous phantoms are already widely utilized, but no standardisation of their design and use has so far been achieved.

The Workshop aims to establish guidance on phantoms and models most suitable for quality control under different physical and clinically realistic conditions. For this purpose, existing phantoms and models should be evaluated in order to highlight their advantages and disadvantages. The findings can then be used to specify design criteria of phantoms for monitoring the performance of radiological equipment and previously selected image quality criteria, including reference dose values.

Programme Outline

Various design criteria and uses of phantoms and models which have been developed for acceptance, status and constancy testing, will be evaluated in relation to:

- relevant physical and technical parameters such as resolution, contrast, noise, dose, optical density, kV, screen-film speed, scatter, etc.
- accuracy and comparability of subjective and/or objective assessment of phantom measurements
- theoretical basis and practical experience in using phantoms
- strategies for evaluating phantoms
- criteria for unacceptability of phantoms.

These will be applied to the following:

- conventional radiography
- fluoroscopy
- mammography
- computed tomography
- digital angiography, including contrast media studies
- dental radiography
- conventional tomopgraphy
- digital radiography
- film processing
- video systems, including multi-format cameras
- bone density
- nuclear medicine, including scintillation detectors: planar and SPECT
- computational models

Participation

In order to ensure effective discussion, attendance will be limited. Those wishing to participate should return the enclosed preliminary registration form before 30 November 1991.

A registration fee of 320 DM (160 ECU) will be asked. The account number will be communicated with confirmation of registration.

Papers and Posters

The Workshop will consist of invited review papers covering the topics of the programme outline. Proffered papers will be presented in the form of posters and will be discussed fully during the course of the Workshop. The review papers will be sent to those wishing to make comments on certain topics. This wish may be indicated on the attached preliminary registration form.

Abstracts

Those wishing to make a poster presentation are requested to submit an abstracts before 30 November 1991. The abstract should be of 250-350 words and sufficiently detailed to permit an assessment of the scientific merit of the work and its suitability for the Workshop. It should include the author(s) name(s) and affiliation (Abstract form enclosed). Authors will be notified of acceptance of their presentation in February 1992.

Proceedings

Proceedings of the Workshop including all proffered contributions will be published. Instructions to authors will be communicated later.

Language

The working language will be English.

RP/P/Nr

ABSTRACT FORM

WORKSHOP: TEST PHANTOMS AND OPTIMISATION IN DIAGNOSTIC RADIOLOGY AND NUCLEAR MEDECINE

Würzburg, 15-17 June 1992

TITLE: .....

.....

NAME(S) AND AFFILIATION(S) OF AUTHOR(S): .....

.....

.....

PRINCIPAL AUTHOR'S ADDRESS: .....

..... COUNTRY: .....

TEL: ..... FAX: ..... Telex: .....

Mail original and 2 copies before 30 November 1991 to:

Commission of the European Communities
Dr H. Schibilla (DG XII-D-3)
Rue de la Loi, 200
B-1049 Brussels

Preliminary Registration and proposed contributions

Workshop "Test Phantoms and Optimisation in Diagnostic Radiology and Nuclear Medicine"
Würzburg (FRG), 15-17 June 1992

Surname ..... Title .....

First Name(s) .....

Institution .....

Address .....

.....

Telephone ..... Fax ..... Telex .....

I should like to prepare a comment on the topic: ☐
I should like to present a poster on: ☐

.....

.....

I should like to attend and/or receive further information ☐

Please note that this form must be returned before 30 November 1991

Dr Nina Petoussi
Scientific Secretariat
Workshop "Test Phantoms and Optimisation
in Diagnostic Radiology and Nuclear Medicine"

GSF - Forschungszentrum für Umwelt und Gesundheit, GmbH
Institut für Strahlenschutz - Telefax: 89/3187-3373
Ingolstädter Landstr., 1
D-8042 Neuherberg

Etterutdannelse i medisinsk fysikk

Kurs i Strålings vekselvirkning med materie ved NTH

Det arbeides med å få til et organisert program for dr.grads-studier i medisinsk fysikk og teknologi ved Universitetet i Trondheim. Det første tiltaket i dette programmet er gjennomføringen av to kombinerte etterutdannings- og dr.ing.-kurs, lagt opp med tidskonsentrert undervisning. Kurset "Strålings vekselvirkning med materie" vinteren 1992 etterfølges av kurset "Strålingsdosimetri" som foreleses høsten 1992.

Kursene sees i forbindelse med kompetansekrav som nå vurderes innført for medisinske fysikere som er ansvarlige for bruk av ioniserende stråling. Slike regler er vedtatt og under innføring i EF-landene, og det er av interesse for de øvrige nordiske land å harmonisere sitt regelverk til EF-landenes. Spesialistkompetansen vil kreve flere års arbeidserfaring i faglig sterke miljøer samt spesialistkurs innen sentrale deler av fagområdet. De to planlagte kursene vil her stå sentralt, og de utgjør idag den obligatoriske delen av fagpensum for dr.gradsstudiet i radiofysik i Sverige.

Målgruppe:

Kursene har tre målgrupper:

1) Ansatte medisinske fysikere (sykehusfysikere) med flere års arbeidserfaring som ønsker å kvalifisere seg for spesialistkompetanse i medisinsk fysikk.

2) Ansatte medisinske fysikere (sykehusfysikere) som ønsker å studere for dr.grad innen medisinsk fysikk og teknologi.

3 Studenter med grunnleggende universitetsutdannelse innen strålingsfysikk, medisinsk fysikk eller biofysikk som ønsker å studere videre for dr.grad innen medisinsk fysikk og teknologi.

Kursopplegg:

Kursene legges opp med tidskonsentrert undervisning i perioder a 1 uke (mandag-fredag).

"Strålingsvekselvirkninger"	uke 6, 10, 13, 1992	totalt	60 forelesningstimer 72 øvingstimer
"Strålingsdosimetri"	uke 40, 44, 1992	totalt	48 forelesningstimer 48 øvingstimer

Kursene utgjør henholdsvis 12 og 9 poeng av en totalbelastning på 50 i den svenske forskerutdannelsen i radiofysik, og er tillagt belastningstimer på henholdvis 24 og 18 av totalkrav på 96 for dr.ing.studiet ved Norges Tekniske Høgskole. I følge reglementet for dr.ing. studiet ved NTH, er det slik at fag hvor eksamen er tatt etter at grunnutdannelsen er avsluttet, men før dr.ing.studiet påbegynnes, kan godkjennes for dr.ing.studiet såfremt eksamen ikke er avlagt tidligere enn 3 år før opptak.

Eksamensdatoer for de to kursene er henholdsvis 15. mai og 4. desember 1992.
Eksamen vil bli holdt samtidig i Trondheim, Oslo og ved flere universiteter i Sverige, slik at behovet for reising minimaliseres.

Kursbeskrivelse for "Strålings vekselvirkning med materie":

Kurset gir en systematisk innsikt i ulike typer ioniserende strålings vekselvirkning med materie, basert på kvantemekanisk vekselvirkningsteori.

Hovedelementer:
- kvantemekanisk vekselvirkningsteori
- elektroners (og positroners) vekselvirkning:
  uelastisk vekselvirkning med atomære elektroner, elastiske vekselvirkninger, spredning, vekselvirkning med atomkjerner, Monte-Carlo simulering av elektron-transport
- vekselvirkning for myoner, pioner og tunge ladete partikler (protoner, alfa-partikler, ioner, fisjonsfragmenter), stopping power
- fotonvekselvirkning:
  generell teori, Maxwells ligninger, Comptonspredning, koherent spredning, fotoelektrisk effekt og dennes sekundærfenomener, pardannelse, kjernefotoeffekt, transportteori for røntgendiagnostikk og stråleterapi
- neutroners vekselvirkning, tverrsnittsdata, Monte-Carlo metoder, transportteori

Lærere:

Kursene foreleses av lærere med lang tids erfaring fra forskerutdanning innen radiofysik i Sverige. Hovedforelesere for det første kurset vil være Magne Alpsten, professor i radiofysik (strålingsfysikk) ved Universitetet i Gøteborg, Søren Mattsson, professor i medisinsk radiofysik ved Universitetet i Lund, og Sven-Erik Strand, dosent i radiofysik ved Universitetet i Lund.

Praktiske forhold:

Deltagere som ikke er registrerte studenter ved NTH må betale en kursavgift på kr. 5.400.- for det første kurset (og kr. 3.600.- for det andre). Forøvrig må deltagerne dekke sine reise- og oppholdsutgifter.
Påmelding skjer til SEVU, Stiftelsen for etter- og videreutdanning ved NTH.
Påmeldingsfristen er satt til 9. desember 1991. Det er en fordel om interesserte snarest tar kontakt med SEVU eller ansvarlig faglærer for å få tilsendt påmeldingsskjema, og slik at det tidlig blir klart hvor mange deltagere som kommer på kurset.

Arrangør:
SEVU,
N-7034 Trondheim.

Tlf: 07-595266, Fax: 07-517226

Ansvarlig faglærer:
Prof. Tore Lindmo,
Institutt for fysikk, NTH,
N-7034 Trondheim.

Tlf: 07-593432, Fax: 07-598684.

CRITERIA FOR THE NUMBER OF PHYSICISTS IN A MEDICAL PHYSICS DEPARTMENT

PREAMBLE

Modern Health Care Services are provided with ever-increasing demands for competence, specialization and cost effectiveness. The Medical Physics Service as practised in hospitals faces the same demands. The Hospital Physicist has to make decisions with consequences for the patient and such decisions are based on a competence which only the discipline of Medical Physics covers. These facts have to be taken into account within the organisation and management of the Medical Physics Service.

INTRODUCTION

Medical Physics can be described as the scientific discipline which is concerned with the application of the concepts and methods of physics in medicine.

In the opinion of the European Federation of Organisations for Medical Physics (EFOMP) Medical Physics is a Health Care Profession and the Medical Physicist whose training and function are specifically directed towards Health Care is entitled to an official recognition as a specialist. High standards in Medical Physics Services are important and at a time of increasing demand sufficient resources must be directed towards an appropriate, safe and cost effective use of physical sciences in the Health Service for the benefit and safety of the patient.

MEDICAL PHYSICIST

The formal entry qualification to the profession of Medical Physics is academic with physical sciences as an essential component of the training. A formalised in-service training scheme must be completed succesfully before a physicist may proceed to a post in a hospital Medical Physics Department that is higher than the training grade. A certificate or diploma should be given to the candidate to recognize succesfull completion of training.

A qualified Medical Physicist is thereafter an individual who is competent to practice independently, one or more of the subfields of medical physics e.g. therapeutic radiological physics, diagnostic radiophysical physics, medical nuclear physics or one of the many branches of medical physics that does not involve the use of ionising radiation.

LEGAL REQUIREMENTS

EEC Directive 84/466/Euratom of 3 September 1984 contains the following statement in article 5. "A Qualified Expert in radiophysics shall be available to sophisticated departments of radiotherapy and nuclear medicine". Such departments would normally have one or more high energy therapy machines or gamma cameras respectively.

If a "sophisticated department" is taken to mean one in which complex radiological methods and procedures requiring special protection of the patient are undertaken, the concept should also be extended to many departments of diagnostic radiology.

EFOMP has already issued a policy statement entitled "Radiation Protection of the Patient in Europe: The training of the Medical Physicist as a Qualified Expert on Radiophysics". In

it, a Qualified Expert in Radiophysics is described as "an experienced Medical Physicist working in a hospital, or in a recognised analogous institution, whose knowledge and training in radiation physics are required in services where the quality of the diagnostic image, or the precision of treatment, is important and the doses delivered to patients undergoing these medical examinations of treatments must be strictly controlled".

MEDICAL PHYSICS DEPARTMENT

The Organization of Medical Physics Services in Health Care varies widely throughout Europe. The highest standards and most cost effective provision of services are usually obtained if the service is organized by an independent Department of Medical Physics. That means that the head of the department is an experienced Medical Physicists with responsibility for professional standards, provision of scientific services and for the department's budget. These responsibilities may be within a hospital or within a region. Small departments are likely to be relatively more expensive and less efficient, at the risk of the quality and availability of services to be reduced and the level of safety for patients may be compromised. Therefore it is recommended that small departments have collaboration with a larger department.

Medical Physics Departments generally serve a variety of medical specialities. In some countries the Medical Physics Service is still restricted mainly to the radiological field (radiotherapy, nuclear medicine, X-ray diagnostics and radiation protection), where the service has a long and recognised tradition. In other countries services are already provided to magnetic resonance and ultrasound imaging, physiological measurements, clinical applications of non-ionising radiations (lasers, ultraviolet light and microwaves), bioengineering, electronics, information technology, general data processing and computer technology. The role of medical physics in these areas is expected to increase in the future.

Because the Medical Physicist must have in depth understanding of techniques used for examinations or treatments there must be close daily relationship between the Medical Physicist and the patient environment especially the medical staff. The Medical Physics Department should therefore be close to relevant clinical areas.

GENERAL OBSERVATIONS ON STAFFING THE MEDICAL PHYSICS DEPARTMENT

Generally the number of Medical Physicists required in a Medical Physics Department depends upon:

(i) the range of applications of physics in medicine
(ii) the scale of organisational and management responsibilities (number of hospitals, population served)
(iii) the amount and complexity of equipment and procedures used in related clinical specialities
(iv) the number of patients examined and treated in the relevant modalities and the complexities of these examinations or treatments
(v) the load for formal teaching and training
(vi) the level of participation in research, development and clinical trials
(vii) the number of supporting staff (e.g. technical and radiographic)

The number of Medical Physicists per million inhabitants shows wide variations in different European countries, from less than 2 in Portugal to 14 in Sweden (1988). Figures can be used in comparisons between countries only if they are covering the same areas of physics related activities. Variations between departments in the same country also depend on the range of physics related activities together with the number and qualifications of the supporting staff. Largely for this reason, it is difficult to specify appropriate staffing levels. However in radiotherapy, nuclear medicine and partly in diagnostic radiology there now exists legal requirements for the services of a physicist, who has the status of a Qualified Expert in radiation physics related to these disciplines. Therefore, for these services it is appropriate to make recommendations on minimum staffing in the Medical Physics Department. The following general points apply to the staffing figures given.

1. Staffing provision has been made for immediate duties in radiation protection associated with the specialty. Additional staff will be needed if the Medical Physics Department has to act as a general radiation protection adviser to the Authority on measures it must take to comply with national regulations and has to advise on other health and safety matters connected with ionising and non-ionising radiation.

2. Additional staff are required if there are research activities or training responsibilities. Physicists who have academic commitments should be scored by only 0.5 whole time equivalent for service work.

3. In deciding the level of staffing based on major items of equipment allowance has also been made for minor items (e.g. in radiotherapy: a superficial X-ray unit, plotting tanks, secondary standard dose meters etc.).

4. Some duties may be interchangeable among the three services depending on local organization.

MINIMUM STAFFING OF THE MEDICAL PHYSICS SUPPORT OF RADIOTHERAPY

1.1. Only staff who have had an approved course of training in radiation physics related to radiotherapy should be included in the minimum staffing level.

1.2. In all departments there must be at least two medical physicists, each specialising in radiotherapy physics, at least one of whom is a qualified expert.

1.3. Minimum staffing levels should be calculated from factors depending both on equipment load, number of patients treated and sophistication of treatments.

General guidelines are given below (wte = whole time equivalent)

1	high energy linear accelerator	0.8 wte physicist
1	major item of equipment (e.g. cobalt unit, simulator, computer treatment planning system, high dose rate afterloading)	0.4 wte physicist

1000	new courses of treatment per annum with external beam therapy	1.2 wte physicist
100	new courses of treatment per annum with brachytherapy	0.25 wte physicist

The number of physicists should be summed to give the total.

1.4. The figure for a second standard subsequent accelerators may be reduced by 0.2 provided they do not have electron facilities and are not under computer control.

1.5. The number of physicists per item of equipment may be reduced by 0.1 if maintenance and repair is carried out by staff not managerially responsible to the physicist.

MINIMUM STAFFING OF THE MEDICAL PHYSICS SUPPORT OF NUCLEAR MEDICINE

2.1. Only staff who have had an approved course of training in radiation physicis related to nuclear medicine should be included in the minimum staffing level.

2.2. In all departments there must be at least one medical physicist who is a qualified expert with experience in nuclear medicine physics. If the department has responsibilities related to therapy with radionuclides a second qualified expert may be necessary.

2.3. Minimum staffing levels should be calculated from factors depending both on equipment load and patients examined or treated.

General guidelines are given below (wte = whole time equivalent)

1	gamma camera	0.50 wte physicist
5000	examinations per annum	0.50 wte physicist
500	dynamic studies involving significant data processing by a physicist per annum	0.25 wte physicist
250	studies involving single photon computed emission tomography per annum	0.25 wte physicist
50	new courses of treatment per annum	0.25 wte physicist

The number of physicists should be summed to give the total.

2.4. Additional staff are required if the Nuclear Medicine Department has other facilities such as sample counting or a whole body counter or the physics staff supervise work in the radiopharmacy.

2.5. The number of physicists required for second and subsequent cameras may be reduced by 0.2 provided they are used mainly for simple static imaging procedures.

2.6. The number of physicists per item of equipment may be reduced by 0.1 if maintenance and repair is not carried out by staff managerially responsible to the physicist.

MINIMUM STAFFING OF THE MEDICAL PHYSICS SUPPORT TO DIAGNOSTIC RADIOLOGY

3.1. Only staff who have had an approved course of training in radiation physics related to diagnostic radiology should be included in the minimum staffing level.

3.2. All departments using complex equipment or carrying out complex radiological procedures should have available to them the services of at least one medical physicist who is a qualified expert with experience in diagnostic radiological physics.

3.3. The number of physicists needed will very much depend on the quality assurance programme performed in the department, the involvement of radiographers or other staff in that programme and the involvement of the manufacturer.

3.4. Application of digital techniques demands extra expertise in computing and data handling for evaluation and analysis of digital images.

3.5. The medical physics staffing level is likely to depend on the size of the population served as well as on the range of equipment.

3.6. For a diagnostic radiology department utilizing a full range of techniques, including e.g. digital radiology, computed tomography, dedicated mammography to a population of 500.000 1.0 wte physicist would be appropriate.

3.7. Physics input to diagnostic imaging technique using nonionizing radiation is not considered.

March 1991. EFOMP Education, Training and Professional Committee.

Proposal for a definition of "Sophisticated Departments".

The EEC Directive 84/466/Euratom of 3. September 1984 "laying down basic measures for the radiation protection of persons undergoing medical examinations and treatments" contains the following statement:

Article 5. A Qualified Expert in radiophysics shall be available to sophisticated departments of radiotherapy and nuclear medicine.

The European Federation of Organisations for Medical Physics has defined and described the role and the necessary training of the Qualified Expert in radiophysics in a Policy Statement from 1988: "Radiation Protection of the Patient in Europe: The training of the Medical Physicist as a Qualified Expert in Radiophysics". The statement should apply to all medical departments using ionising radiation on patients, i.e. diagnostic radiology, nuclear medicine and radiotherapy.

A definition of "Sophisticated Departments" should be in agreement with this Policy Statement covering the same departments.

Sophisticated Departments: Departments using ionising radiation routinely on patients, where complex equipment and/or complex procedures and/or frequent radiological examinations/-treatments are involved.
Such departments shall have available from the Medical Physics Profession the material and human means to control that: -For treatment, the prescribed dose has been delivered. For diagnosis, the ALARA principle has been fulfilled.
The level of assistance and support needed in each case should be compatible with the number and complexity of equipment in use and with the nature, variety and complexity of the procedures undertaken in order to provide a better, safer and more cost-effective service to the patient.

Sep-91

main meetings of interest to EFOMP

date	name of the meeting or course (organiser)	location	EFOMP involvement
9-13 sept. 1991	3rd symposium of radiological physics - CANCELLED -	Smolenice (Czechoslovakia)	yes
9-13 sept. 1991	teaching course on rad. phys. for clin. radiot. (ESTRO)	Leuven (Belgium)	no
14-15 sept. 1991	"Quality Assurance network" (IAEA)	Leuven (Belgium)	no
15-20 sept. 1991	"from prescription to delivery in radiot." (ESTRO/IAEA)	Leuven (Belgium)	no
16-20 sept. 1991	European Congress of Radiology (EAR)	Vienna (Austria)	contribution
14-17 oct. 1991	1st meeting on physics in clinical radiotherapy (ESTRO)	Budapest (Hungary)	no
29 march-2 apr. 1992	course "modern brachytherapy techniques" (ESTRO)	Prague (Czechoslovakia)	no
6-10 april 1992	course on radiation protection of the patient (CEC)	Neuherberg (Germany)	no !
25-29 may 1992	advanced school on med. phys. : MRS+PET (EFOMP/AIFB/Un. Milan)	Como (Italy)	co organizing
25-27 may 1992	brachytherapy meeting (GEC-ESTRO)	Nancy (France)	no
14-21 june 1992	school in radiophysics (radiotherapy) (EFOMP/CEC)	Sevilla (Spain)	organizing
15-17 june 1992	test phant. and optim. in diag radiol+nuc. med. (CEC/GSF/ICRU/EFOI	Würzburg (Germany)	co organizing
5-10 july 1992	6th mediterranean conf. on medical engineering	Capri (Italy)	no
1-4 sept. 1992	11th annual ESTRO meeting	Malmo (Sweden)	no
22-25 sept. 1993	3rd European Congress of Medical Physics (EFOMP/SEFM)	Tenerife (Spain)	co organizing
?	2nd meeting on physics in clinical radiotherapy (ESTRO)	?	?
1993	school in radiophysics (radiodiagnostic) (EFOMP/CEC)	?	organizing
13-17 sept.1993 ?	European Congress of Radiology (EAR)	Vienna (Austria)	yes ?
22-26 aug. 1994	10th Int. Congress of Medical Physics (IOMP)	Rio de Janeiro (Brazil)	?
20-23 sept. 1995	Röntgen Centenary Conference (EFOMP+DGMP)	Würzburg (Germany)	yes
1995	European Congress of Radiology (EAR)	Berlin (Germany)	yes ?
1995?	3rd meeting on physics in clinical radiotherapy ? (ESTRO)	?	
1996 ?	Becquerel Centenary Conference (EFOMP/SFPH)	Paris (France)	co organizing
1996 ?	4th European Congress of Medical Physics	?	
sept. 1997	11th Int. Congress of Medical Physics (IOMP)	Nice (France)	yes

EUROPEAN FEDERATION OF ORGANISATIONS for MEDICAL PHYSICS

EFOMP

General Office:
4 Campleshon Road
York YO2 1PE
Telephone 0904 610821
Fax 0904 612279

Please Reply to: REGIONAL MEDICAL PHYSICS DEPARTMENT
Cleveland Unit, South Cleveland Hospital,
Marton Road, Middlesbrough,
Cleveland TS4 3BW
Tel: 0642 850850 Ext 20152

JKH/CJP

11th March 1991

Dr Inger-Lena Lamm
President
Swedish Hospital Physicists Association
Department of Hospital Physics
Lasarettet
S-221 85 Lund

Dear Dr Inger-Lena Lamm

EFOMP Scientific Committee
Scheme for Sharing Information about Accidents to Patients

Each EFOMP national organisation does everything within its power to help its members to ensure the safety of patients. However, accidents occur and can be traced to equipment and procedures which our members calibrate, operate or maintain (see enclosed examples). We cannot forsee all possible accidents but when we know one has occurred we can try to prevent a repetition.

The causes of accidents do not respect national boundaries. Many countries use the same equipment and similar procedures. Therefore, information about the causes of an accident in one country can help members in another country to avoid a similar accident.

Unfortunately, there are not yet inter-governmental arrangements for exchange of medical accident information across all European national boundaries. It is possible that this may begin in the European Community, but only for equipment, not for procedures and it would not cover all EFOMP countries.

It is clear that a federation of national medical physics organisations can play an important part in gathering accident reports and distributing them. EFOMP Scientific Committee is willing to do this and requests the help of national organisations. The information requested is summarised in the enclosed protocol.

(If your organisation is unable to discover any accidents by 1st January 1992, please complete part 1 of the protocol only and return it to me. That will tell me which national organisations have participated.)

cont.

All accident reports will be analysed for common features and a summary will be presented at Medical Physics '93 in Tenerife. The summary will not identify the institutions where accidents occurred.

I hope that you will decide to ask your members to help us in this work. Only an organisation like EFOMP can do this. For the protection of the patient EFOMP must attempt to do it.

Finally, I know that EFOMP lists of officers of national organisations are not always up-to-date. If this letter is addressed to the wrong person, please send it to someone who can act on it.

Yours sincerely

John Haywood

J K Haywood
EFOMP Accident Collator

Encs.

Vänner sjukhusfysiker!

Jag ber om er hjälp att samla in rapporter från Sverige för denna analys. I och för sig samlar SoS in rapporter om olyckor(Sten Grapengiesser gav mig namnet Göran Liedström vid vår sjukhusfysikerkurs nu i april). Det finns dock rimligen typer av olycktillbud, som inte kommer med i SoS raporteringen, t ex sätt att arbeta, sätt att dokumentera strålbehandling, som det kan vara värdefullt att informera om.

Det praktiska sättet att hantera insamlingen av information är att jag tar emot rapporterna för Sverige, för att i samlad form sända över resultatet till J K Haywood under januari 1992. Jag kommer att meddela honom att vi gör så för Sverige. Naturligtvis kommer jag också att ha kontakt med Göran Liedström.

TACKAR PÅ FÖRHAND FÖR HJÄLPEN

Eder tillgivna

Inger-Lena Lamm
Radiofysik
Lasarettet
221 85 LUND

EUROPEAN FEDERATION OF ORGANISATIONS for MEDICAL PHYSICS
Scientific Committee Protocol for Reporting Patient Accidents

The Scientific Committee requests national organisations to supply information about:

Any accident after 1st January 1986 in which more than one patient is harmed as a result of a defect or malfunction of an equipment or a procedure for which members of the national organisation should normally be responsible.

This definition includes accidents outside the fields of radiation physics or nuclear medicine. The details needed by Scientific Committee are specified in 1 to 7 below.

If necessary an accident can be reported without saying exactly where it occurred.

Please send the information to:
Dr J K Haywood, EFOMP Accident Collator,
Cleveland Medical Physics Unit, South Cleveland Hospital,
Marton Road, Middlesbrough, Cleveland TS4 3BW, England
Telephone: 0642 850850 Ext 20152 FAX: 0642 824877

1. **National Medical Physics Organisation** .....

.....

2. **Where and when did the accident occur?**

Department* ..... Address* .....

....

....

Hospital* ..... Country .....

....

Date(s) of accident .....

3. **How many patients were injured?** .....

4. **What were their injuries?** .....

.....

.....

*Omit if confidential

5. **Was there an investigation?** .....

Who investigated (Department, Hospital, Government)? .....

.....

Is the investigation finished? .....

What, in your opinion, was the probable cause of the acccident?

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

What, in the opinion of the investigators, was the probable cause?

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

6. **Was equipment involved?** .....

What kind of equipment?

.....
.....
.....
.....
.....

Who made the equipment?

.....
.....
.....
.....
.....

7. **Name and address of contact who can provide further information**

.....
.....
.....
.....

78 radiation overdose patients have died

By Stephen Ward

AT LEAST 78 of the 207 cancer patients given radiation overdoses earlier this year have died, it was disclosed yesterday.

The figures were given at the publication of two inquiry reports into the mistakes which led to patients at the Royal Devon and Exeter Hospital being given doses of radiation up to 25 per cent too high for five months until July.

Exeter Health Authority yesterday promised early interim compensation payments where victims show need and liability is not disputed. Murray French, the authority chairman, said 21 safety recommendations made in one of the reports had been accepted and improvements had already been made. The authority was increasing staff and installing additional safety equipment costing £130,000.

Chris Over, a solicitor co-ordinating 76 claims for compensation, including 10 on behalf of patients who have died, said there was no reason why some money should not be paid before Christmas. He complained that victims had still not been told how seriously they had been affected, and had to go to private consultants to find out. He said victims had suffered and should not have to demonstrate "need". Determining the exact extent of the damage caused by the mistake is complicated by the fact that many of the patients were terminally ill, and their treatment was to provide relief, not a cure. Even at the correct dose radiation has side effects.

One of yesterday's reports, by Professor Charles Joslin, consultant radiotherapist at Leeds University, said 10 victims had been put at very high risk of suffering severe radiation damage which could threaten their lives. At a press conference, Dr Alastair Mason, medical officer for the South-West Regional Health Authority, said of the 10, two had died: one was Majorie Brimblecombe, 47, on whom a verdict of misadventure, aggregated by lack of care, was recorded at a Torquay inquest last month. Forty more were at high risk, of whom two had died. Twenty were at moderate risk, of whom six had died and 19 were at low risk, of whom three had died.

He said: "The great majority of the remaining 65 [who have died] were people who were expected to die of their cancer."

The second report, into the management which led to the errors, was compiled by Professor Sir Bryan Thwaites, until recently chairman of Wessex Regional Health Authority. The errors were caused by a wrongly-calibrated TeleCobalt machine. "The calculation appears not to have been checked in any way," he says in his report.

Staff numbers in the physics department where the errors were made had been reduced at the end of 1987 despite a written warning from the department head that this would be "fundamentally detrimental" to standards of care, according to the Thwaites report.

Mr French defended management and staffing at the hospital yesterday, arguing that the managers were not responsible for the incident itself, and that understaffing could not be blamed.

He added: "We have accepted there was a breach of the duty ... The compensation will probably be spread over a number of years, and it is possible we may have to postpone some of our activities."

Patients die after radiation mix-up

AP in Madrid

A SPANISH health official said yesterday that he feared the worst for 24 cancer patients who received high doses of radiation when a Zaragoza hospital's linear accelerator went haywire for 10 days. Three patients have already died.

A Zaragoza judge is investigating the causes of the disaster, which the director of the Insalud chain of state-run hospitals called "the worst accident in the world" of its type.

"We fear the worst for some of the patients," an Insalud spokesman, Fernando Gomez, said. "We are seeking information to find someone who has experience in this kind of situation."

General Electric officials were unable to comment on the machine's operation. Hospital officials said that the accelerator was now functioning normally.

Guardian 27.2.91

DEBATT

Spola det här med verksamhetsidé!

Verksamhetsidé är ett nytt trendord, som ännu inte finns i några ordböcker och vars innebörd fortfarande är höljd i dunkel. Det låter pampigt och har okritiskt börjat användas av diverse myndigheter, däribland tyvärr även SSI, som en sorts verbal krona på verket.

Troligen har verksamhetsidé bildats i analogi med affärsidé, som är en företagsstrategisk term. Den betecknar kombinationen av faktorer som kan ge ett företag konkurrensfördelar. Bakom en affärsidé finns ett originellt uppslag eller kluriga tankar om vad och hur och till vem man skall kränga varor eller tjänster. Ett bra exempel på en affärsidé är att sälja glasspinnar genom att fara runt i blå bilar i bostadsområden och föra oväsen. Naturligtvis kan folk också sitta på myndigheter eller andra icke affärsdrivande institutioner och kläcka idéer om hur uppställda mål skall nås eller verksamheter bedrivas och sedan formulera vad man då skulle kalla för verksamhetsidéer. Ett krav på dessa måste rimligtvis vara att de innebär något nytt och fräscht och originellt. Verksamhetsidéer som inte uppfyller det kravet skall man nog akta sig för att torgföra försåvitt man inte vill utmana löjet.

Socialstyrelsen har i en påkostad flerfärgsbroschyr med bilder av frostnupna äpplen lanserat sin verksamhetsidé:

VÅR VERKSAMHETSIDÉ - Socialstyrelsen är statens centrala expert- och tillsynsmyndighet inom socialtjänst, hälso- och sjukvård och hälsoskydd.

Kan avståndet till snilleblixten vara större?

Strålskyddsinstitutet presenterar sin verksamhetsidé bl a i bilaga 3 till huvudrapporten om **Prioriterade verksamheter**, vilken i dagarna går på cirkulation:

SSIs VERKSAMHETSIDÉ- Bakom all verksamhet skall finnas SSIs **ÖVERGRIPANDE MÅL** som är att verka för säker strålmiljö för människor, djur och natur.

I denna deklaration kan noteras att vi skall verka med målet bakom oss. Det är förvisso en omstörtande idé men inte särskilt progressivt. Mål brukar man ju vanligtvis ha framför sig om man nu inte är kräfta. Ett mål är för övrigt det förväntade resultatet av någonting man företar sig. Att verka för säker strålmiljö etc är sålunda inget mål, inte ens övergripande. Slutligen undrar man försynt hur det är tänkt att åstadkomma en **säker strålmiljö för naturen.** Varför duger inte längre det välformulerade syftet med strålskyddslagen, dvs att människor, djur och **miljö** skall skyddas mot skadliga effekter av strålning.

Hur har så många års arbete med mål och medel kunnat ge ett så taffligt resultat när det gäller formuleringarna? Synes det inte rimligt att helt spola det här med verksamhetsidé? Vad säger Shakespeare?

Upp flyga orden, tanken stilla står.
Ord utan tanke aldrig himlen når.

(Hamlet akt III, scen 3)

Jonas Karlberg