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Churchill Livingstone



# Guidelines on Patient Care in Radiography

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## Guidelines on Patient Care in Radiography

## Foreword

The writers of this book have a great deal of experience both in the clinical and teaching side of their profession and this is shown quite clearly by the high standard of information contained in it.

I highly recommend this concise little book for use by therapeutic and diagnostic student radiographers and radiographers both as a guide to the care of the patient in the X-ray and Radiotherapy Department and also as a help towards passing the Care of the Patient and Hospital Practice section of the D.C.R. examination.

The new syllabus set by the College of Radiographers now has a section on psychological aspects regarding the care of the patient and I am glad to see this important aspect of the radiographer's work so adequately covered in this book. Not only to the radiographers do I recommend it but also to all the staff working with or having contact with patients in an X-ray or Radiotherapy Department.

Newcastle upon Tyne 1982

S. Williams

## **Preface**

This book was written as a precise reference guide to the care of the patient in the X-ray and Radiotherapy Departments.

Our aim is to provide essential information which may be of use, not only to student radiographers and radiographers but also to X-ray and Radiotherapy nurses and other paramedical staff having contact with patients.

We anticipate that student radiographers will use the guide alongside more detailed texts which, together with the relevant practical experience, will help to provide the student radiographer with a sound basis on which to develop a high standard of patient care.

The 25 chapters contain information on all aspects of patient care. At the beginning of each chapter, an introduction outlines the reasons why the information which follows has been included. It is difficult to know how much information is necessary (or unnecessary) and we have tried to produce a book which achieves a balance between a purely factual notebook and a detailed textbook.

1982 C.G. C.S.T.

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We would also like to thank the College of Radiographers for giving us permission to use abstracts from the Examiners' comments from the Care of the Patient and Hospital Practice papers.

All the artwork for this book has been drawn by Dr D.A. Gunn to whom the authors are extremely grateful as the illustrations would not have been possible without his help.

C.G. C.S.T.

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## Departmental organisation and procedure

#### INTRODUCTION

The aim of this section is to provide the student radiographer with information regarding general departmental procedures. It is important that the student is aware that the practical running of hospital departments requires an efficient hospital team of which they have become a member. Emphasis must be placed on gaining practical experience within their own departments and the guidelines set out in this chapter should help the student to have an understanding of departmental organisation and the importance of record keeping.

At the end of this section are notes concerning medico-legal aspects of hospital administration.

Whilst we feel that to burden students with complicated legal procedures and laws is unnecessary, nevertheless a basic appreciation of medico-legal aspects regarding hospital personnel and patients in the department should be within the capabilities of student radiographers.

#### WAITING AREAS

When planning waiting areas the following points should be considered:

Sufficient area to accommodate patients and 'friends'

Separate areas for children/badly injured/ward patients

Sufficient comfortable chairs and small tables

Well ventilated, no draughts, suitable temperature

Pleasant decor

Clean magazines, goldfish, piped music may be available

Toys for children (washable - to reduce the likelihood of infection)

Toilet facilities - adjacent and well signposted

Refreshments available or instructions where they can be obtained.

Receptionist available to assist the patients

#### APPOINTMENT SYSTEMS

#### Required to:

Minimise patient waiting time

Ensure full use of staff and equipment

When booking an appointment -

For In Patients avoid

Meal times

Doctors ward rounds

Drug administration rounds

Visiting time

For Out Patients consider

The distance the patient has to travel and the time it may take

Use of hostel accommodation for radiotherapy patients

If the patient is on 'shift work'

If the patient has dependants (young children, etc.)

If the the appointment can be arranged to coincide with other hospital visits

If an ambulance will be required

If an ambulance escort will be required

Any clinical features e.g. a strict schedule is required for diabetic patients

#### DIAGNOSTIC X-RAY EXAMINATION REQUEST FORMS

Ideally these should give the following information

Patient details

Full name

Address

Hospital registration number

Age/date of birth

X-ray number

Occupation

Sex

Married/single/widowed

Method of transport from the ward e.g. if a trolley is required

Ward/Out patient

Date of last menstrual period Date and place of previous radiographs

Departmental information
Radiographic examination requested
Doctor's signature
Consultant in charge of the case
Any clinical features/diagnosis
Observe/ignore 10 day rule
Number of films for reporting
Radiographer's signature
Exposure factors used
Space for the Radiologist's report

The above information is required to ensure that the correct patient is radiographed and any previous radiographs/reports can be obtained. The person referring the patient and the radiographer responsible for the radiographs can be contacted if necessary.

#### RADIOTHERAPY HISTORY

Patients are assigned a radiotherapy case number and the history may be colour coded to show the year that treatment commenced. Confidential reports are required of:

Patient diagnosis and associated literature

Patient background history

Pathology reports

X-ray reports etc.

Correspondence concerning patients

Ward details for In patients or Radiotherapy hostel patients

Drug prescriptions

Patients consent to treatment form

#### RADIOTHERAPY PRESCRIPTIONS

Ideally they should give the following information

Patient details
Full name
Hospital number
Diagnosis
In/Out patient

#### 4 GUIDELINES ON PATIENT CARE IN RADIOGRAPHY

Treatment details

Treatment machine

Beam energy

Focus to skin distance

Field size

Position of fields

Beam direction devices

Wedges

Compensators

Treatment plan

Percentage depth dose at the tumour

Skin dose

Applied dose

Interfield distance

Special instructions e.g. blood counts to be undertaken

Information recorded daily by the radiographer during treatment Summary of treatment on completion

#### DEPARTMENTAL STATISTICS

#### Diagnostic

Records are kept concerning

Patient attendances - In/Out patients

The number of radiographic examinations undertaken

The number of X-ray units

Unit values are based on the time required to undertake specific examinations and they are used to assess

Staffing levels

Film requirements

Chemicals required

Drugs required

Equipment required

Future planning of the department

As the following patients and examinations take longer to perform, additional units are given for

Blind patients

Children (under the age of 6)

Deaf patients

Patients with language difficulties

Intoxicated patients

Mentally ill patients

Mentally handicapped patients

Physically crippled patients

Unconscious patients (other than anaesthetised)

Mobile/portable examinations

Operating theatre work

Visits to other hospitals

Domiciliary visits

All records are kept during the patient's lifetime, in some hospitals after 5 years the notes are microfilmed for ease of storage.

Radiographs are kept for 7 years (soon to be changed to 21 years) and are then sent for silver recovery.

#### Radiotherapy

Records are kept concerning

Number of new cases per year

Total number of treated cases per year

Number of radiation fields applied per year

Number of chemotherapy cases per year

Number of biopsies performed per year.

The above records are kept so as to predict:

A percentage workload increase/decrease

Correct staff establishment

Correct treatment machine establishment

The records may also be used for research purposes.

#### Storage of radiographs

Each radiograph should give the following information, (preferably photographed on)

Patient's name

Hospital

The date the radiographic examination was undertaken

An anatomical marker

Patient identification number

Radiographs are stored in paper envelopes which carry details of

Patient's name

X-ray number

The radiographic examinations which have been performed

Radiographs can be filed under

X-ray registration number

The date of birth of the patient

The patient's name (in alphabetical order)

Radiographs should be stored

Away from direct heat

Away from damp

In an area of constant temperature

#### MEDICO-LEGAL ASPECTS

#### Accidents in the department

Hospital personnel should always be on their guard as most accidents are preventable. Patient injury could be caused by –

#### Radiation equipment

Mechanical hazards

Irradiation hazards

Electrical hazards

#### Accessory equipment

Treatment/X-ray couch

Wheelchairs

Cones/cassettes/grids

Foot stools

#### Departmental

Slippery material on the floor

Dangerous materials e.g. broken glass

Poor lighting

Incorrect storage of articles

#### Patient care procedures

Incorrect identification of patients

Incorrect treatment/investigations of patients

Incorrect drug administration to patients

Incorrect handling of patients

Inadequate hygiene standards - cross infection

Accidents involving equipment and departmental design apply equally well to hospital personnel.

#### Accident routine

Attend to the patient

Report to the head of department

Inform medical officer if necessary

Fill in an accident form (see chapter on First Aid)

#### HEALTH AND SAFETY AT WORK ACT

#### Instituted in 1974.

Applies to all persons at work (except domestic employees in private households).

#### Principal objectives

To involve all staff at the work place and to create an awareness of the importance of achieving a high standard of health and safety It is the duty of everyone to take reasonable care for health and safety

Student radiographers should

Be aware of the work of their safety representative Know the safety policy of their own employing authority

Be aware of all possible hazards within a department

Be able to correctly fill in the accident forms

Staff working in X-ray or Radiotherapy Departments should integrate the Health and Safety Policy with the Code of Practice for the protection of Persons against Ionizing Radiations arising from Medical and Dental Use.

N.B. Should an accident occur due to negligence on the part of an individual they may not be covered by the employing authority.

#### PROFESSIONAL ATTITUDES

Students begining their training should be aware of the attitude towards –

Patients:

With reference to

Patient confidentiality

Care of patients before

during

after treatment/examination

Patience and understanding

Appreciation of patient problems

Other staff

Respect for other staff

Cooperation

Importance of teamwork

Punctuality

Liaison with staff in other departments

## Hygiene

#### INTRODUCTION

It is essential that student radiographers understand and practice the rules relating to hygiene with regard to themselves, their patients and the working environment.

A high standard of hygiene is expected from every member of staff in the hospital and the following section is intended to help the student to develop a common sense approach to hygiene standards.

To ensure that cross-infection is kept to a minimum the following points should be considered –

#### Personal

Uniform coats should

Be clean and changed when necessary

Cover clothing

Only be worn inside the hospital

Be of the correct length and not too tight

Protective gowns should be worn in theatre and when handling an infectious patient

#### Footwear

Shoes should be comfortable and in good repair

Quiet, safe, protective and only worn inside the hospital

Socks/tights should be clean

Special shoes should be worn in the operating theatre.

#### Hair should be

Either short or tied back

Clean and tidy

Covered completely in the operating theatre

#### Diet

Should be well balanced

Regular meals should be taken

Regular bowel habits are to be encouraged

Care should be taken with regard to dental hygiene

#### Bathing

Reduces infection

Refreshing and relaxing

#### In general

Finger nails, short, clean, with no nail varnish

If watches and jewellery are worn, care should be taken to ensure that there are no sharp edges which could scratch a patient

Face masks should be worn when necessary

Cuts on hands should be covered

Hands washed after handling patients/dressings/bedpans/urinals/catheters/soiled instruments etc.

#### Patient

Clean gowns/bed linen/cubicles/X-ray room/treatment room Disposable materials and equipment used e.g. syringes/needles/drinking receptacles/denture holders/bedpans Hand washing facilities must be available

#### Equipment

Kept socially clean

Special care with equipment for use in the operating theatre Use of washable items e.g. foam pads/covers for sandbags and bolus bags

Sterile equipment used for aseptic procedures Use of covered receptacles for used dressings

#### Department

Kept socially clean
Good ventilation/air conditioning
Equipment kept in cupboards and so free from dust
Adequate washing facilities should be available
'Clean' and 'dirty' examinations kept separate
Special areas reserved for surgical trolley setting
Toilet facilities checked and cleaned regularly