REPORT ON NATIONAL RADIOGRAPHY PILOT PROJECTS

Compiled by Michele Monahan MA
Clinical Specialist Radiographer
Table of Contents

1. Executive Summary and Recommendations……………………….page 5

2. Introduction……………………………………………………………….page 10

3. Chapter One
   Skill Mix  The Introduction of Radiography Assistants………..page 14
   Beaumont Hospital. ................................................................. page 17
   Letterkenny General. ............................................................. page 37
   AMNCH Tallaght ................................................................. page 57
   St Vincent's University Hospital ............................................. page 77
   Our Lady’s Hospital for Sick Children, Crumlin ....................... page 95
   South Infirmary – Victoria Hospital, Cork .............................. page 114
   Connolly Hospital, Blanchardstown ....................................... page 134
   Cork University Hospital .................................................... page 156
   Comparative Satisfaction ratio for 8 Hospitals ......................... page 176

   Appendix A
   Copy of questionnaire for the Radiography Assistant ................ page 179
   Appendix B
   Copy of questionnaire for the Radiography Staff working with the Radiography Assistant ................ page 183
   Appendix C
   Composite Duties and Responsibilities of Radiography Assistant ................ page 187
   Bibliography, Chapter 1 ............................................................ page 192

4. Chapter Two
   Red Dot and Demand Management ........................................ page 193

   Appendix D  Reports from Various Hospitals ............................ page 202
   St Joseph’s Hospital, Nenagh ................................................ page 203
   Mid West Regional Hospital, Limerick .................................... page 213
   South Infirmary – Victoria Hospital, Cork .............................. page 217
   Naas General Hospital ........................................................ page 223
   Our Lady’s Hospital Navan ..................................................... page 231
   Cavan Hospital ................................................................. page 238
   Connolly Hospital Hospital ................................................ page 243
   Cork University Hospital ..................................................... page 254
   St Columcille’s Hospital, Loughlinstown ................................ page 259
   Ennis General Hospital ....................................................... page 261
5. Chapter Three
   Out of core Hours.................................................................page 264
Cavan Hospital.................................................................page 266
Merlin Park Hospital..........................................................page 276
Beaumont Hospital.............................................................page 286
Mater Hospital.................................................................page 296
AMNCH Tallaght.................................................................page 307
University College Hospital Galway......................................page 317
Appendix E.................................................................page 328
Staff Saturday Satisfaction Survey
Appendix F.................................................................page 332
Patient Satisfaction Surveys
Copy of Survey .................................................................page 333
AMNCH Tallaght.................................................................page 336
Merlin Park.................................................................page 355
Mater .................................................................page 370
Cavan.................................................................page 389

7. Chapter Four
   Pilot Project St Luke's Hospital Rathgar..............................page 405
Acknowledgements

The members of the Joint Implementation Group wish to acknowledge and thank all Hospital Management, Radiography Services Managers, Radiology Department Staff and SIPTU Radiography Representatives for their contribution and help in the process and completion of the 36 Radiography Pilot Projects.

The members of the Joint Implementation Group wish to thank Michele Monahan, National Co-ordinator who instigated and co-ordinated the pilot projects and also compiled this comprehensive evaluation report on behalf of the Group.

This report is available on the website of the HSE Employers Agency www.hseea.ie and also the SIPTU Health website www.siptuhealth.ie.
Executive Summary and Recommendations

Membership of Joint Implementation Group

Larry Bane            HSE Midlands Region
Colm Conachy          HSE North Eastern Region
Paul Flanagan          Department of Health and Children*
Anna Groarke          AMNCH, Tallaght
Mary Hehir            HSE Employers Agency
Jean Kirby            Beaumont Hospital
Martin McDonald          HSE Employers Agency^
Michele Monahan                       National Co Coordinator
Maria Murphy          St Luke’s Hospital, Rathgar
Se O Connor           HSE Employers Agency~
Ken Purdie           AMNCH, Tallaght
Bernie Ryan           SIPTU
Tony Walsh            Department of Health and Children#

*Paul Flanagan          Department of Health and Children* until May 2005
^Martin McDonald         HSE Employers Agency^until March 2004
~Se O Connor                      HSE Employers Agency~ from March 2004
# Bernie Ryan                         Department of Health and Children# Dec 2005

Radiography Assistant

Key Findings

- The vast majority of Radiography Assistants taking part in the pilot projects had previous and relevant experience in the Health Service.
- The Radiographers completing the survey covered all grades and experience levels.
- The Radiography Assistants participating in the pilots felt they were developing their role.
- The Radiography Assistants participating in the pilots felt they had a role in providing increased quality patient care.
- Without exception the Radiography Assistants participating in the pilots would welcome an opportunity to continue the role.
- The majority of Radiographers felt the Radiography Assistant, provided invaluable assistance, which leads to increased quality patient care and throughput of patients.
With one exception the hospitals participating in the pilots have kept the Radiography Assistants in place post pilot project.

Both Radiographers and Radiography Assistants have a more positive view on skill mix after the pilot projects.

The term Assistant should be looked at in light of a number of the comments made.

Better utilisation of skills within the Radiology Departments.

**Recommendations**

- The term Radiography Assistant has a different role in the UK and it is important that this be recognised.
- Job description and role should be clearly defined.
- An appropriate avenue should be found to establish the Radiography Assistant as part of Skill Mix in the wider Health Services.
- A structured and formalised training programme should be put in place. This would make available a nationally recognised system of education for Radiography Assistants that would allow for sustainability and transferability throughout the health service.

**Red Dot and Demand Management**

**Key Findings**

- By introducing protocols from the Royal College of Radiologists, London and endorsed by the EU in RP 118, there can be a reduction in unnecessary x-rays and as a consequence radiation dose to patients.
- This reduction can be minimal where protocols already exist and significant where previous protocols were not in existence.
- By introducing Red Dot and Demand Management to departments interdepartmental relationships have been shown to improve.
- The pick up rate for the Red Dot in all projects compared very favourably to the literature.
- Red Dot can significantly improve the missed fracture rate and improve patient care and outcome.
Recommendations

- By taking on board the literature and the findings of the pilot projects, it is recommended that the successful Demand Management Protocol project in St Joseph’s Hospital, Nenagh and Naas General Hospital be rolled out to other hospitals and reinforce the implementation of SI 478 of 2002 which follows from the EU Directive 97/43/Euratom and has the inherent philosophy that where an exposure cannot be justified it should be prohibited.
- The Red Dot should be rolled out nationally.
- There should be a national Red Dot protocol, this would allow for transferability throughout the health service.
- A reporting course for Radiographers on trauma radiographs should be set up in Ireland. [Robinson et al 1996 & 1999, Loughran 1994, Brealey et al 2003 & 2005] In the interim where opportunities present themselves Radiographers should complete courses in the UK and utilise the skills learnt.

Working outside of core hours

Key Findings

- These presented a varied response to the initiatives.
- Where the projects related to waiting list initiatives the projects had the desired effect in all but the MRI area, and waiting lists were either cleared or reduced to a manageable level.
- In both of the hospitals where the MRI projects took place the rate of attendance was close to 100% but there was little if any impact on the waiting lists.
- In other areas Cavan General Hospital had the best attendance rate overall with patients all keeping their appointments, it may be of note that the CT patients were oncology patients.
- The overall non-attendance rate for patients outside of the above mentioned was up to 35%.
- There was a correlation with increase in number of weekends worked by Radiographers and decrease in satisfaction rates.
Only one hospital continued after the pilot project, AMNCH Tallaght.

It is interesting to note from the patient satisfaction survey that the patient’s choice of day and time for appointment appeared to depend on whether they were x-rayed during the week or on Saturdays. A noteworthy amount of those x-rayed on a Saturday chose Saturday, however those x-rayed during the week and offered the same choice choose in the majority a Monday to Friday appointment time. [See Appendix F]

**Recommendations**

- Lists outside of core hours have a role to play in some areas to alleviate waiting lists.
- An assessment of the reasons for non-attendees may be helpful for scheduling purposes of future appointments.

**Radiotherapy**

**Clerical Officer for Booking System, St Luke’s Hospital Rathgar**

**Key Findings**

- New patient flow system in operation.
- Enhanced and improved skill mix.

**Recommendations**

- Continuation and augmentation of project to increase the advantages already proven.


Introduction

The Health Strategy ‘Quality and Fairness’ mapped out some radical changes in the way health services will be organised, managed, funded and delivered.

The recent Report of the Radiography Service Review Group, approved by Government and agreed with SIPTU, recommended that every opportunity is given to develop agreed responses on a pilot basis in individual hospitals to meet particular demands.

Following negotiations, procedures for the selection, implementation, monitoring and evaluating the implications of pilot projects have been agreed between SIPTU representing Radiographers and the HSEA representing the Employers/Management of the Health Services.

A National Joint Implementation Group (JIG) comprising of HSEA/Employers Management representatives and SIPTU/ Staff representatives was established to select appropriate pilots, to oversee the process and make recommendations following their evaluation.

Pilot project co-ordinator Ms Michele Monahan, Clinical Specialist Radiographer, James Connolly Memorial Hospital, Blanchardstown was seconded to develop, implement and co-ordinate the evaluation of selected pilot projects from various sites.

The criteria on which the selection of pilot projects were based are as follows:

♦ A pilot project must show evidence of at least one or more of the 8 criteria listed below;

1. **Increased workloads – routine, semi routine and emergency** – are any of these issues being addressed in the pilot project?

2. **Increasing demand for the provision of extended services outside traditional core hours** - does this proposal involve the provision of services outside the traditional core hours?

3. **Demand management systems** - does the proposal involve protocols for demand management and avoidance of inappropriate examinations and/or control of exposure to radiation on the basis of the ALARA principle?
4. **Staffing resources to cope with demands** – does the proposal involve relocation/ additional allocation of staff to cope with peaks and troughs in demand?

5. **User satisfaction with present arrangements, including effectiveness of communication** – does the proposal go in any way to address this issue?

6. **Dissatisfaction with present arrangements as voiced by staff and management** - does the proposal go in any way to address this issue?

7. **Improved quality of service response through the operation of the 'Red Dot' system** - does the proposal go in any way to address this issue?

8. **Appropriate skill-mix** Introduction of Radiography Assistant on a trial basis to work under Radiographer supervision and to carry out tasks, which do not require the professional input of the Radiographer - does the proposal go in any way to address this issue?

---

**Phase Two:**

Following selection of proposal from Phase 1, evidence under the following criteria will then be considered:

1. **Partnership principles**- is there evidence of partnership and good and effective communication between management and staff?

2. **Benefit to patient / service** - are the benefits to the patient/service clearly identified in line with the Quality and Fairness Health Strategy?

3. **Benefit to staff** - are there any clearly identified benefits to the staff under Health and Safety, Work Life balance, remuneration?

4. **Transferability** – can this be easily transferred to different sites?

5. **Cost benefit analysis** – is it cost effective in terms of cost v benefit to patients, service and staff?

6. **Sustainability** – if proved successful, will hospital management buy into the project on a long-term basis?

6. **Commitment of staff to project** - are the staff ready and willing to commit to the duration of the project once terms and conditions are agreed?
8. **Quality** — *will it improve the quality of service to the patient without reducing the quality of work life to staff?*

9. **Risk Management / Compliance with Legislation** — *does proposal comply with legislation and take risk management factors into consideration?*

10. **IR issues** — *is it addressing present issues or raising potential issues?*

A letter was sent in May 2003 to all key stakeholders inviting submissions for inclusion in the pilot projects.

Following initial submissions from various sites, the Project Co-ordinator contacted each of those sites, and had preliminary meetings with the stakeholders involved to discuss the project, its possible implications and to ensure there was a willingness to participate in the process.

The JIG group then considered in detail all submissions and selected appropriate projects for development and implementation.

Each site formed a team to support the project locally, the team included representatives from hospital management, radiography management and radiographers within the x-ray dept., to include the local radiographers SIPTU representative.

It was a condition of funding that this team provided bimonthly feedback to the National Joint Implementation Group. Satisfaction surveys were distributed for completion by staff implementing the project. The project coordinator facilitated this process.
Rationale

The pilot projects focus on service and staff needs, with a view to improving the quality of the service from both these perspectives. This is to be done by addressing issues from the criteria set out below. The pilots focus on service and staff needs by addressing issues laid out in the criteria below, with a view to improving the quality of the service from both perspectives.

It is recognised that local needs and service provisions vary but that ultimately local solutions to patterns of service need to be developed within the parameters of a national agreement.

- *Increased workloads – routine, semi routine and emergency*
- *Increasing demand for the provision of extended services outside traditional core hours*
- *Appropriate skill-mix; Introduction of Radiography Assistant on a trial basis to work under Radiographer supervision and to carry out tasks, which do not require the professional input of the Radiographer.*
Chapter One

Skill Mix
Background

The purpose of these studies was to evaluate the role of Radiography Assistants under the National Radiography Pilot Projects.

- The emerging role of Skill Mix in the Imaging Dept with the introduction of Radiography Assistant on a trial basis to work under Radiographer supervision and to carry out tasks, which do not require the professional input of the Radiographer.

- To determine whether or not the findings derived from the evaluation process of the pilot project have the elements of sustainability and transferability across Radiology Dept and indeed the Health Services.

- To make recommendations based on the findings as to the extension of the programme across the health services.

Methodology

The results of this study were achieved by using both quantitative and qualitative approaches. Participants involved in the pilot included Radiography Assistants who held a specific job profile for the six-month duration of the pilot, and Radiographers of all grades.

Results were obtained by surveying the participants by method of questionnaire. The questionnaires were confidential and allowed for the comments of those surveyed.

Quasar was used as an audit tool for analysing the questionnaires.

Copy of questionnaire for the Radiography Assistant appendix A.
Copy of questionnaire for the Radiography Staff working with the Radiography Assistant appendix B.
Introduction to Skill Mix

In essence the introduction of Radiography Assistants is to allow Radiographers to spend more time on activities, which require their direct professional input. This allows Radiographers to focus upon what they are educated to do. The role and function of the Radiography Assistant is in addition to and complimentary to the professional role of the Radiographer.

The American Nurses Association (ANA 2000) adopted a position statement in this regard in 1992, which described the employment of unlicensed assistive personnel to support the provision of direct and indirect patient care under the direction of a registered nurse. The position statement described direct and indirect patient care activities as follows:

Direct patient care activities assist the patient/client in meeting basic human needs within the institution, at home or other health care settings. This includes activities such as assisting the patient with feeding, drinking, ambulating, grooming, toileting, dressing and socialising. It may involve the collecting, reporting and documentation of data related to the above activities. This data is reported to the Registered Nurse who uses the information to make a clinical judgement about patient care.

Indirect patient care activities are necessary to support the patient and their environment, and only incidentally involve direct contact. These activities assist in providing a clean, efficient and safe patient care milieu and typically encompass chore services, companion care, transporting, clerical stocking and maintaining stock. (1)

Radiographers would view the introduction of Radiography Assistants in a similar fashion.
Report on Radiography Assistants for Specialised areas in the Radiology Dept Beaumont Hospital

Following submissions from Beaumont Hospital which were then evaluated by the Joint Implementation Group, Beaumont Hospital was selected as a pilot site for the following projects

1. Two Radiography Assistants for Specialised areas in the Radiology Dept.

To introduce two Radiography Assistants to work on a rotational basis in the three specialised areas of MRI, Neurovascular Radiology and CT, under the direction of the Clinical Specialist Radiographers.

Pre pilot Radiographers felt that increasingly, more of their time is spent on non-radiographic duties i.e. patient transfer on and off scanners/ equipment and replenishing stocks in the area. The patients have to wait for the next available porter to return from the wards to assist with the patient transfer.

The pilot hoped to address the increased demand for services in each of the specialised areas with the timely and effective transfer of patients to and within the Radiology Dept.

The pilot involved skill-mix where the Assistant carried out tasks, which did not require the professional input of the Radiographer.
It was also hoped that the pilot would in some way provide an improved quality of service to the patient.
The following are the core duties assigned to the Radiography Assistant for Beaumont Hospital

Duties and Responsibilities

- Assisting where necessary to help patients get on and off examination tables in the Radiology Department.
- Collecting outpatients and GP patients from the main Radiology reception area and outpatient waiting areas.
- Assisting the radiographers with the sterilisation and disinfection procedures carried out in the area as required.
- Be responsible to the radiographer in charge for monitoring and replenishing stock as required.
- Assist ambulatory patient in returning to the ward / clinics with chairs, i.e. write patients' name on board or accompany walking patient to wards / clinics.
- Ensure patients comfort pre and post examination where necessary, for example provision of blankets.
- Assisting ambulatory inpatients from the wards in locating the Department of Radiology.
- Prepare patients for their examinations, in other words instruct / assist in undressing etc.
- Accompany patients who require non-specialist supervision as required.
- Change linen on examination tables after each patient comes off the table and place linen in the bags provided in the area.
- Answer telephones and locate appropriate personnel or take messages, sort films and write envelopes as required.
- And other duties as required.
Results from Radiography Assistants

The following results are from questionnaire from Appendix A. The Radiography Assistants who were seconded to partake in the pilot project were given the survey in Appendix A complete.

Q1 Number of years working in the Health Services

Q2 Grade before pilot:

Porter

Porter
Q3 Please indicate the area you worked in as part of the pilot

The overview of ratings for question 4-11 of the Radiography Assistant is as follows:
The results from the questions individually are as follows:

Q4 Since the introduction of the Radiography Assistant Pilot, My day to day duties have changed considerably

Q5 Since the introduction of the Radiography Assistant Pilot, I have learnt additional skills
Q6 Since the introduction of the Radiography Assistant Pilot, the quality of patient care has increased.

Q7 Since the introduction of the Radiography Assistant Pilot, I have had more time to deal with patients.
Q8 Since the introduction of the Radiography Assistant Pilot, I have felt less stressed at work

Q9 Since the introduction of the Radiography Assistant Pilot, I have a more positive view on skill mix
Q10 Since the introduction of the Radiography Assistant Pilot, my own job satisfaction has increased

Q11 If offered I would welcome the opportunity to continue this role
An overall satisfaction rating of questions 4-11 of Radiography Assistant responses is:

**Satisfaction rating results of individual questions**

Question 4 gives a satisfaction rating of 100% that the day to day duties of the Radiography Assistant has changed.

Question 5 gives a satisfaction rating of 87.5% that the Radiography Assistants have learnt additional skills.

Question 6 gives a satisfaction rating of 62.5% that quality of patient care has increased from the Radiography Assistants point of view.

Question 7 gives a satisfaction rating of 87.5% that the Radiography Assistants have had more time to deal with patients.

Question 8 gives a satisfaction rating of 50% that the Radiography Assistants have felt less stressed at work.

Question 9 gives a satisfaction rating of 75% that the Radiography Assistants have a more positive view on skill mix.

Question 10 gives a satisfaction rating of 87.5% that the Radiography Assistants have an increased level of job satisfaction.

Question 11 gives a satisfaction rating of 87.5% that the Radiography Assistants would like the opportunity to continue in the role.
The following are the positive issues of the pilot project as identified by Radiography Assistants:

- More time to interact with patients.
- More pleasant working environment.
- Quality of care to patients increased.
- Less stressful working environment.
- Greater job satisfaction.
- More interesting

The following are the negative issues of the pilot project as identified by Radiography Assistants:

- None

Additional comments from Radiography Assistants:

- From the pilot it would appear to be better for everyone if the role of Radiography Assistant was kept on as a full time basis.
Results from Radiographers

The following results are from the questionnaire from appendix B, Radiographers from various grades and years of experience, were surveyed to ascertain their views on the introduction of the Radiography Assistant.

This survey took place on completion of the project to allow the Radiographers take a reflective and retrospective view on working with the Radiography Assistant.

In total 11 Radiographers working in the specialized areas answered the questionnaires, which reflects approximately 73% of the total number of Radiographers working in the designated areas with a Radiography Assistant.
The overview of ratings for question 4-10 of the Radiographers is as follows:

![Overview of Q4-Q10](image)

The results from the questions individually are as follows:

Q4 Since the introduction of Radiography Assistant productivity has increased

![Category 4](image)
Q5 Since the introduction of the Radiography Assistant, I have spent less time on non-radiographic duties

Q6 Since the introduction of the Radiography Assistant, the quality of patient care has increased
Q7 Since the introduction of the Radiography Assistant, I have more time to deal with patients.

Q8 Since the introduction of the Radiography Assistant, I have felt less stressed at work.
Q9 Since the introduction of the Radiography Assistant I have a more positive view on skill mix.

Q10 Since the introduction of the Radiography Assistant, my own job satisfaction has increased.
An overall satisfaction rating of questions 4-10 of Radiographer responses is:

![Bar chart showing satisfaction ratings](image)

**Satisfaction rating results of individual questions**

Question 4 gives a satisfaction rating of 84.09% that productivity has increased from the Radiographers point of view.

Question 5 gives a satisfaction rating of 88.64% that Radiographers have spent less time on non-radiographic duties.

Question 6 gives a satisfaction rating of 90.91% that quality of patient care has increased from the Radiographers point of view.

Question 7 gives a satisfaction rating of 61.36% that the Radiographer has had more time to deal with patients.

Question 8 gives a satisfaction rating of 77.27% that the Radiographers have felt less stressed at work.

Question 9 gives a satisfaction rating of 77.27% that the Radiographers have a more positive view on skill mix.

Question 10 gives a satisfaction rating of 77.27% that the Radiographers have an increased level of job satisfaction.
The following are the positive issues of the pilot project as identified by Radiographers:

- Decreased risk of back strain for Radiographers.
- Decreased waiting time for porters.
- Increased throughput.
- More time for Radiographic duties.
- Increased care for the patient, hope of less back injuries for Radiographers.
- Increased skill mix.
- Less time waiting for trained assistance in moving and transferring patients.
- Improved quality of patient care.
- Greater efficiency in terms of radiographic duties.
- Less physical stress on Radiographers.
- The knowledge that there is someone with a defined role as Radiography Assistant improves efficiency, as there is no time wasted discussing ‘roles’.
- Increased quality of care for the patient due to decreased waiting times for portering aid. Quicker examination times.
- More personal time with patients.
- Improved patient care.
- Reduced risk of injury and stress to Radiographer, due to not having to work single-handedly. More time spend on Radiographic duties.
- Help in lifting patients available on request leading to fewer injuries for the Radiographer, as the Assistant is always available.
- Radiographer is free to do radiographic duties leading to a more efficient work environment.
- If room is busy the Radiography Assistant is available to monitor sick patients.
- Increased patient throughput.
- As many patients in CT are on beds or trolleys etc, it eliminates waiting for assistance with lifts.
- Less back injury among Radiographers.
- More time to spend on Radiographic duties.
- Radiography Assistants help with stocking up
- Increased productivity.
- Increased patient turnover.
- Increased Radiographer morale.
- Increased efficiency.
Greater patient care.
Physical stress decreased.
More focus now on patient and examination.
Improved team working in less stressed environment.
Decreased waiting times for help with lifting etc.
The two individuals who were chosen ensured that it was a truly positive experience.
Less back injury for Radiographers.
Less stress waiting for porter.
Patient safety improved while getting out of beds/chairs.

The following are the negative issues of the pilot project as identified by Radiographers:

- Two assistants not sufficient for large, busy x-ray dept.
- Removal of the Assistants would mean back to the old days of back injuries and stress.
- Two Radiography Assistants are an insufficient number for a large dept.
- Some areas may suffer when the aides are busy elsewhere.
- Lack of permanence with the posts.
- All areas may benefit from Radiography Assistants, rather than just the specialised areas, which would lead to more than two Radiography Assistants being necessary.
- More Radiography Assistants would be appropriate for General Dept as well.
- Regret that they were not in place up to now.
- The only negative is that if the project is not continued, it will be hard to revert to self-help.
- There is a need for a Radiography Assistant dedicated to general rooms.
- Area now very dependent on assistants.
- It has also identified other areas needing assistants.
- Uncertain future will the pilot continue?
- Only two assistants in a large dept are not enough, as they are needed in other areas.
- Radiography Assistants are covering all areas, there are more required.
- There is a need for the posts to be made permanent, as their future is unsure.
Additional comments from Radiographers:

- In the entire project has had a very positive effect on the department.
- The project has had a very positive effect on the working life of the Radiographer, allowing more time to be spent on Radiography duties.
- The Assistants work very hard, are very pleasant with the patients, additional assistants would be even more beneficial.
- I believe that this pilot study has been extremely successful largely in relation to the persons employed as the Radiography Assistants. The Assistants were required and succeeded in working in a range of areas and a range of roles. Success is dependent largely on a personal basis.
- I feel the introduction of Radiography Assistants was hugely beneficial to the Dept. and would like to see it continued.
- This was a very positive project and overall CT radiographers spent more time on radiographic duties. Less time spent waiting for porters to help lift patients on and off the scanners, therefore if project ends patient throughput will decrease.
- While the service is available during the day, it would be beneficial if it were also available after hours.
- As mentioned above both Assistants selected were excellent. It would, however, be very important to have a clear comprehensive job description so that the job is built around the role as opposed to the person.
- The people selected for these posts are excellent.

Conclusion

It is clear from the above data that the Beaumont Pilot project on Radiography Assistants has been successful from the perspectives of both the Radiographers and the Radiography Assistants.

Satisfaction ratings re learning additional skills, changing day-to-day duties to quality of care improvements range from 62% to 100%.

In addition there is a satisfaction rating of 50% improvement when it comes to feeling less stressed at work.

Beaumont Hospital have to date continued the project beyond the pilot phase.
Report on the Radiography Assistant for CT in Letterkenny General Hospital.

The purpose of this study is similar to that of Beaumont Hospital, however in this instance the Radiography Assistant worked exclusively in the CT Dept.

The following are the core duties assigned to the Radiography Assistant in the CT Dept of Letterkenny Hospital:

Out patients
- Assist with the patient in the preparation for the examination.
- Explain procedure to patient and how long it may take.
- Help the patient to change into a gown if necessary, and give reassurance.
- Have respect for patient at all times and be aware of confidentiality issues.
- Assist the patient onto the examination couch.
- Assist the Radiologist with the Venflon.
- When the examination is complete remove Venflon from patients vein and ensure bleeding has ceased, place bandage on injection site.
- Assist patient from examination couch, escort back to changing room and help to dress if needed.
- Ensure patient has no adverse reaction to contrast injection.
- Ensure patient has transport home.
- Advise patients on how they can access the results and how long they are likely to take.

In patients
- Check patient is on appropriate ward and ensure patient is prepared for examination i.e. fasting.
- Bring the oral contrast drink to ward for patient.
- Ensure there is a venflon in situ.
- Liase with porter re the time patient required in the Department for the examination.
- Ensure patient notes on hand.
- Ensure patient returns to the ward with as little delay as possible.

Other duties
- Collect patient documentation and charts from reception and ensure all paperwork is correct for each individual patient.
- Ensure technical data reports and charts are properly processed in accordance with instructions.
- Collecting request cards to be appointed and on appointment to return to appointment clerk in office.
- Ensure that the scanner and room are kept clean and tidy at all times.
- Change linen on couch and ensure linen cupboard is stocked. Be aware of correct linen bags to be used for varying linen and ensure bags are collected.
- Check injection trolley is fully prepared at all times. Keep shelves and anaesthetic stocked as required.
- Check stocks in CT and preparation room and inform Clinical Specialist when stocks required.
- Check sharps and bottle box.
- Report broken items.
- Be familiar with relevant Hospital policies.
- Report all incidents involving self, patients or visitors to Radiographic Services Manager and Clinical Specialist.
- Assist with emergency first aid.
- Attend in house training as required.
Results from Radiography Assistants

The following results are from questionnaire from Appendix A. The Radiography Assistants who were seconded to partake in the pilot project were given the survey in Appendix A complete.

Q1 Number of years working in the Health Services

Q2 Grade before pilot:

Care Assistant - Nursing Home
Q3 Please indicate the area you worked in as part of the pilot

The overview of ratings for question 4-11 of the Radiography Assistant is as follows

Overview of Q4-Q11
The results from the questions individually are as follows:

Q4 Since the introduction of the Radiography Assistant Pilot, My day to day duties have changed considerably

Q5 Since the introduction of the Radiography Assistant Pilot, I have learnt additional skills
Q6 Since the introduction of the Radiography Assistant Pilot, the quality of patient care has increased

Q7 Since the introduction of the Radiography Assistant Pilot, I have had more time to deal with patients
Q8 Since the introduction of the Radiography Assistant Pilot, I have felt less stressed at work

Q9 Since the introduction of the Radiography Assistant Pilot, I have a more positive view on skill mix
Q10 Since the introduction of the Radiography Assistant Pilot, my own job satisfaction has increased

Q11 If offered I would welcome the opportunity to continue this role
An overall satisfaction rating of questions 4-11 of Radiography Assistant responses is:

![Overall satisfaction rating of questions 4-11](image)

Satisfaction rating results of individual questions

Question 4 gives a satisfaction rating of 100% that the day to day duties of the Radiography Assistant has changed.

Question 5 gives a satisfaction rating of 100% that the Radiography Assistant has learnt additional skills.

Question 6 gives a satisfaction rating of 100% that quality of patient care has increased from the Radiography Assistants point of view.

Question 7 gives a satisfaction rating of 100% that the Radiography Assistant has had more time to deal with patients.

Question 8 gives a satisfaction rating of 100% that the Radiography Assistant has felt less stressed at work.

Question 9 gives a satisfaction rating of 100% that the Radiography Assistant has a more positive view on skill mix.

Question 10 gives a satisfaction rating of 100% that the Radiography Assistant has an increased level of job satisfaction.

Question 11 gives a satisfaction rating of 100% that the Radiography Assistant would like the opportunity to continue in the role.
The following are the positive issues of the pilot project as identified by Radiography Assistant:

- Patients get more attention, both before and after the CT examination.
- Work area clean and tidy at all times.
- Assisting Doctors with injection and ensuring that the patient has no reaction after injection

The following are the negative issues of the pilot project as identified by Radiography Assistants:

- None
Results from Radiographers

The following results are from the questionnaire from appendix B, Radiographers from various grades and years of experience, were surveyed to ascertain their views on the introduction of the Radiography Assistant to the CT Department of Letterkenny Hospital.

This survey took place on completion of the project to allow the Radiographers take a reflective and retrospective view on working with the Radiography Assistant.

In total Radiographers working in CT answered the questionnaires, which reflects approximately 90% of the total number of Radiographers working in CT with the Radiography Assistant.
Q 2 Grade at time of pilot

<table>
<thead>
<tr>
<th>Grade</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic</td>
<td>3</td>
</tr>
<tr>
<td>Senior</td>
<td>2</td>
</tr>
<tr>
<td>Clinical Specialist/ Supt 1</td>
<td>2</td>
</tr>
<tr>
<td>RSM 1</td>
<td>1</td>
</tr>
<tr>
<td>RSM 2</td>
<td>1</td>
</tr>
</tbody>
</table>

Q 3 Areas worked in

<table>
<thead>
<tr>
<th>Area</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>CT</td>
<td>9</td>
</tr>
<tr>
<td>MRI</td>
<td>8</td>
</tr>
<tr>
<td>US</td>
<td>7</td>
</tr>
<tr>
<td>NM</td>
<td>6</td>
</tr>
<tr>
<td>Ang</td>
<td>5</td>
</tr>
<tr>
<td>Mam</td>
<td>4</td>
</tr>
<tr>
<td>Gen</td>
<td>3</td>
</tr>
<tr>
<td>More than one,</td>
<td>2</td>
</tr>
</tbody>
</table>


The overview of ratings for question 4-10 of the Radiographers is as follows:

The results from the questions individually are as follows:

Q4 Since the introduction of Radiography Assistant productivity has increased
Q5 Since the introduction of the Radiography Assistant, I have spent less time on non-radiographic duties

Q6 Since the introduction of the Radiography Assistant, the quality of patient care has increased
Q7 Since the introduction of the Radiography Assistant, I have more time to deal with patients.

Q8 Since the introduction of the Radiography Assistant, I have felt less stressed at work.
Q9 Since the introduction of the Radiography Assistant I have a more positive view on skill mix.

Q10 Since the introduction of the Radiography Assistant, my own job satisfaction has increased.
An overall satisfaction rating of questions 4-10 of Radiographer responses is:

![Overall satisfaction rating of questions 4-10](chart)

**Satisfaction rating results of individual questions**

Question 4 gives a satisfaction rating of 80.56% that productivity has increased from the Radiographers point of view.

Question 5 gives a satisfaction rating of 86.11% that Radiographers have spent less time on non-radiographic duties.

Question 6 gives a satisfaction rating of 91.67% that quality of patient care has increased from the Radiographers point of view.

Question 7 gives a satisfaction rating of 77.78% that the Radiographer has had more time to deal with patients.

Question 8 gives a satisfaction rating of 69.44% that the Radiographers have felt less stressed at work.

Question 9 gives a satisfaction rating of 83.33% that the Radiographers have a more positive view on skill mix.

Question 10 gives a satisfaction rating of 61.11% that the Radiographers have an increased level of job satisfaction.
The following are the positive issues of the pilot project as identified by Radiographers:

- Patient care has improved as there is someone to look after them when the scan is completed.
- More patients can be done due to the extra pair of hands.
- From a health and safety point of view work practices have improved.
- Stress levels due to administration of contrast are now decreased due to someone now being available to look after patient post examination.
- Patient care has improved
- Patient safety has improved.
- Stress levels are reduced.
- Radiographer's life more bearable.
- Patient care more efficient.
- Radiographers now able to concentrate on CT examination in hand knowing there is another person waiting with the patient.
- As the Manager I can see that the life of the Clinical Specialist in CT has become much less stressful and makes the management of CT and patient care much more efficient.
- Patients are never left unattended.
- Patient care has increased.
- There is more time to spend with the patient and less time doing clerical work and answering the phone in the middle of a scan.
- More time for patient care.
- Clearing up after exams more efficient.
- More time spent with sick patients awaiting CT.
- More time to scan, less phone answering etc.
- Extra person able to set up patients, organise preps, assist with IV injections and patient care.
- Quality of patient care increased.
- Day runs much more efficiently.
Less stressful.

In CT the Radiographer has more time to deal with patients and the patient has more care and assistance given to them outside the scan room dressing and undressing etc.

Contrast drinks are given to patients by the Assistant and monitored while drinking, both in ward and Dept.

Decreased stress on staff members.

Greater efficiency and throughput.

Patient is supervised at all times.

The following are the negative issues of the pilot project as identified by Radiographers:

- No person to fill the position when the assistant is off.
- None, very welcome addition to the department.
- Would like to see the arrangement to be permanently in place.
- None – since the introduction of this pilot, I have only positive issues to make, I would like to see the post being made permanent.
- No cover for time off.

Additional comments from radiographers:

- Life as a Clinical Specialist has improved one hundred fold since the employment of the Assistant for CT. In 1997 when CT started 2000 scans were done, in 2004 6,500-7,500 scans will be done this would not be possible without an assistant.
- CT becomes busier each day and the introduction of an assistant has greatly improved the service.
- The volume of work would not be feasible each day without the help of the assistant.
- Overall having an assistant in CT has been a totally positive experience.
- An assistant on busy bank holiday weekends would be most useful.
As I feel productivity has increased because of the radiography assistant, there is a greater throughput in CT which does not allow for additional time to be spent with the patient, however, there is more time for booking patients etc and greater time spent at scanner learning technique. This is especially good for teaching skills.

Conclusion

It is clear from the above data that the Letterkenny Pilot project on Radiography Assistant, has been equally successful from the perspectives of both the Radiographers and the Radiography Assistants in a similar fashion to Beaumont Hospital. Satisfaction ratings re learning additional skills, changing day-to-day duties to quality of care improvements range from 61.11% to 100%.

In addition there is a satisfaction rating of 69.44% improvement when it comes to feeling less stressed at work.

Letterkenny Hospital has continued on with the Radiography Assistant for CT with the Hospital providing the funding.
Report on the Radiography Assistant for AMNCH Tallaght

The purpose of this study is similar to that of Beaumont Hospital.

The following are the core duties assigned to the Radiography Assistant AMNCH Tallaght.

Duties and responsibilities

- Assist with the transfer of patients within the department.
- Assist with the preparation of patients for imaging procedures.
- Assist and monitor patients while they are taking preparations for examinations.
- Accompany patients if required when procedures are being performed.
- Assist with moving and positioning of patients when necessary.
- Assist with confused or agitated patients while in the department.
- Prepare and serve food/refreshments to patients as requested.
- Assist with the patient in the preparation for the examination.
- Help and support patients prior to and after examinations.
- Change linen on examination tables after each patient comes off the table and place linen in the bags provided in the area. Ensure linen cupboard stocked.
- Ensure the correct laundry bags are used and the correct use of waste bags.
- Answer telephones and locate appropriate personnel or take messages, sort films and write envelopes as required.
- Assist in the disposal of clinical waste and clean Special Procedure trolleys after use, including the restocking of CSSD packs as required.
- Assist in any area within the department as required.
- Attend to spillages immediately to reduce the risk of accidents.
- Assist with the cleaning and transfer of equipment within the department.
- Assist with the registration of patient demographics on the RIS and work list.
- Report all incidents involving self, patients or visitors to the Radiography Services Manager or Senior Radiographer in his/her absence.
- Assist with emergency first aid as directed.
- Attend in-service instruction as required.
- Assist with the transfer of patients within the department.
- Assist with the disposal of clinical waste and clean Special Procedure trolleys after use.
- Report any items that require repair/maintenance.
- Assist in any area within the Department as required.
- Change cubicle curtains as requested.
- Assist with issues relating to day-to-day department operation such as Materials Management, Pharmacy, radiographic film and pathology specimen delivery.
- Maintain awareness of the primacy of the patient in relation to all hospital activities.
- Be familiar and comply with Hospital and Departmental policies in relation to Patients Charter, Health and Safety, Fire, Infection Control, Waste Disposal and Radiation Protection.
Results from Radiography Assistants

The following results are from questionnaire from Appendix A.
The Radiography Assistants who were seconded to partake in the pilot project were
given the survey in Appendix A complete.

Q 2. Grade before pilot:

Care Assistant on wards.
The overview of ratings for question 4-11 of the Radiography Assistant is as follows.
The results from the questions individually are as follows:

**Q4** Since the introduction of the Radiography Assistant Pilot, My day to day duties have changed considerably

<table>
<thead>
<tr>
<th>Category</th>
<th>Assistants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree</td>
<td>0.6</td>
</tr>
<tr>
<td>Agree</td>
<td>0.9</td>
</tr>
<tr>
<td>Undecided</td>
<td>0.4</td>
</tr>
<tr>
<td>Disagree</td>
<td>0.1</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>0.0</td>
</tr>
</tbody>
</table>

**Q5** Since the introduction of the Radiography Assistant Pilot, I have learnt additional skills

<table>
<thead>
<tr>
<th>Category</th>
<th>Assistants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Agree</td>
<td>0.5</td>
</tr>
<tr>
<td>Agree</td>
<td>1.0</td>
</tr>
<tr>
<td>Undecided</td>
<td>0.2</td>
</tr>
<tr>
<td>Disagree</td>
<td>0.1</td>
</tr>
<tr>
<td>Strongly Disagree</td>
<td>0.0</td>
</tr>
</tbody>
</table>
Q6 Since the introduction of the Radiography Assistant Pilot, the quality of patient care has increased.

Q7 Since the introduction of the Radiography Assistant Pilot, I have had more time to deal with patients.
Q8 Since the introduction of the Radiography Assistant Pilot, I have felt less stressed at work

Q9 Since the introduction of the Radiography Assistant Pilot, I have a more positive view on skill mix
Q10 Since the introduction of the Radiography Assistant Pilot, my own job satisfaction has increased

Q11 If offered I would welcome the opportunity to continue this role
An overall satisfaction rating of questions 4-11 of Radiography Assistant responses is:

Satisfaction rating results of individual questions

Question 4 gives a satisfaction rating of 75% that the day to day duties of the Radiography Assistant has changed.

Question 5 gives a satisfaction rating of 75% that the Radiography Assistants have learnt additional skills.

Question 6 gives a satisfaction rating of 100% that quality of patient care has increased from the Radiography Assistants point of view.

Question 7 gives a satisfaction rating of 100% that the Radiography Assistants have had more time to deal with patients.

Question 8 gives a satisfaction rating of 75% that the Radiography Assistants have felt less stressed at work.

Question 9 gives a satisfaction rating of 100% that the Radiography Assistants have a more positive view on skill mix.

Question 10 gives a satisfaction rating of 100% that the Radiography Assistants have an increased level of job satisfaction.

Question 11 gives a satisfaction rating of 100% that the Radiography Assistants would like the opportunity to continue in the role.
The following are the positive issues of the pilot project as identified by Radiography Assistants:

- Working in different areas of X-Ray is very interesting.
- There is more time to spend with the patients.
- Patients have varied requirements, which makes every day different.

The following are the negative issues of the pilot project as identified by Radiography Assistants:

- None

Additional comments from Radiography Assistants:

- None
Results from Radiographers

The following results are from the questionnaire from appendix B. Radiographers from various grades and years of experience, were surveyed to ascertain their views on the introduction of the Radiography Assistant to the Specialised areas in the X-Ray Department of AMNCH Tallaght.

This survey took place on completion of the project to allow the Radiographers take a reflective and retrospective view on working with the Radiography Assistant.

In total 5 completed questionnaires were received, which reflects approximately 100% of the total number of Radiographers managing the specialised areas where the Radiography Assistant works in addition the Clinical Nurse Manager in the X-Ray Dept completed a questionnaire.
Q 2 Grade at time of pilot

Number

Grade

Basic
Senior
Clinical Specialist/ Supt 1
RSM 1
RSM 2

Q 3 Areas worked in

Number

Area

CT
MRI
US
NM
Ang
Mam
Gen
More than one,
The overview of ratings for question 4-10 of the Radiographers is as follows:

Q4 Since the introduction of Radiography Assistant productivity has increased
Q5 Since the introduction of the Radiography Assistant, I have spent less time on non-radiographic duties

Q6 Since the introduction of the Radiography Assistant, the quality of patient care has increased
Q7 Since the introduction of the Radiography Assistant, I have more time to deal with patients.

Q8 Since the introduction of the Radiography Assistant, I have felt less stressed at work.
Q9 Since the introduction of the Radiography Assistant I have a more positive view on skill mix.

Q10 Since the introduction of the Radiography Assistant, my own job satisfaction has increased.
Satisfaction rating results of individual questions

Question 4 gives a satisfaction rating of 90% that productivity has increased from the Radiographers point of view.

Question 5 gives a satisfaction rating of 95% that Radiographers have spent less time on non-radiographic duties.

Question 6 gives a satisfaction rating of 85% that quality of patient care has increased from the Radiographers point of view.

Question 7 gives a satisfaction rating of 90% that the Radiographer has had more time to deal with patients.

Question 8 gives a satisfaction rating of 70% that the Radiographers have felt less stressed at work.

Question 9 gives a satisfaction rating of 80% that the Radiographers have a more positive view on skill mix.

Question 10 gives a satisfaction rating of 75% that the Radiographers have an increased level of job satisfaction.
The following are the positive issues of the pilot project as identified by Radiographers:

- Work list can commence earlier each morning, as Radiographer no longer has to spend time on non-radiographic duties prior to commencement of work list.
- As a result of Radiographer spending less time on non-radiographic duties there are more patients scanned.
- Radiographers spend less time on non-radiographic duties.
- Improved care of patients.
- Additional personnel in radiology dept. to care for and help patients
- Radiographers spend less time getting rooms ready in the morning as the Radiography Assistant has already stocked them and so the patient list gets started earlier.
- Patient care is improved, as there is now someone to direct to next examination etc.
- Radiographers now doing less non-radiographic duties.
- There is now more time for patients.
- Increased care for patients during examinations.
- Radiography Assistant acts as chaperone for Radiologists during certain procedures.
- Assists with dressing and undressing elderly and ill patients.
- Increased teamwork within the Dept.
- Supervises patients while taking preparation for the examinations.
The following are the negative issues of the pilot project as identified by Radiographers:

- The Radiography Assistant should remain as a Radiography Assistant and not be required for other disciplines.
- Ideally there should be one Radiography Assistant dedicated to each specialised area within the x-ray dept. I feel this would further increase productivity and would reduce the Radiography Assistant having unclear duties.
- One Radiography Assistant in a large department can be kept very busy.
- Having one assistant in a large department means that they move around from area to area. If the assistant was working in one area for a longer time they may be able to take on additional duties and so reduce further the non-radiographic duties for the Radiographer.
- Having a number of Assistants perhaps one assigned to each area would be the ideal and ensure the role of Radiography Assistant is established.
- There is a need for one in each specialised area.
- The Radiography Assistant should be dedicated to assist Radiographers and Radiologists only.
- None

Additional comments from radiographers:

- While the pilot of Radiography Assistant has been successful in reducing the amount of non-radiographic duties done by radiographers, Radiographers should not become distant from the patient nor should they feel that they should never perform non-radiographic duties.
- This as our first experience of a Radiography Assistant working in our department. It has certainly helped with care of patients and allows the Radiographer more time for his or her radiography duties.
Conclusion

It is clear from the above data that the AMNCH Tallaght Pilot project on Radiography Assistant has been equally successful from the perspectives of both the Radiographers and the Radiography Assistants in a similar fashion to the other Hospitals. Satisfaction ratings re learning additional skills, changing day-to-day duties to quality of care improvements range from 70% to 100%.
In addition there is a satisfaction rating of 70% improvement when it comes to feeling less stressed at work.
AMNCH Tallaght has continued on with the Radiography Assistant for the Radiology Dept. with the Hospital providing the funding.
Report on the Radiography Assistant for Ultrasound in St Vincent’s University Hospital

The purpose of this study is similar to that of Letterkenny, in this instance the Radiography Assistant worked exclusively in the Ultrasound Dept.

The following are the core duties assigned to the Radiography Assistant in the Ultrasound Dept. SVUH

Duties and Responsibilities

- Escorting patients to and from scan rooms.
- Ensuring patient transfers are made in a timely fashion from wards and other departments as directed by the sonographers.
- Assist patients into gowns and any other patient need as directed by sonographers.
- Ensure proper prep is given prior to scans i.e. ensuring full bladder prior to pelvic scans.
- All aspects of general housekeeping of scan rooms.
- Collection of probes from other areas and moving scanners to other areas of the department /wards as directed.
- TSSD collection runs as required.
- Correlating films with requests and previous films.
- Assist with lifting, moving patients and pushing beds.
- Assist Consultant Radiologists with dedicated scan lists.
Results from Radiography Assistant

The following results are from questionnaire from Appendix A. The Radiography Assistants who were seconded to partake in the pilot project were given the survey in Appendix A complete.

Q1 Number of years working in the Health Services

Q2 Grade before pilot:

Kitchen Assistant
Q3 Please indicate the area you worked in as part of the pilot

The overview of ratings for question 4-11 of the Radiography Assistant is as follows
The results from the questions individually are as follows:

**Q4** Since the introduction of the Radiography Assistant Pilot, My day to day duties have changed considerably

**Q5** Since the introduction of the Radiography Assistant Pilot, I have learnt additional skills
Q6 Since the introduction of the Radiography Assistant Pilot, The quality of patient care has increased

Q7 Since the introduction of the Radiography Assistant Pilot, I have had more time to deal with patients
Q8 Since the introduction of the Radiography Assistant Pilot, I have felt less stressed at work

Q9 Since the introduction of the Radiography Assistant Pilot, I have a more positive view on skill mix
Q10 Since the introduction of the Radiography Assistant Pilot, my own job satisfaction has increased

Q11 If offered I would welcome the opportunity to continue this role
An overall satisfaction rating of questions 4-11 of Radiography Assistant responses is:

Overall satisfaction rating of questions 4-11

Questions 4-11

Satisfaction rating

Satisfaction rating results of individual questions

Question 4 gives a satisfaction rating of 100% that the day to day duties of the Radiography Assistant has changed.

Question 5 gives a satisfaction rating of 100% that the Radiography Assistant has learnt additional skills.

Question 6 gives a satisfaction rating of 100% that quality of patient care has increased from the Radiography Assistants point of view.

Question 7 gives a satisfaction rating of 100% that the Radiography Assistant has had more time to deal with patients.

Question 8 gives a satisfaction rating of 100% that the Radiography Assistant has felt less stressed at work.

Question 9 gives a satisfaction rating of 100% that the Radiography Assistant has a more positive view on skill mix.

Question 10 gives a satisfaction rating of 100% that the Radiography Assistant has an increased level of job satisfaction.

Question 11 gives a satisfaction rating of 100% that the Radiography Assistant would like the opportunity to continue in the role.
The following are the positive issues of the pilot project as identified by Radiography Assistants:

- Better patient care.
- Well maintained workflow.
- Scan rooms maintained to a high standard.
- Patients are changed and ready for scanning, meaning more time for sonographer to scan and report.

The following are the negative issues of the pilot project as identified by the Radiography Assistants:

- None

Additional comments from Radiography Assistants:

- An ultrasound assistant is vital to the running of this extremely busy department. Removing the assistant would cause extra strain and stress on ultrasonographers.

- The Assistant helps ensure patients get the care they need and help maintain a better work environment
Results from Radiographers

The following results are from the questionnaire from appendix B, Radiographers from various grades and years of experience, were surveyed to ascertain their views on the introduction of the Radiography Assistant to the Ultrasound area in the X-Ray Department of St Vincent’s.

This survey took place on completion of the project to allow the Radiographers take a reflective and retrospective view on working with the Radiography Assistant.

In total 4 completed questionnaires were received, which reflects approximately 100% of the total number of Senior / Clinical Specialist Radiographers working in Ultrasound with the Radiography Assistant.
Q2 Grade at time of pilot

Number

1

Grade

Basic

Senior

Clinical Specialist/ Supt 1

RSM 1

RSM 2

Q 3 Areas worked in

Number

Area

CT

MRI

US

NM

Ang

Mam

Gen

More than one,
The overview of ratings for question 4-10 of the Radiographers is as follows:

**Overview of Q4-Q10**

The results from the questions individually are as follows:

Q4 Since the introduction of Radiography Assistant productivity has increased
Q5 Since the introduction of the Radiography Assistant, I have spent less time on non-radiographic duties

Q6 Since the introduction of the Radiography Assistant, the quality of patient care has increased
Q7 Since the introduction of the Radiography Assistant, I have more time to deal with patients

Q8 Since the introduction of the Radiography Assistant, I have felt less stressed at work.
Q9 Since the introduction of the Radiography Assistant I have a more positive view on skill mix.

Q10 Since the introduction of the Radiography Assistant, my own job satisfaction has increased.
An overall satisfaction rating of questions 4-10 of Radiographer responses is:

**Satisfaction rating results of individual questions**

Question 4 gives a satisfaction rating of 81.25% that productivity has increased from the Radiographers point of view.

Question 5 gives a satisfaction rating of 100% that Radiographers have spent less time on non-radiographic duties.

Question 6 gives a satisfaction rating of 100% that quality of patient care has increased from the Radiographers point of view.

Question 7 gives a satisfaction rating of 100% that the Radiographer has had more time to deal with patients.

Question 8 gives a satisfaction rating of 100% that the Radiographers have felt less stressed at work.

Question 9 gives a satisfaction rating of 81.25% that the Radiographers have a more positive view on skill mix.

Question 10 gives a satisfaction rating of 93.75% that the Radiographers have an increased level of job satisfaction.
The following are the positive issues of the pilot project as identified by Radiographers:

- Efficient organisation of workflow.
- Readily available help with difficult patients.
- Rooms tidied and stocked.
- Better overall atmosphere when the stress is relieved.
- Increased productivity, allowing more time with patients.
- Increases the smooth running of the department.
- Everyone works well as a team.
- Increased job satisfaction for everyone.
- The Ultrasound Department is more organised with respect to patient workflow and matching films etc.
- Having the Assistant makes work in a very busy department more manageable.
- The department is lucky that the Radiography Assistant is excellent.
- There is more time to scan patients, less time chasing films and reports etc.
- Increased patient care.
- It is very important to have someone who knows which rooms are available and who is where, as when one is scanning one cannot keep a constant check.

The following are the negative issues of the pilot project as identified by Radiographers:

- None
**Additional comments from Radiographers:**

- The appointed Radiography Assistant is an invaluable addition to the ultrasound department who shows great initiative and works well with all members of staff.
- The pilot has been a hugely positive and beneficial for the Ultrasound Dept.
- The Radiography Assistant is a pleasure to work with.
- The Radiography Assistant works extremely hard both for the staff and the patients.
- It would now be hard to imagine the Ultrasound Dept without an Assistant.
- The current Assistant in Ultrasound has become an invaluable member of the team.
- The Assistant guarantees a smooth running of the day to day tasks within the Dept.

**Conclusion**

It is clear from the above data that the St Vincent’s University Hospital Pilot project on Radiography Assistant has been equally successful from the perspectives of both the Radiographers and the Radiography Assistants in a similar fashion to other hospitals. Satisfaction ratings re learning additional skills, changing day-to-day duties to quality of care improvements range from 81.25% to 100%. In addition there is a satisfaction rating of 100% improvement when it comes to feeling less stressed at work. St Vincent’s University Hospital is considering an expansion of the Radiography Assistant pilot within the new Radiology Dept.
Report on the Radiography Assistant for OLHSC Crumlin

The purpose of this study is somewhat different to those previously described. In this instance the Radiography Assistant is employed to work at night with the on call Radiographer.

The following are the core duties assigned to the Radiography Assistant in OLHSC Crumlin.

Duties and Responsibilities

- Inputting of patient data into the RIS.
- Prepare patients for their examination i.e. give instructions as to examination room to enter, assist in undressing etc.
- Assist where necessary in helping patients’ on/off examination tables in the radiology department.
- Assist in accompanying patients who require non-specialist supervision to and from the radiology department.
- Assist with the transfer of patients within the department.
- Change linen on the examination tables as required.
- Ensure patient comfort pre and post examination e.g. provision of blankets.
- Assist the radiographer with the sterilisation and disinfection procedures carried out in the area as required.
- Answer telephones and locate appropriate personnel or take messages, sort films and write envelopes as required.
- Assist with the cleaning and transfer of equipment when necessary.
- Assist radiographer with mobile examinations on the ward when necessary.
- Replenish stock when necessary.
- Perform other such duties appropriate to the post as may be assigned from time to time by the Radiographic Services Manager.
Results from Radiography Assistants

The following results are from questionnaire from Appendix A. The Radiography Assistants who were seconded to partake in the pilot project were given the survey in Appendix A complete.

Q1 Number of years working in the Health Services

Q2 Grade before pilot:

(1) New to the Health Service

(2) New to the Health Service
Q3 Please indicate the area you worked in as part of the pilot

The overview of ratings for question 4-11 of the Radiography Assistant is as follows
The results from the questions individually are as follows:

**Q4** Since the introduction of the Radiography Assistant Pilot, My day to day duties have changed considerably

**Q5** Since the introduction of the Radiography Assistant Pilot, I have learnt additional skills
Q6 Since the introduction of the Radiography Assistant Pilot, the quality of patient care has increased

Q7 Since the introduction of the Radiography Assistant Pilot, I have had more time to deal with patients
Q8 Since the introduction of the Radiography Assistant Pilot, I have felt less stressed at work

Q9 Since the introduction of the Radiography Assistant Pilot, I have a more positive view on skill mix
Q10 Since the introduction of the Radiography Assistant Pilot, my own job satisfaction has increased

Q11 If offered I would welcome the opportunity to continue this role
An overall satisfaction rating of questions 4-11 of Radiography Assistant responses is:

Satisfaction rating results of individual questions

Question 4 gives a satisfaction rating of 87.5% that the day to day duties of the Radiography Assistant has changed.

Question 5 gives a satisfaction rating of 75% that the Radiography Assistant has learnt additional skills.

Question 6 gives a satisfaction rating of 75% that quality of patient care has increased from the Radiography Assistant’s point of view.

Question 7 gives a satisfaction rating of 75% that the Radiography Assistant has had more time to deal with patients.

Question 8 gives a satisfaction rating of 75% that the Radiography Assistant has felt less stressed at work.

Question 9 gives a satisfaction rating of 75% that the Radiography Assistant has a more positive view on skill mix.

Question 10 gives a satisfaction rating of 75% that the Radiography Assistant has an increased level of job satisfaction.

Question 11 gives a satisfaction rating of 87.5% that the Radiography Assistant would like the opportunity to continue in the role.
The following are the positive issues of the pilot project as identified by Radiography Assistants:

- Assisting the radiographer while on call.
- Helps keep the department tidy.
- Patient and exam details entered on system when on call.
- More pleasant experience for patients.
- Shorter waiting times for patients.

The following are the negative issues of the pilot project as identified by Radiography Assistants:

- Long hours

- Would like more involvement with patients and general process to gain a wider scope for involvement.
Results from Radiographers

The following results are from the questionnaire from appendix B, Radiographers from various grades and years of experience, were surveyed to ascertain their views on the introduction of the Radiography Assistant to the X-Ray Department of OLHSC Crumlin for on call hours.

This survey took place on completion of the project to allow the Radiographers take a reflective and retrospective view on working with the Radiography Assistant. In total 11 completed questionnaires were received, which reflects approximately 100% of the total number of Radiographers on the call rota where the Radiography Assistant worked.
Grade at time of pilot

Areas worked in
The overview of ratings for question 4-10 of the Radiographers is as follows:

The results from the questions individually are as follows:

Q4 Since the introduction of Radiography Assistant productivity has increased
Q5 Since the introduction of the Radiography Assistant, I have spent less time on non-radiographic duties

Q6 Since the introduction of the Radiography Assistant, the quality of patient care has increased
Q7 Since the introduction of the Radiography Assistant, I have more time to deal with patients.

Q8 Since the introduction of the Radiography Assistant, I have felt less stressed at work.
Q9 Since the introduction of the Radiography Assistant I have a more positive view on skill mix.

<table>
<thead>
<tr>
<th>Number</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Undecided</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
</table>

Q10 Since the introduction of the Radiography Assistant, my own job satisfaction has increased.

<table>
<thead>
<tr>
<th>Number</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Undecided</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
</table>
An overall satisfaction rating of questions 4-10 of Radiographer responses is:

Satisfaction rating results of individual questions

Question 4 gives a satisfaction rating of 52.27% that productivity has increased from the Radiographers point of view.

Question 5 gives a satisfaction rating of 77.27% that Radiographers have spent less time on non-radiographic duties.

Question 6 gives a satisfaction rating of 56.82% that quality of patient care has increased from the Radiographers point of view.

Question 7 gives a satisfaction rating of 61.36% that the Radiographer has had more time to deal with patients.

Question 8 gives a satisfaction rating of 52.27% that the Radiographers have felt less stressed at work.

Question 9 gives a satisfaction rating of 61.36% that the Radiographers have a more positive view on skill mix.

Question 10 gives a satisfaction rating of 47.73% that the Radiographers have an increased level of job satisfaction.
The following are the positive issues of the pilot project as identified by Radiographers:

- More time spent with the patients.
- Decrease in workload.
- Decrease in waiting time for patients.
- Less admin work for Radiographers.
- Always someone in the Dept. so you do not have to work alone after hours therefore you feel more secure.

- Due to increase in admin work done at night by the assistant there is a better patient service available. Patient care increased.
- Radiography Assistant helpful when busy, moving equipment.
- Good that someone is always in Dept. out of hours to deal with patients if Radiographer busy elsewhere.

- Additional resources for clerical staff as patients do not have to be registered the following day.
- Radiography Asst very helpful when busy, in moving equipment and returning films.
- Good to have someone in the dept. after hours when Radiographer not present.
- Opportunity for patient details and examinations to be double-checked.
- More time available to spend on radiographic duties.
- If Radiographer busy elsewhere patients are dealt with immediately.
- Patients dealt with promptly when radiographer out of dept.
- Less administrative duties on call.
- Additional security at night.
- Assistance available with difficult patients.
- When Radiographer busy outside of dept in theatre for example, there is someone in the dept. to deal with the patients.

- Less administrative work for Radiographer on call and clerical staff the following day.
- Radiography Assistant very helpful with moving equipment and returning films.
- When Radiographer in theatre there is someone to greet the patients and deal with any enquires.

- Very helpful in dealing with difficult trolley/wheelchair cases, also very helpful when on mobile examinations.
- Always someone in the dept to meet the patients and register the patient and examination details onto system.
The following are the negative issues of the pilot project as identified by Radiographers:

- Additional training needed for Radiography Assistants.
- If staff are overqualified for the position they may not find the work stimulating.
- Increased training time required
- Training required prior to commencement of job as sometimes it delays things if you have stop and show someone how to do things.
- People have different expectations max and min workloads must be agreed.
- Care should be taken when employing staff as overqualified staff may become bored and unenthusiastic about the job, or unsatisfied with the manual work aspect of the job.

Additional Comments from Radiographers:

- Position should be made permanent.
- In addition to Radiographers the Clerical Staff have benefited enormously.
- It is important that the person employed is informed of the nature and role of the job they are employed to do, and have suitable attributes for the job.
- If the Assistants were available during the day work protocols would have been easier to establish, and maintain during out of hours.
- Training course or experience in the health sector should be essential prior to taking up the position.
- Job descriptions could be expanded to accommodate a wider range of duties.
Conclusion
As with previous pilot projects regarding Radiography Assistants this project has also proved successful in the introduction of skill mix to the Radiology Dept. The positive and negative comments from the Radiographers and Radiography Assistants involved are included, which allow for an overall very positive view of the position but raise some issues on the selection and training process. This brings an interesting viewpoint, as this is the first pilot where the staff were selected from outside of the health services. At a presentation given at the recent 2005 UK Radiological Conference, part of their evaluation process was that when introducing a new team member to a busy x-ray dept, an employee who had previous experience in the health sector adapted more easily to the experience than a person with no previous health care experience [McDonald, S.P. Emergency Care Radiology Cardio Thoracic Centre Liverpool]. [2]

The Radiographic Services Manager, Radiography and Clerical staff would hope to have the project extended by the hospital, unfortunately the hospital have decided through lack of funding not to continue with the Radiography Assistants.
Report on the Radiography Assistant for South Infirmary-Victoria Hospital, Cork

The purpose of this study is to adapt the previous role of Darkroom Technician to that of Radiography Assistant. With the advent of PACS in the X-Ray department there has been the scope for changing and expanding the duties previously done by the Darkroom Technician.

The following are the core duties assigned to the Radiography Assistant in the Radiology Dept. SI-VH

Duties and responsibilities

- Assist with the transfer of patients within the department.
- Assist with the preparation of patients for imaging procedures.
- Assist and monitor patients while they are taking preparations for examinations.
- Accompany patients if required when procedures are being performed.
- Assist with moving and positioning of patients when necessary.
- Assist with confused or agitated patients while in the department.
- Assist with monitoring patient’s children, if necessary, while procedures are being performed.
- Prepare and serve food/refreshments to patients as requested.
- Ensure that the film processing area is clean and tidy.
- Assist in the correlation of previous images for mammography, and the printing of radiological images as required.
- Change the linen on unoccupied couches and trolleys.
- Assist in the disposal of clinical waste and clean Special Procedure trolleys after use, including the restocking of CSSD packs as required.
- Report broken items.
- Assist in any area within the department as required.
- Attend to spillages immediately to reduce the risk of accidents.
- Ensure the correct laundry bags are used and the correct use of waste bags.
- In rostered areas, when necessary, answer telephones.
- Assist with issues relating to day-to-day department operation such as Materials Management, Pharmacy, radiographic film and pathology specimen delivery.
- Assist with the cleaning and transfer of equipment within the department.
- Assist with the registration of patient demographics on the RIS and work list.
- Assist with emergency first aid as directed.
- Attend in-service instruction as required.
- Perform all film processing duties including processor and magazine daily maintenance.
- Be familiar and comply with Hospital and Departmental policies in relation to Patients Charter, Health and Safety, Fire, Infection Control, Waste Disposal and Radiation Protection.
- Report all incidents involving self, patients or visitors to the Radiography Services Manager or Senior Radiographer in his/her absence.
- Perform weekly stock checks throughout the department and order such stock as necessary.
Results from Radiography Assistants

The following results are from questionnaire from Appendix A. The Radiography Assistants who were seconded to partake in the pilot project were given the survey in Appendix A to complete.

**Q1 Number of years working in the Health Services**

![Graph showing the number of years working in the Health Services by years of experience.]

- 1-5yrs: 0.5 assistants
- 5-10yrs: 0.9 assistants
- 10-15yrs: 1.0 assistants
- 15-25yrs: 0.2 assistants
- Over 25 yrs: 0.1 assistants

**Q2 Grade before pilot:**

(1) Darkroom Technician

(2) Darkroom Technician
Q3 Please indicate the area you worked in as part of the pilot

The overview of ratings for question 4-11 of the Radiography Assistant is as follows

Overview of Q4-Q11
The results from the questions individually are as follows:

**Q4 Since the introduction of the Radiography Assistant Pilot, My day to day duties have changed considerably**

**Q5 Since the introduction of the Radiography Assistant Pilot, I have learnt additional skills**
Q6 Since the introduction of the Radiography Assistant Pilot, the quality of patient care has increased

Q7 Since the introduction of the Radiography Assistant Pilot, I have had more time to deal with patients
Q8 Since the introduction of the Radiography Assistant Pilot, I have felt less stressed at work

Q9 Since the introduction of the Radiography Assistant Pilot, I have a more positive view on skill mix
Q10 Since the introduction of the Radiography Assistant Pilot, my own job satisfaction has increased

Q11 If offered I would welcome the opportunity to continue this role
An overall satisfaction rating of questions 4-11 of Radiography Assistant responses is:

### Satisfaction rating results of individual questions

Question 4 gives a satisfaction rating of 87.5% that the day to day duties of the Radiography Assistant has changed.

Question 5 gives a satisfaction rating of 100% that the Radiography Assistant has learnt additional skills.

Question 6 gives a satisfaction rating of 100% that quality of patient care has increased from the Radiography Assistants point of view.

Question 7 gives a satisfaction rating of 87.5% that the Radiography Assistant has had more time to deal with patients.

Question 8 gives a satisfaction rating of 100% that the Radiography Assistant has felt less stressed at work.

Question 9 gives a satisfaction rating of 100% that the Radiography Assistant has a more positive view on skill mix.

Question 10 gives a satisfaction rating of 100% that the Radiography Assistant has an increased level of job satisfaction.

Question 11 gives a satisfaction rating of 100% that the Radiography Assistant would like the opportunity to continue in the role.
The following are the positive issues of the pilot project as identified by Radiography Assistants:

- More defined role within the department.
- Given more responsibility.
- Able to more readily interact with patients.
- Better care of patient.
- Less personal stress as my role is more defined.
- I find work more interesting with a lot more variety and feel I am making a greater contribution.

The following are the negative issues of the pilot project as identified by Radiography Assistants:

- As of now there are no negative issues.
- No negative issues, I am very pleased with the project.

Additional Comments From Radiography Assistants:

- The project was extremely beneficial to both the department and myself.
- I gained more confidence in my role as Radiography Assistant.
- I hope the role, as Radiography Assistant will be made permanent.
Results from Radiographers

The following results are from the questionnaire from appendix B, Radiographers from various grades and years of experience, were surveyed to ascertain their views on the introduction of the Radiography Assistant to the X-Ray Department of South Infirmary-Victoria Hospital.

This survey took place on completion of the project to allow the Radiographers take a reflective and retrospective view on working with the Radiography Assistant.

In total 8 completed questionnaires were received, which reflects approximately 100% of the total number of Radiographers working with the Radiography Assistant.
Q 2 Grade at time of pilot

Number

Grade

Q 3 Areas worked in

Number

Area

CT
MRI
US
NM
Ang
Mam
Gen
More than one,
The overview of ratings for question 4-10 of the Radiographers is as follows:

The results from the questions individually are as follows:

Q4 Since the introduction of Radiography Assistant productivity has increased
Q5 Since the introduction of the Radiography Assistant, I have spent less time on non-radiographic duties

Q6 Since the introduction of the Radiography Assistant, the quality of patient care has increased
Q7 Since the introduction of the Radiography Assistant, I have more time to deal with patients.

Q8 Since the introduction of the Radiography Assistant, I have felt less stressed at work.
Q9 Since the introduction of the Radiography Assistant I have a more positive view on skill mix.

Q10 Since the introduction of the Radiography Assistant, my own job satisfaction has increased.
An overall satisfaction rating of questions 4-10 of Radiographer responses is:

![Bar chart showing overall satisfaction rating Q4 - Q10]

**Satisfaction rating results of individual questions**

Question 4 gives a satisfaction rating of 84.38% that productivity has increased from the Radiographers point of view.

Question 5 gives a satisfaction rating of 84.38% that Radiographers have spent less time on non-radiographic duties.

Question 6 gives a satisfaction rating of 78.13% that quality of patient care has increased from the Radiographers point of view.

Question 7 gives a satisfaction rating of 75.00% that the Radiographer has had more time to deal with patients.

Question 8 gives a satisfaction rating of 68.75% that the Radiographers have felt less stressed at work.

Question 9 gives a satisfaction rating of 68.75% that the Radiographers have a more positive view on skill mix.

Question 10 gives a satisfaction rating of 62.50% that the Radiographers have an increased level of job satisfaction.
The following are the positive issues of the pilot project as identified by Radiographers:

- Increased job satisfaction due to increased role and duties among Radiography Assistants.
- Since the introduction of a Radiography Assistant, I certainly feel under less pressure as non-radiographic duties, which I used to do, I no longer have to do.
- Allows the Radiographer to spend more time with patients and can increase productivity within the department.
- Increased job satisfaction for the Radiography Assistants undertaking the pilot.
- The 'Darkroom Technicians' who are now Radiography Assistants feel they have more involvement in their jobs now especially since the introduction of PACS and digital imaging, as their previous roles have become obsolete.
- Better utilisation of resources.
- Another person to call on in the staff compliment.
- Better utilisation of professional resources.
- Introducing Radiography Assistants has improved morale and improved team working relationships.
- It appears there is improved patient satisfaction as their needs for examination are attended to more promptly e.g. helping people getting patients changed etc.
- There is now more teamwork in the dept.
- The Radiography Assistant is very keen to help and it is very beneficial to the workflow, particularly when one is working single-handed.
- Productivity has increased. I spend less time on non-nursing duties.
The following are the negative issues of the pilot project as identified by Radiographers:

- The name/title should be changed from Radiography Assistants as this title could be misconstrued with radiography assistants in the UK.
- Job descriptions must be carefully outlined, and must in no way take professionally responsibility from Radiographer’s duties.
- Need for clarification of title.
- Perhaps a broad list of duties could be made known to Radiographers so that the Radiography Assistants are not been taken advantage of, and to avoid any conflict in the workplace.
- At present there is no holiday cover so at busy times the patients may be somewhat delayed, holiday cover would be of benefit.

Additional Comments From Radiographers:

- Overall a positive development in our department during the pilot scheme and hope it continues on an ongoing basis. There may however be a problem with the job title as Radiography Assistants perform a much different role in the UK system.
- Change of job title should be considered.
- It is important to ensure that the title Radiography Assistant is distinguished from the same grade in the UK.
- It is hoped to make these permanent positions. I believe that nationally this position would benefit departments, hospitals and radiography.
- The Radiography Assistants are always willing to help whenever possible and that this help is imperative to the smooth running of the x-ray departments.
- I am satisfied with the service given by the Radiography Assistants and I feel the department is benefiting from their contribution.
Conclusion

It is clear from the above data that the South Infirmary – Victoria Hospital Pilot project on Radiography Assistants has been successful from the perspectives of both the Radiographers and the Radiography Assistants.

It has been an innovative pilot in addressing the issue of new technology in the department and how to redeploy staff by incorporating new skills and introducing skill mix into the department.

Satisfaction ratings re learning additional skills, changing day-to-day duties to quality of care improvements range from 78.12% to 100%.

In addition there is a satisfaction rating of 68.75% improvement when it comes to feeling less stressed at work.

The Hospital Management has agreed to make the Radiography Assistant position permanent following the success of the pilot project.
Report on the Radiography Assistant for Connolly Hospital Blanchardstown

The purpose of this study is somewhat different to those previously described. In this instance the Radiography Assistant is employed to work with the Radiographer who is on mobile/portable/theatre and emergency resus on an 8.30am to 8.00pm seven days a week. The second pilot involved the Radiography Assistant working in the Ultrasound Dept.

The following are the core duties assigned to the Radiography Assistants in Connolly Hospital.

Duties and Responsibilities

- Assist where necessary in helping patients get on and off examination tables in the Radiology Department.
- Collecting outpatients and GP patients from the main Radiology reception area and outpatient waiting areas.
- Assist ambulatory patients in returning to the ward / clinics with chairs, i.e. write patients' name on board or accompany walking patient to wards / clinics.
- Ensure patients comfort pre and post examination where necessary, for example provision of blankets
- Assisting ambulatory inpatients from the wards in locating the Department of Radiology.
- Accompany patients who require non-specialist supervision as required.
- Ensure the correct laundry bags are used and the correct use of waste bags.
- Assist the radiographers with the sterilisation and disinfection procedures carried out in the area as required.
- Answer telephones and locate appropriate personnel or take messages, sort films and write envelopes as required.
- Ensure that the film processing area is clean and tidy.
- Assist and be familiar with the procedures for processing CR and DR Images.
- Assist with the registration of patient demographics on the RIS and work list.
- Report all incidents involving self, patients or visitors to the Radiography Services Manager or Senior Radiographer in his/her absence.
- Assist with emergency first aid as directed.
- Attend in-service instruction as required.
- Check sharps and bottle box.
- Perform all film processing duties including processor and magazine daily maintenance.
Assist with the transfer of patients within the department.
Assist Radiographer with mobile examinations on the ward when necessary.
Monitor patients and make sure to inform the Radiographer of any difficulties immediately.
Ensure the timely transfer/delivery of specimens to the laboratory as required.
Assist with moving patients as required in accordance with hospital manual handling procedures.
Report any items that require repair/maintenance.
Ensure technical data reports and charts are properly processed in accordance with instructions.
Collecting request cards to be appointed and on appointment to return to appointment clerk in office.
Ensure that the scanner and room are kept clean and tidy at all times.
Ensure that the scanner and room are kept clean and tidy at all times.
Monitor patients and make sure to inform the radiographer of any difficulties immediately.
Chaperone the Radiographer if required for examinations.
In the Ultrasound Dept maintain a constant supply of warm gel in clean gel bottles.
Ensure proper preparation is given to patients prior to scans.
Collection of probes from other areas and moving scanners to other areas of the department / wards as directed.
Assist Consultant Radiologists with dedicated scan lists where appropriate.
Correlating films with requests and previous films
Assist with issues relating to day-to-day department operation such as Materials Management, Pharmacy, radiographic film and pathology specimen delivery.
Be familiar with all film type and sizes.
Be competent with the procedures for copying film.
To perform such other duties appropriate to the post as may be agreed between the Radiographer Services Manager and Union.
Ensure technical data reports and charts are properly processed in accordance with instructions.

Patient Care

Assist with the preparation of patients for imaging procedures.
Assist with confused or agitated patients while in the department.
Explain procedure to patient and how long it may take.
Help the patient to change into a gown if necessary, and give reassurance.
Have respect for patient at all times and be aware of confidentiality issues.
Assist patient from examination couch, escort back to changing room and help to dress if needed.
Ensure patient has no adverse reaction to contrast injection.
Ensure patient has transport home.
Advise patients on how they can access the results and how long they are likely to take.
Collect patient documentation and charts from reception and ensure all paperwork is correct for each individual patient.
Help and support patients prior to and after examinations.
In patients

- Check patient is on appropriate ward and ensure patient is prepared for examination i.e. fasting.
- Ensure there is a venflon in situ.
- Liaise with Attendant re the time patient required in the Department for the examination.
- Ensure patient notes on hand.
- Ensure patient returns to the ward with as little delay as possible.
Results from Radiography Assistants

The following results are from questionnaire from Appendix A. The Radiography Assistants who were seconded to partake in the pilot project were given the survey in Appendix A complete.

Q1 Number of years working in the Health Services

- 1-5yrs
- 5-10yrs
- 10-15yrs
- 15-25yrs
- over 25 yrs

Q2 Grade before pilot:

(1) Health Care Assistant
(2) Health Care Assistant
(3) Health Care Assistant
Q3 Please indicate the area you worked in as part of the pilot

The overview of ratings for question 4-11 of the Radiography Assistant is as follows
The results from the questions individually are as follows:

Q4 Since the introduction of the Radiography Assistant Pilot, My day to day duties have changed considerably

Q5 Since the introduction of the Radiography Assistant Pilot, I have learnt additional skills
Q6 Since the introduction of the Radiography Assistant Pilot, the quality of patient care has increased.

Q7 Since the introduction of the Radiography Assistant Pilot, I have had more time to deal with patients.
Q8 Since the introduction of the Radiography Assistant Pilot, I have felt less stressed at work

Q9 Since the introduction of the Radiography Assistant Pilot, I have a more positive view on skill mix
Q10 Since the introduction of the Radiography Assistant Pilot, my own job satisfaction has increased.

Q11 If offered I would welcome the opportunity to continue this role.
An overall satisfaction rating of questions 4-11 of Radiography Assistant responses is:

Satisfaction rating results of individual questions

Question 4 gives a satisfaction rating of 100% that the day to day duties of the Radiography Assistant has changed.

Question 5 gives a satisfaction rating of 100% that the Radiography Assistant has learnt additional skills.

Question 6 gives a satisfaction rating of 100% that quality of patient care has increased from the Radiography Assistants point of view.

Question 7 gives a satisfaction rating of 100% that the Radiography Assistant has had more time to deal with patients.

Question 8 gives a satisfaction rating of 83.33% that the Radiography Assistant has felt less stressed at work.

Question 9 gives a satisfaction rating of 100% that the Radiography Assistant has a more positive view on skill mix.

Question 10 gives a satisfaction rating of 100% that the Radiography Assistant has an increased level of job satisfaction.

Question 11 gives a satisfaction rating of 100% that the Radiography Assistant would like the opportunity to continue in the role.
The following are the positive issues of the pilot project as identified by Radiography Assistants:

- Increased productivity in Ultrasound.
- Better workflow in Ultrasound since the introduction of the Pilot.
- Faster response time for x-raying of patients in ICU, CCU, Resus etc.
- Have increased knowledge of all equipment and how it works.
- Better service delivery all around.
- Greater job satisfaction in new role.
- More job satisfaction being more involved in technical end of things.

The following are the negative issues of the pilot project as identified by Radiography Assistants:

- There were no negative issues identified, and the only comment was that the pilot worked very well.

Additional Comments From Radiography Assistants

- Learning additional skills has had a positive impact in my working life.
- Feel I am more part of the team.
- Better utilisation of skills within the department.
- With on going training this new role of Radiography Assistant will be of much benefit to both hospital and patients in the future.
Results from Radiographers

The following results are from the questionnaire from appendix B. Radiographers from various grades and years of experience, were surveyed to ascertain their views on the introduction of the Radiography Assistant to the X-Ray Department of Connolly Hospital for on Mobile/Theatre/ Ultrasound.

This survey took place on completion of the project to allow the Radiographers take a reflective and retrospective view on working with the Radiography Assistant.
In total 17 completed questionnaires were received, which reflects approximately 100% of the total number of Radiographers where the Radiography Assistant worked.
The overview of ratings for question 4-10 of the Radiographers is as follows:

The results from the questions individually are as follows:

Q4 Since the introduction of Radiography Assistant productivity has increased
Q5 Since the introduction of the Radiography Assistant, I have spent less time on non-radiographic duties

Q6 Since the introduction of the Radiography Assistant, the quality of patient care has increased
Q7 Since the introduction of the Radiography Assistant, I have more time to deal with patients.

Q8 Since the introduction of the Radiography Assistant, I have felt less stressed at work.
Q9 Since the introduction of the Radiography Assistant I have a more positive view on skill mix.

Q10 Since the introduction of the Radiography Assistant, my own job satisfaction has increased.
An overall satisfaction rating of questions 4-10 of Radiographer responses is:

**Satisfaction rating results of individual questions**

Question 4 gives a satisfaction rating of 69.12% that productivity has increased from the Radiographers point of view.

Question 5 gives a satisfaction rating of 94.12% that Radiographers have spent less time on non-radiographic duties.

Question 6 gives a satisfaction rating of 80.88% that quality of patient care has increased from the Radiographers point of view.

Question 7 gives a satisfaction rating of 80.88% that the Radiographer has had more time to deal with patients.

Question 8 gives a satisfaction rating of 73.53% that the Radiographers have felt less stressed at work.

Question 9 gives a satisfaction rating of 86.76% that the Radiographers have a more positive view on skill mix.

Question 10 gives a satisfaction rating of 72.06% that the Radiographers have an increased level of job satisfaction.
The following are the positive issues of the pilot project as identified by Radiographers:

- Able to deal with trauma cases faster.
- General patient flow more efficient.
- Patient care improved.
- Decreased back pain!
- Easier to position patients with assistance.
- Time not wasted on non-radiographic duties, answering phones, finding x-ray bags etc.
- Better Patient / Staff relationships.
- Quicker throughput of patients.
- Lessens burden of doing clerical work in cases of trauma.
- More time is spent with patient.
- Mobile work much more efficient.
- Patient never left unattended.
- Improved working relationship between A&E and X-Ray.
- Positive skill mix. Increased patient care.
- Increased patient care.
- Less stress.
- Reduced patient exam time.
- Reduce patient waiting time.
- Increased patient care.
- Decreased workload.
- Additional help with patients.
- I see this as a positive initiative overall.
- Increased patient care.
- Urgent ward cases addressed immediately.
- Patients now spend less time in the x-ray dept.
- There is now assistance available with patient transfer to and from ultrasound table.
- Time not wasted on non-radiographic duties.
- Increased productivity due to better patient flow.
- More efficient and improved throughput of patients.
- Decrease in workload especially of non-radiographic duties.
- Increased patient care.
- Improved organisation of the patients and workload.
- No interruption during scans to answer phones.
- Patient flow more streamlined.
- Improved communication with the wards.
- Paper work and statistics completed on a daily basis.
- Restocking of consumables attended to as required.
- Improved efficiency and workflow.
- Less time spent on non-radiographic duties.
- Improved patient care.
- Better organisation of workload.
- Improved patient care and efficiency.
- Less administrative work for Radiographers
- Improved patient care.
- Increased productivity.
- Better patient workflow.
- Less time spent on non-radiographic duties.

The following are the negative issues of the pilot project as identified by Radiographers:

- Need to ensure staff get in house training.
- All Assistants should be trained to the same level and to the particular job description.
- There should be a Radiography Assistant upgraded to Supervisor for training and to deal with problems etc.
- In the future it would be helpful to have a Radiography Assistant Supervisor.
Additional Comments From Radiographers:

- Patient care has improved, as has the quality and efficiency.
- Less stress physical and other on Radiographers.
- Overall more efficient, speedy, productive pleasant service.
- Need to ensure adequate training of Radiography Assistant.
- Less physical stress on Radiographer.
- Faster response time for trauma and ICU patients.
- The Radiographer’s job is far less stressful when working with a trained Radiography Assistant. Workload able to be increased with the help provided by the Radiography Assistants.
- More time spent with patients, therefore procedure runs more smoothly.
- Although I do not think patient productivity has increased - the patient throughput is faster, which results in a better quality service for patient and Radiographer.
- I believe that the Radiography Assistants could handle greater responsibility i.e. handle the daily, and annual leave rosters for the healthcare assistants in x-ray.
- Overall more efficient, speedy productive and pleasant service.
- I think the Radiography Assistants have been of great benefit to the dept. with respect to the A&E / portable situation.
- I hope this position is made permanent and feel other rooms would benefit from dedicated Assistants.
- Less time spent on non-radiographic duties.
- I hope these positions are made permanent in the future, as I believe they have benefited the department hugely.
Conclusion

It is clear from the above data that the Connolly Hospital project on Radiography Assistants has been successful from the perspectives of both the Radiographers and the Radiography Assistants.

It has been an innovative pilot in addressing the issue of new technology in the department and how to redeploy staff by incorporating new skills and introducing skill mix into the department.

Satisfaction ratings re learning additional skills, changing day-to-day duties to quality of care improvements range from 80.88% to 100%.

In addition there is a satisfaction rating of 73.53% improvement when it comes to feeling less stressed at work.

The Hospital Management have agreed to extend the Radiography Assistant position on an interim basis following the success of the pilot project.
Report on the Radiography Assistants for Cork University Hospital

In this study one of the Radiography Assistants is employed to work from 6.00pm until 2am with the Radiographer who is on call. The second pilot involved the Radiography Assistant working in the Specialised areas during the normal working day.

The following are the core duties assigned to the Radiography Assistant in Cork University Hospital.

Duties and Responsibilities

- Assist Radiographer with transport of patients into and out of the x-ray room.
- Assist patients on to the examination table.
- Assist Radiographer with positioning of patient, e.g. sitting patients up for erect radiography.
- Receive patients and accept forms from patients noting position in the queue. Time stamp all request forms.
- Be alert to patients with special needs and inform the Radiographer.
- Put cassettes through the processor.
- Write up relevant envelopes for patients, Orange for A/E and Brown for ward.
- Sort films and match to envelopes.
- Answer the telephone, take messages and deal with queries when possible.
- Assist with patients e.g. sick bowls, bedpans. Assist with cleaning up whenever necessary.
- Clean cassettes whenever necessary.
- Return film to IT/A/E resus after portable x-rays.
- Ensure adequate stocks of linen, stationery etc.
- Check that all doors are locked. Lock access doors from main corridor at 2am.
- Be alert to potential difficulties with patients and inform the Radiographer and Security if necessary.
- Assist with transfer of patients within the department and when necessary help patients to get on and off examination tables.
- Stay with patients in the x-ray room when necessary while Radiographer processes films.
- Help and support patients prior to and after examinations.
- Assist with the preparation of patients for imaging examinations.
- Accompany patients who require non-specialist supervision as required.
- Assist with confused and agitated patients. Remain with patient in the x-ray room while the radiographer processes films, not while the x-ray is in progress.
- Be vigilant to patients safety particularly while they are waiting for examinations and returning to the ward i.e. ensuring that trolley and bed sides are up & any other issue that could arise in relation to safety.
- Change linen on examination tables when required.
- Assist Radiographers in the cleaning of all x-ray equipment including lead aprons and thyroid shields and other protective equipment.
- Monitor activity in the main waiting room to ensure that all inpatients are attended to in a timely manner.
- Get previous x-rays from office when necessary.
- Distribute request cards to the appropriate rooms.

**Other Responsibilities**

- Be familiar with the hospital policy in relation to Health & Safety, Fire Safety, Infection Control, Waste Management & Disposal and Smoking.
- Report all incidents involving self, patients or visitors to the Radiography service Manager.
- Observe Department policies and procedures particularly the Radiation Local Rules.
- Maintain confidentiality of information about patients, staff and hospital business.
Results from Radiography Assistants

The following results are from questionnaire from Appendix A. The Radiography Assistants who were seconded to partake in the pilot project were given the survey in Appendix A complete.

Q1 Number of years working in the Health Services

Q2 Grade before pilot:

(1) Porter
(2) Porter
Q3 Please indicate the area you worked in as part of the pilot

The overview of ratings for question 4-11 of the Radiography Assistant is as follows
The results from the questions individually are as follows:

Q4 Since the introduction of the Radiography Assistant Pilot, My day to day duties have changed considerably

Q5 Since the introduction of the Radiography Assistant Pilot, I have learnt additional skills
Q6 Since the introduction of the Radiography Assistant Pilot, The quality of patient care has increased

Assistants

Category

Q7 Since the introduction of the Radiography Assistant Pilot, I have had more time to deal with patients

Assistants

Category
Q8 Since the introduction of the Radiography Assistant Pilot, I have felt less stressed at work

Q9 Since the introduction of the Radiography Assistant Pilot, I have a more positive view on skill mix
Q10 Since the introduction of the Radiography Assistant Pilot, my own job satisfaction has increased

Q11 If offered I would welcome the opportunity to continue this role
An overall satisfaction rating of questions 4-11 of Radiography Assistant responses is:

![Overall satisfaction rating of questions 4-11](image)

**Satisfaction rating results of individual questions**

Question 4 gives a satisfaction rating of 87.50% that the day to day duties of the Radiography Assistant has changed.

Question 5 gives a satisfaction rating of 87.50% that the Radiography Assistant has learnt additional skills.

Question 6 gives a satisfaction rating of 100% that quality of patient care has increased from the Radiography Assistants point of view.

Question 7 gives a satisfaction rating of 87.50% that the Radiography Assistant has had more time to deal with patients.

Question 8 gives a satisfaction rating of 62.50% that the Radiography Assistant has felt less stressed at work.

Question 9 gives a satisfaction rating of 100% that the Radiography Assistant has a more positive view on skill mix.

Question 10 gives a satisfaction rating of 100% that the Radiography Assistant has an increased level of job satisfaction.

Question 11 gives a satisfaction rating of 100% that the Radiography Assistant would like the opportunity to continue in the role.
The following are the positive issues of the pilot project as identified by Radiography Assistants:

- Increase in speed and efficiency of x-ray dept at night.
- Greater division of responsibility amongst those working at night.
- Extra sense of security for radiographers.
- Increase in standard of communication between x-ray and other depts.
- More interaction with patients.
- Additional responsibility.
- I have a more positive view on skill mix.

The following are the negative issues of the pilot project as identified by Radiography Assistants:

- There is still retention of portering duties, and therefore on occasion, it is difficult to fulfill all new duties.
- Occasional absences from the x-ray dept due to portering duties

Additional Comments From Radiography Assistants

- Perhaps an avenue for potential increase in hours covered could be explored, some nights
- The dept. is still very busy at finishing time of 2am and there is no procedure in place whereby additional cover is given.
- For the duration of time that I have held this position, I have enjoyed working with the staff and interacting with the patients.
Results from Radiographers

The following results are from the questionnaire from appendix B, Radiographers from various grades and years of experience, were surveyed to ascertain their views on the introduction of the Radiography Assistant to the X-Ray Department of Cork University Hospital for on call and General X-ray.

This survey took place on completion of the project to allow the Radiographers take a reflective and retrospective view on working with the Radiography Assistant.
In total 9 completed questionnaires were received, which reflects a random sample of the total number of Radiographers where the Radiography Assistant worked.
The overview of ratings for question 4-10 of the Radiographers is as follows:

The results from the questions individually are as follows:

Q4 Since the introduction of Radiography Assistant productivity has increased
Q5 Since the introduction of the Radiography Assistant, I have spent less time on non-radiographic duties

Q6 Since the introduction of the Radiography Assistant, the quality of patient care has increased
Q7 Since the introduction of the Radiography Assistant, I have more time to deal with patients.

Q8 Since the introduction of the Radiography Assistant, I have felt less stressed at work.
Q9 Since the introduction of the Radiography Assistant I have a more positive view on skill mix.

Q10 Since the introduction of the Radiography Assistant, my own job satisfaction has increased.
An overall satisfaction rating of questions 4-10 of Radiographer responses is:

Satisfaction rating results of individual questions

Question 4 gives a satisfaction rating of 72.22% that productivity has increased from the Radiographers point of view.

Question 5 gives a satisfaction rating of 66.67% that Radiographers have spent less time on non-radiographic duties.

Question 6 gives a satisfaction rating of 72.22% that quality of patient care has increased from the Radiographers point of view.

Question 7 gives a satisfaction rating of 58.33% that the Radiographer has had more time to deal with patients.

Question 8 gives a satisfaction rating of 58.33% that the Radiographers have felt less stressed at work.

Question 9 gives a satisfaction rating of 72.22% that the Radiographers have a more positive view on skill mix.

Question 10 gives a satisfaction rating of 50.00% that the Radiographers have an increased level of job satisfaction.
The following are the positive issues of the pilot project as identified by Radiographers:

- Very beneficial to radiographers and patients. Improves workflow.
- Less delays for patients as radiographers freed from non-radiographic duties.
- Radiographers feel more secure at night.
- Delays are minimised as help to move patients is immediately available.
- Patient care is increased and there is reduced risk in getting very ill patients from trolleys and wheel chairs to the x-ray table.
- All manual lifting is now assisted, as is care with drips resulting in increased productivity and care of the patient.
- Security for staff at night.
- Company and security for patient at night.
- Reduced pressure on radiographer having to do non-radiographic duties.
- Radiographers can now concentrate on using radiographic skills.
- Greater efficiency of service.
- Less time doing secretarial work.
- Less stress.
- Able to keep an eye on patients that are waiting.
- Out of hours patients waiting time in x-ray has decreased.
- Safer working environment.
- Better for manual handling.
- At night patient better catered for more time for Radiography duties at night
- In dept during the day work flow improved.
- Increased morale at night.
- Manual lifting much easier with help.
- Faster throughput of patients especially during on-call.
- Very helpful to have some one who assists with the patient and non-radiographic duties.

- In the evenings it is very helpful having someone to assist with administration and the patient. It has definitely made a difference to the workload and is also a good psychological support.
The following are the negative issues of the pilot project as identified by Radiographers:

- This job needs a lot of initiative and the right person is required for the job.
- Being able to learn and being aware of patients needs is important to workflow and patients/staff and relatives satisfaction.
- More formal structured induction required.
- Strict guidelines for duties required.
- Radiographers must ensure professional duties not infringed on especially at night.
- Assistant spending a lot of the time doing transfers to and from A&E helping out in CT so less time in general A&E room.
- Duties need to be clarified so each person has a clear understanding of their role.
- Need more concise job description so role clearly defined, and greater teamwork can then be achieved.
- It is important to match the person to the job, as this will enhance teamwork.
- A formal induction process would help, as the Assistant would have a clear view of duties from the outset.

Additional Comments From Radiographers

- There is a need for an increased number of Assistants in the dept.
- Where possible Darkroom Technicians should be redesignated to Radiography Assistants as soon as possible.
- Since the introduction of the Radiography Assistant to the scheduling area, patients have had to wait less time in the Dept. This becomes very apparent on days when the Assistant is off.
- The Radiography Assistant at night is a tremendous help.
- Very positive effect on the dept.
- I feel Radiographers as a whole need to embrace the introduction of Radiography Assistants, as they will become a valued member of the team.
- There is definitely much less physical stress with the presence of a Radiography Assistant.
- A formal induction period with a senior member of staff would help the process.
- In principle I believe the Radiography Assistant is a good idea.
- A key success factor is to appoint a person with the right attributes who shows initiative and a willingness to learn, this would help to ensure the position becomes permanent.

**Conclusion**

It is clear from the above data that the Cork University Hospital project on Radiography Assistants has been successful from the perspectives of both the Radiographers and the Radiography Assistants.

It has been an innovative pilot in addressing the issue of new technology in the department and how to redeploy staff by incorporating new skills and introducing skill mix into the department.

Satisfaction ratings re learning additional skills, changing day-to-day duties to quality of care improvements range from 72.22% to 100%.

The Hospital Management have agreed to extend the Radiography Assistant position on an interim basis following the success of the pilot project.
The following is a combined satisfaction rating from the total Radiography Assistants in the eight hospitals where the skill-mix projects took place.

### Overall Satisfaction Rating from Radiography Assistants in 8 Hospitals

<table>
<thead>
<tr>
<th>Question Number</th>
<th>Satisfaction Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beaumont Hospital</td>
<td>70</td>
</tr>
<tr>
<td>Letterkenny General Hospital</td>
<td>65</td>
</tr>
<tr>
<td>AMNCH, Tallaght</td>
<td>72</td>
</tr>
<tr>
<td>St Vincent’s University Hosp</td>
<td>80</td>
</tr>
<tr>
<td>OLHSC Crumlin</td>
<td>85</td>
</tr>
<tr>
<td>SI-VH Cork</td>
<td>90</td>
</tr>
<tr>
<td>Connolly Hosp</td>
<td>95</td>
</tr>
<tr>
<td>CUH</td>
<td>100</td>
</tr>
</tbody>
</table>
The following is a combined satisfaction rating from the Radiographers surveyed in the eight hospitals where the skill-mix projects took place.
Appendix A

Questionnaire for the Radiography Assistant
NATIONAL RADIOGRAPHY PILOT PROJECT
RADIOGRAPHY ASSISTANT STAFF SATISFACTION SURVEY

The data collated from this survey will be used in the evaluation of the Radiography Pilot Projects.

All information will be confidential.

General Information
Please tick appropriate box

1. No. of Years working in the Health Services
   1-5yrs    5-10yrs  10-15yrs  15-25yrs  over25yrs

2. Grade before pilot Project and area worked in

   Please Circle the area/s you work in as part of the Pilot.

<table>
<thead>
<tr>
<th>1. Specialised Area</th>
<th>CT</th>
<th>MRI</th>
<th>Ultrasound</th>
<th>Nuclear Medicine</th>
<th>Angiography/Interventional</th>
</tr>
</thead>
</table>

The following relate to the change in working practices in the pilot project. The following statements relate to your feelings about various aspects of work in respect of the pilot study, following the duration of pilot. Please indicate level of agreement or disagreement with the following statements where circling 1 means that you strongly disagree and circling 5 means that you strongly agree.
<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Undecided</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Since the introduction of the Radiography Assistant Pilot, my day to day duties have changed considerably</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2. Since the introduction of the Radiography Assistant Pilot, I have learnt additional skills</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3. Since the introduction of the Radiography Assistant Pilot, the quality of patient care has increased</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4. Since the introduction of the Radiography Assistant Pilot, I have had more time to deal with patients.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5. Since the introduction of the Radiography Assistant Pilot, I have felt less stressed at work.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6. Since the introduction of the Radiography Assistant, I have a more positive view on skill mix</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>7. Since the introduction of the Radiography Assistant, my own job satisfaction has increased.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>8. If offered I would welcome the opportunity to continue in this role.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
1. Identify positive issues of this pilot

•  
•  
•  
•  
•  
•  

2. Identify negative issues of this pilot and possible solutions

•  
•  
•  
•  
•  
•  

Please feel free to add comment to any of the above questions

---------------------------------------------------------------------------------------------------
---------------------------------------------------------------------------------------------------
---------------------------------------------------------------------------------------------------
---------------------------------------------------------------------------------------------------
---------------------------------------------------------------------------------------------------
---------------------------------------------------------------------------------------------------

Please return completed forms to
Michele Monahan
National Coordinator
Radiography Pilot projects
HSEA
63-64 Adelaide Rd
Dublin 2
Appendix  B

Questionnaire for the Radiography Staff working with the Radiography Assistant
NATIONAL RADIOGRAPHY PILOT PROJECT  
RADIOGRAPHY STAFF SATISFACTION SURVEY

The data collated from this survey will be used in the evaluation of the Radiography Pilot Projects.

All information will be confidential.

General Information
Please tick appropriate box

3. No. of Years Qualified

<table>
<thead>
<tr>
<th>1-5yrs</th>
<th>5-10yrs</th>
<th>10-15yrs</th>
<th>15-25yrs</th>
<th>over25yrs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4. Grade at time of pilot Project

<table>
<thead>
<tr>
<th>Clinical Specialist/</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

Other please Specify .................................................................

Please Circle the area you work in.

<table>
<thead>
<tr>
<th>1. Specialised Area</th>
<th>CT</th>
<th>MRI</th>
<th>Ultrasound</th>
<th>Nuclear Medicine</th>
<th>Angiography/Interventional</th>
</tr>
</thead>
</table>

The following relate to the change in working practices in the pilot project.
The following statements relate to your feelings about various aspects of work in respect of the pilot study, following the duration of pilot. Please indicate level of agreement or disagreement with the following statements where circling 1 means that you strongly disagree and circling 5 means that you strongly agree.
<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Undecided</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Since the introduction of the Radiography Assistant, productivity has increased.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2. Since the introduction of the Radiography Assistant, I have spent less time on Non-Radiographic duties</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3. Since the introduction of the Radiography Assistant, the quality of patient care has increased</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4. Since the introduction of the Radiography Assistant, I have had more time to deal with patients.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5. Since the introduction of the Radiography Assistant, I have felt less stressed at work.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6. Since the introduction of the Radiography Assistant, I have a more positive view on skill mix</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>7. Since the introduction of the Radiography Assistant, my own job satisfaction has increased.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
3. Identify positive issues of this pilot

   •
   •
   •
   •

4. Identify negative issues of this pilot and possible solutions

   •
   •
   •
   •

Please feel free to add comment to any of the above questions

Please return completed forms to
Michele Monahan
National Coordinator
Radiography Pilot projects
HSEA
63-64 Adelaide Rd
Dublin 2
Appendix C

Composite of Duties and Responsibilities for the Radiography Assistants partaking in the Pilot Projects
Composite Roles and Duties assigned to Radiography Assistants in Pilot Projects

The post holder will report to the Radiography Services Manager or person designated by him/her.

General Duties

- Assist where necessary in helping patients get on and off examination tables in the Radiology Department.
- Collecting outpatients and GP patients from the main Radiology reception area and outpatient waiting areas.
- Assist ambulatory patient in returning to the ward / clinics with chairs, i.e. write patients' name on board or accompany walking patient to wards / clinics.
- Ensure patients comfort pre and post examination where necessary, for example provision of blankets.
- Assisting ambulatory inpatient from the wards in locating the Department of Radiology.
- Accompany patients who require non-specialist supervision as required.
- Change linen on examination tables after each patient comes off the table and place linen in the bags provided in the area. Ensure linen cupboard stocked.
- Ensure the correct laundry bags are used and the correct use of waste bags.
- Assist the radiographers with the sterilisation and disinfection procedures carried out in the area as required.
- Responsible to the radiographer in charge for monitoring and replenishing stock as required.
- Answer telephones and locate appropriate personnel or take messages, sort films and write envelopes as required.
- Perform all film processing duties including processor and magazine daily maintenance.
- Be familiar with all film type and sizes.
- Be competent with the procedures for copying x-ray film.
- Ensure that the film processing area is clean and tidy.
- Assist and be familiar with the procedures for processing CR and DR Images.
- Assist in the correlation of previous images for mammography, and the printing of radiological images as required.

- Assist in the disposal of clinical waste and clean Special Procedure trolleys after use, including the restocking of CSSD packs as required.

- Assist in any area within the department as required.

- Attend to spillages immediately to reduce the risk of accidents.

- Assist with the cleaning and transfer of equipment within the department.

- Assist with the registration of patient demographics on the RIS and work list.

- Report all incidents involving self, patients or visitors to the Radiography Services Manager or Senior Radiographer in his/her absence.

- Assist with emergency first aid as directed.

- Attend in-service instruction as required.

- Check injection trolley is fully prepared at all times. Keep shelves and anaesthetic stocked as required.

- Check stocks in CT and preparation room and inform Clinical Specialist when stocks required.

- Check sharps and bottle box.

- Ensure technical data reports and charts are properly processed in accordance with instructions.

- Collecting request cards to be appointed and on appointment to return to appointment clerk in office.

- Ensure that the scanner and room are kept clean and tidy at all times.

- Assist with the transfer of patients within the department.

- Assist radiographer with mobile examinations on the ward when necessary.

- Enter relevant data to ultrasound machine and check patient details.

- Monitor patients and make sure to inform the radiographer of any difficulties immediately.

- Chaperone the radiographer if required for examinations.

- Ensure the timely transfer/delivery of specimens to the laboratory as required.

- Send required instruments for sterilisation and collect these instruments when ready.

- In the ultrasound Dept maintain a constant supply of warm gel in clean gel bottles.
- Ensure proper preparation is given to patients prior to scans.

- Collection of probes from other areas and moving scanners to other areas of the department / wards as directed.

- Correlating films with requests and previous films

- Assist with moving patients as required in accordance with hospital manual handling procedures.

- Assist Consultant Radiologists with dedicated scan lists where appropriate.

- Assist with the disposal of clinical waste and clean Special Procedure trolleys after use.

- Report any items that require repair/maintenance.

- Assist with issues relating to day to day department operation such as Materials Management, Pharmacy, radiographic film and pathology specimen delivery.

- To perform such other duties appropriate to the post as may be assigned from time to time by the Radiographer Services Manager

**Patient Care**

- Assist with the preparation of patients for imaging procedures.
- Assist and monitor patients while they are taking preparations for examinations.
- Accompany patients if required when procedures are being performed.
- Assist with moving and positioning of patients when necessary.
- Assist with confused or agitated patients while in the department.
- Assist with monitoring patient’s children, if necessary, while procedures are being performed.
- Prepare and serve food/refreshments to patients as requested.
- Assist with the patient in the preparation for the examination.
- Explain procedure to patient and how long it may take.
- Help the patient to change in a gown if necessary, and give reassurance.
- Have respect for patient at all times and be aware of confidentiality issues.
- Assist the Radiologist with the Venflon.
- When the examination is complete remove Venflon from patients vein and ensure bleeding has ceased, place bandage on injection site.

- Assist patient from examination couch, escort back to changing room and help to dress if needed.

- Ensure patient has no adverse reaction to contrast injection, while patient in waiting area.

- Ensure patient has transport home.

- Advise patients on how they can access the results and how long they are likely to take.

- Collect patient documentation and charts from reception and ensure all paperwork is correct for each individual patient.

- Help and support patients prior to and after examinations.

**In patients**

- Check patient is on appropriate ward and ensure patient is prepared for examination i.e. fasting.

- Bring the oral contrast drink to ward for patient.

- Ensure there is a venflon in situ.

- Liase with porter re the time patient required in the Department for the examination.

- Ensure patient notes on hand.

- Ensure patient returns to the ward with as little delay as possible.
Competencies

- Have a high capacity for responsibility, self-motivation and individual initiative.
- Dedication to the delivery of a high quality service
- Good communication and interpersonal skills.
- Be adaptable to change and willing to learn new skills.
- Maintain awareness of the primacy of the patient in relation to all hospital activities.
- Be familiar and comply with Hospital and Departmental policies in relation to Patients Charter, Health and Safety, Fire, Infection Control, Waste Disposal and Radiation Protection.
Bibliography Chapter One


2. McDonald, S.P. *Emergency Care Radiology* Cardio Thoracic Centre Liverpool, Oral Presentation at UKRC, Manchester June 2005
Chapter Two

Red Dot
and
Demand Management
**RED DOT / DEMAND MANAGEMENT**

**Background**

Berman et al 1996 made the following observations in the foreword and introduction of their book ‘Accident and Emergency Radiology A Survival Guide’ that, in an acute general hospital the Accident and Emergency Department is usually the busiest in terms of the numbers of patients seen. It is still very often the case, however that the vast majority of patients seen in the Accident and Emergency Department are managed entirely by Senior House Officers who are relatively inexperienced. Berman et al continue, that to add to the strain placed upon these doctors, is the fact that most conditions that will present to the minor side of the Emergency Department will be completely new to them. The greatest difficulties faced by these doctors include deciding whether or not to x-ray the patient, and being confident in the interpretation of radiographs. Although there are many safety nets built into Accident and Emergency practice in the well-run departments, designed so as to limit the problems caused by inaccurate interpretation of radiographs, mistakes will continue to occur given the large numbers of injured patients who attend on every day of the week.

**Discussion**

Vincent et al 1988 found that during night hours and at weekends 39% of clinically significant radiographic abnormalities were overlooked. This rate is similar to that found in other studies.

Berman et al state 1996 that two important principles should be adhered to firstly, that radiological investigations should never replace careful clinical examination but should always be correlated with the physical signs. Secondly, that guidelines essential for the appropriate practice of radiology need to be applied.

These guidelines ‘making the best use of a Radiology Dept.’ and RP 118 have been discussed in the report of the Radiography Service Review Group, and the implementation of same are discussed in detail in the following report from St Joseph’s Hospital Nenagh.

The concept of ‘red dot’ was introduced into the UK in the mid eighties. This is a system whereby radiographers identify abnormalities demonstrated on the skeletal films undertaken in the Emergency Department x-ray.

The red dot is an informal indication that the Radiographer wishes to draw the attention of the Casualty Officer to that particular x-ray. It is not a definite diagnosis.
The legal responsibility for interpreting the x-ray remains with the Casualty Officer and ultimately the Radiologist. The absence of a red dot does not imply that the x-ray is normal, but rather that the Radiographer has not identified an abnormality. This system is voluntary and is undertaken only after written protocols are drawn up with Radiographers, Radiologists and Consultants in the Emergency Department. It is undertaken only after suitable training and those Radiographers who are participating in the programme have gained experience. The red dot programme is subject to audit.

Berman et al 1985 discuss the topic ‘Reducing errors in the accident department: a simple method using radiographers’ They suggested that a system whereby radiographers signal abnormalities should be standard practice. This paper presented an evaluation of the scheme whereby radiographers marked casualty radiographs that they considered to show abnormalities.

False negative interpretations by both casualty officers and radiographers were classified by the A&E consultant as clinically important or unimportant, taking into account whether a correct diagnosis would have altered treatment or advice given to the patient and any medico legal consequences that might have arisen had the abnormality remained undetected. Of the films evaluated, 85% were of patients referred due to trauma. Radiographers missed abnormalities in 4.5% of all patients and the casualty officers missed abnormalities in 4.2% of cases. Although this suggested a similar ability to detect abnormalities, only 2.3% of patients were common to both groups. The radiographers correctly interpreted 1.8% of the radiographs wrongly interpreted by casualty officers. 57% of these (1% of the total) abnormalities were considered to be clinically or medico legally important.

At examination the radiographers correctly interpreted about half of the clinically important abnormalities wrongly interpreted by casualty officers. The authors concluded that casualty officers are unlikely to treat patients on the basis of a radiographer’s suspicion unless there is clear focal clinical evidence. At the time of the article the authors stated that defence organisations informed that as long as casualty officers were aware that the radiographers report was not legally binding they would not object to the radiographer’s opinion being volunteered.
Berman et al emphasise that although marking radiographs is regarded as informal, only when it is introduced as a regular procedure will it reduce errors considerably and be regarded as clinically helpful by casualty officers.

The above article was published in 1985 and set the scene for involving radiographers with image interpretation. The views set out in 1985 have been reinforced and validated in many studies since.

Gleadhill et al 1987 reviewed the scenario whether more efficient use could be made of x-ray examinations in the A&E department. They found that over the course of their tenure casualty officers did not become more selective in their referral pattern for x-ray examination, however, their skills in interpreting films improved. Overall 4.9% of trauma radiographs were misinterpreted, but this fell from 7.1% to 2.9% during tenure of post. Clinical guidelines for selective radiography produced a significant and sustained reduction in the number of x ray examinations by the department. Gleadhill et al continue that the number of x-ray examinations carried out in the accident and emergency department can be reduced by using guidelines, and this in no way compromises the quality of patient care. Appreciable savings may be made in patients’ waiting times and radiodiagnostic expenditure.

In 1995, Rickett et al confirmed by means of a study that accurate clinical details improve injury location from 72.3% to 80.3% and all observers improved their performance with clinical details.

Loughran in 1994 found that experienced radiographers who receive supplementary training in the radiology of skeletal trauma can significantly improve their diagnostic skills and can report such radiographs with a high degree of accuracy. A programme of training and certification for radiographers in fracture reporting could help alleviate the diagnostic radiologists’ workload of plain film reporting. Robinson in 1996 followed that it may be feasible to introduce suitably trained radiographers into a reporting rota for A&E examinations with no detriment to the quality of reports.
In 1997, Mclauchlan et al investigated whether the interpretation of trauma radiographs by junior doctors in accident and emergency departments were a cause for concern. The objective of this study was to investigate how well junior doctors in A&E were able to diagnose significant x-ray abnormalities after trauma and to compare their results with those of more senior doctors. 49 junior doctors (SHO’s) in A&E were tested with an x-ray quiz in a standard way. Their results were compared with 34 consultants and senior registrars in A&E and radiology, who were tested in the same way. The quiz included 30 x-rays (including 10 normal films) that had been taken after trauma. The abnormal films all had clinically significant, if sometimes uncommon, diagnoses. The results were compared and analysed statistically. The results found that the mean score for the abnormal x-rays for all junior doctors was only 32% correct. The 10 junior doctors with more experience scored significantly better (p < 0.001) but their mean score was only 48%. The mean score of senior doctors was 80%, which was significantly higher than the juniors (p<0.0001). The conclusion of the study was that the majority of junior doctors misdiagnosed significant trauma abnormalities on x-ray. Senior doctors scored well, but were not infallible. This paper looks at whether or not junior doctors are providing optimum standard of care working on their own in A&E departments. The authors concluded that there are implications for training, supervision and staffing in A&E departments.

Robinson et al in 1999 did a study on the interpretation of selected A&E radiographic examinations by radiographers. For this study two specially trained radiographers took part in the radiologists’ rota for ‘cold’ reporting skeletal radiographs of patients who attended the A&E department. A&E medical staff had initially seen these radiographs. At the end of an 18-month period during which the two radiographers reported on 11,322 skeletal examinations, a retrospective search was made to detect interpretive errors. In all 10% of patients re-attended for repeat examinations of the same anatomical area, or for different procedures related to the original injury.
The second (subsequent) report was discrepant with that of the first attendance in only 29 of the 1103. Of these 29 patients, 13 had occult fractures which were undetectable at first attendance even in retrospect, six had new injuries accounting for the new findings, six had been the subject of false positive calls at an earlier visit, one had a missed fracture at first attendance, and in three cases no consensus could be reached as to the cause of the discrepancy, owing to incomplete films or insufficient clinical data. The authors concluded on the basis of the study that appropriately trained and supervised radiographers can successfully undertake diagnostic reporting of selected skeletal examinations on A&E patients.

In 2001, Guly noted in his paper on ‘diagnostic errors in an accident and emergency department ’ that the most common reasons for error were misreading radiographs and failure to perform radiography; the majority of errors were made by SHO’s. Guly concluded that good clinical skills are essential. Most abnormalities missed on radiographs were not difficult to diagnose. He concluded that junior doctors in A&E should receive specific training and be tested on their ability to interpret radiographs correctly before being allowed to work unsupervised. Guly reiterated this in his 2002 paper ‘Injuries initially misdiagnosed as sprained wrist (beware the sprained wrist).’ He concluded that training for junior doctors in A&E departments should be improved, especially training in radiological interpretation. Other methods of preventing diagnostic errors by misreading of radiographs, for example additional hot reporting of radiographs by radiologists or radiographers should be considered.

Brealey et al in 2003 conducted a quasi- randomised controlled trial on accident and emergency and general practitioner (GP) plain radiograph reporting by radiographers and radiologists. This study explored the potential for further expanding the reporting role of two specially trained radiographers who had been reporting on plain radiograph x-ray examinations for A&E since 1995. Assessing the two radiographers’ and a group of consultant radiologist’s ability to report on a retrospectively selected random stratified sample of 400 A&E and GP plain radiograph x-ray examinations for all body areas achieved this. Using receiver operating characteristic (ROC) curve analyses there was no statistically significant difference at the 5% level between the area under the ROC curves for the radiographers and the consultant radiologists when reporting A&E or GP plain radiographs. They concluded that it might be feasible to expand the reporting role of suitably trained radiographers to include plain radiograph x-ray examinations for all A&E patients and for GP patients, with no detriment to the quality of reports.
As recently as 2005 Brealey et al did further studies to determine the accuracy of radiographer plain reporting in clinical practice. Further studies that compared selectively trained radiographers and radiologists of varying seniority against a reference standard; it showed no evidence of a difference between radiographer and radiologist reporting accuracy of accident and emergency plain radiographs. Selectively trained radiographers were also found to report such radiographs as accurately as those not solely from accident and emergency, although some variation in reporting accuracy was found for different body areas. Training radiographers improved their accuracy when reporting normal radiographs. The study systematically synthesises the literature to provide an evidence-base showing that radiographers can accurately report plain radiographs in clinical practice.

**Conclusion**

It has been a slow process but Red Dot is now recognised in the UK as the ‘norm’ and in fact radiographers in the UK now contribute in a further expanded role of reporting on radiographs. Ireland has seen a slower process but it is hoped that with the documentation and discussion that has emanated from the Red Dot pilot projects that this will become part of the routine practice for radiographers, and that it will lead to further role development where radiographers will provide written reports on the images they produce, not only for A&E but for other imaging techniques. This could establish a secondary reporting method, in the first instance by radiographers and the final report by the radiologist.
The following extract is taken from the guest editorial in Radiography August 2004,

‘………………Diagnostic x-rays are the single most important artificial contribution to radiation exposure of the world population, but they continue to be used because they great benefit to the sick. So, although the risk of developing cancer from x-ray examinations is generally accepted, this risk is balanced against the advantage gained from diagnosis of disease…………………A recent study has analysed data combining the frequency of X-ray examinations, radiation dose estimates, risk models from atomic bomb survivors and cancer incidence for 15 developed countries, including the UK, with the aim of estimating the extent of this risk from radiography.

Amy Berrington de Gonzalez and Sarah Darby from the Cancer Research UK Epidemiology Unit at Oxford University have estimated that the lifetime risk of developing cancer due to radiation exposure from diagnostic radiography is between 0.6 and 1.8% in 14 of the countries studied and 3.2% in Japan. In the UK, the 0.6% accounts for about 700 cancers per year. Their study demonstrates a wide range in the level of risk between countries largely dependent on the number of x-ray examinations carried out per year, although the type of examination is also an influencing factor. The authors have made conservative estimates of the cancer risk involved by taking the lowest of the range of possible values at each stage of their calculations.

………………They acknowledge that their calculations depend on a number of assumptions which result in some uncertainties in their results, but feel that is unlikely that they have underestimated the risks………………

………………Radiographers also have technical expertise and responsibilities that can influence the level of risk. Techniques and procedures to reduce radiation dose are well developed in most areas of radiography and are very effective when they are applied ………………………………………

…………………………………… Most important in influencing radiation dose in radiography is the justification of the examination. Notably, in the figures presented by Berrington de Gonzalez and Darby, the UK had the lowest annual x-ray frequency per 1000 of the population and this can be attributed, at least in part to the guidance and education given to referring clinicians by the Royal College of Radiologists indicators for x-ray examinations. But we should not be complacent in this. Some radiographic examinations are still over requested and there are also inconsistencies in the way that radiation protection procedures are applied by radiographers even in those examinations that are fully justified.

The reduction in cancer risk from diagnostic x-rays is a responsibility spread over a range of professional practitioners; but at the very leading edge of dose delivery is the radiographer and there is no escaping a unique professional duty in this respect.’

The Appendix attached holds reports from various sites, which, held a red dot pilot, and two that also piloted a demand management protocol.


Rickett AB, Finlay DB, Jagger C. The importance of clinical details when reporting accident and emergency radiographs. Injury 1992; 23(7):458-60


Appendix D

Red Dot / Demand Management Reports

St Joseph’s Hospital, Nenagh

Mid West Regional Hospital, Limerick

South Infirmary – Victoria Hospital, Cork

Naas General Hospital

Our Lady’s Hospital, Navan

Cavan General Hospital

Connolly Hospital, Blanchardstown

Cork University Hospital

St Coulmcille’s Hospital, Loughlinstown

Ennis General Hospital
RED DOT and DEMAND MANAGEMENT REPORT

St Joseph’s Hospital, Nenagh
St Joseph’s Hospital, Nenagh

Radiography pilot projects undertaken on behalf of the HSEA

In May 2003, the HSEA in partnership with SIPTU approached Nenagh General Hospital with regard to participation in radiography based pilot projects. A variety of criteria were issued (on behalf of the HSEA) defining the scope of the intended projects. We in the Radiology department chose to participate in two independent pilot projects.

The first project was to examine the aspect of demand management. The basis of this pilot project was to assess the degree of implementation of the radiological guidelines as set out by the Royal College of Radiologists (RCR) in the United Kingdom. It was proposed to evaluate the current level of usage and adherence to these guidelines by our non-consultant hospital doctors (NCHD's). The data was collated over a period of 6 months, involving accident & emergency radiological workloads during out of hours work only. The ultimate aim was to evaluate their usage & to reinforce the existence and ethos of these guidelines. In the process it was hoped to educate & to encourage the NCHD’s to utilise this tool.

The Royal College of Radiologists guidelines have now published their 5th edition; Professor Gillian Needham and her steering group and project team lead it. The guidelines have been designed to evaluate and implement evidence and current opinions on best practice. Whilst noting that the role of the Radiologist in justifying examinations remains paramount and is dependent on each clinical case. It is also noted that continued use of the recommendations can lead to a reduction in the number of referrals for investigations and therefore lead to a reduction in medical radiation exposure.
The second study, which was chosen, was to implement an accident & emergency red dot system. The basis of this system is that the radiographer who performs the radiograph has the option of attaching a symbol to the image if an abnormality is suspected. This has the effect of alerting the referring doctor to this possible abnormality.

The scope of this project is to identify skeletal work derived from A&E. The aim of this project was to endeavour to improve the quality of the service being delivered to the patients by assisting the accident & emergency NCHD’s with image interpretation.

**Methodology**

Both projects were commenced in July 2003. Letters were dispatched to all NCHDs and radiographers detailing the projects. (See appendix)

Both pilot projects involved a vast cross section of professionals, including all of the NCHD’s, the radiographers and the radiologists. All hospital Consultants were informed and given details of the pilot projects and their compliance sought, and every Doctor in Nenagh General Hospital received a copy of the RCR guidelines.

The Consultant Radiologist and the Radiography Services Manager formally welcomed the NCHD’s to the radiology department at the start of their rotation to the hospital. They were issued with various pieces of radiological information including a letter of guidance regarding making the best use of the department. (See appendix). Copies of the RCR booklets were issued shortly after the initial talk on July 3rd 2003.

The radiographers were involved from the initial stage and their participation was sought and received. Their remit was to familiarise themselves with the RCR guidelines, advise & discuss with the NCHDs if their referral contravened either the departmental protocols and/or the guidelines.

In conjunction with this a provisional red dot project was launched. The radiographers were requested to record the clinical data provided by the referrer in a log. They also had to record their impressions as to the appropriateness of this information and the action taken, i.e. if the clinical data was deemed unjustified the doctor was queried and given the opportunity to amend the data and in some cases following discussion the x-ray was not performed as it was deemed unnecessary.
All examinations were later compared with the official radiology report, to assess a correlation between clinical indications and the final report.

During the months of July to October, this ‘in-house red dot’ project was run. It had no impact on the A&E setting, as the purpose of the initial study was to increase staff confidence and awareness.

All official reports were logged beside the radiographer’s comments and available to staff to review their effectiveness and to act as a learning exercise.

On November 8th & 9th 2003, a formalised, recognised red dot course was held in the Mid-Western Regional Hospital. The course was delivered on behalf of Bradford University, Leeds. After this 2 day course the red dot system was extended into the A&E department and radiographers were actively applying ‘red dots’ as required. A number of radiological books have been purchased by funds provided by the HSEA, to further compound and reinforce knowledge and to further the education of the staff.

**Results**

Statistics were collated from August 2003 to February 2004, unfortunately a number of minor changes needed to be made to the July format, which made it impossible to include this data.

Unfortunately there is no retrospective data available to make a direct correlation with the results that were attained. The following is the data that was gleaned from these studies:
Comparison on patient referrals to x-ray over similar periods in consecutive years

<table>
<thead>
<tr>
<th></th>
<th>Number of radiology patient referrals whilst on-call</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2002</td>
<td>2003</td>
<td></td>
</tr>
<tr>
<td>August</td>
<td>699</td>
<td>495</td>
<td></td>
</tr>
<tr>
<td>September</td>
<td>573</td>
<td>364</td>
<td></td>
</tr>
<tr>
<td>October</td>
<td>537</td>
<td>503</td>
<td></td>
</tr>
<tr>
<td>November</td>
<td>571</td>
<td>449</td>
<td></td>
</tr>
<tr>
<td>December</td>
<td>536</td>
<td>495</td>
<td></td>
</tr>
<tr>
<td>January</td>
<td>454</td>
<td>459</td>
<td></td>
</tr>
<tr>
<td>February</td>
<td>469</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Red dot Missed #’s

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>23</td>
<td>20</td>
<td>17</td>
<td>13</td>
<td>12</td>
<td>8</td>
<td>9</td>
</tr>
</tbody>
</table>

Examinations that were performed which appeared to have contravened the RCR guidelines

<table>
<thead>
<tr>
<th>Requested X-rays</th>
<th>Clinical details given</th>
<th>Recommended grade</th>
<th>Comment</th>
<th>Page no:</th>
</tr>
</thead>
<tbody>
<tr>
<td>CXR</td>
<td>Non specific chest pain</td>
<td>Not indicated</td>
<td>37 cases</td>
<td>Page 58</td>
</tr>
<tr>
<td>CXR</td>
<td>URTI</td>
<td>Not indicated</td>
<td>9 cases</td>
<td>Page 58</td>
</tr>
<tr>
<td>CXR</td>
<td>Routine pre-op &lt;60 years</td>
<td>Not indicated</td>
<td>9 cases</td>
<td>Page 58</td>
</tr>
<tr>
<td>SXR</td>
<td>Headaches</td>
<td>Not indicated</td>
<td>2 cases</td>
<td>Page 26</td>
</tr>
<tr>
<td>SXR</td>
<td>Non trauma, no LOC</td>
<td>Not indicated</td>
<td>2 cases</td>
<td>Page 26</td>
</tr>
<tr>
<td>CXR</td>
<td>? rib fracture, clinically normal</td>
<td>Indicated only in specific circumstances</td>
<td>7 cases</td>
<td>Page 58</td>
</tr>
<tr>
<td>CXR</td>
<td>DVT</td>
<td>Not indicated</td>
<td>6 cases</td>
<td>Page 56</td>
</tr>
<tr>
<td>CXR</td>
<td>Cellulitis</td>
<td>Not indicated</td>
<td>1 cases</td>
<td></td>
</tr>
<tr>
<td>Nasal bones</td>
<td>Trauma</td>
<td>Not indicated</td>
<td>2 cases</td>
<td></td>
</tr>
<tr>
<td>AXR</td>
<td>UTI</td>
<td>Not indicated</td>
<td>3 cases</td>
<td>Page 82</td>
</tr>
<tr>
<td>L/Spine</td>
<td>Chronic back pain</td>
<td>Indicated only in specific circumstances</td>
<td>2 cases</td>
<td>Page 38</td>
</tr>
</tbody>
</table>

207
Discussion

A direct benefit, which was derived from this study, was that it acted as a refresher of the RCR guidelines for all members of staff both medical & radiological. The emphasis was placed on justification of radiation exposures. In some cases x-rays were avoided or modified to ensure effectiveness of the study.

It was found extremely beneficial to have S.I. No.478 of 2002 detailing the European communities (Medical Ionising radiation) regulations 2003 legalised. As this document details that there is a clinical and legal responsibility on the referrer to justify radiation exposures.

The red dot pilot project has contributed to the overall reduction in the diagnosis of missed fractures, there has been a palpable improvement in inter-departmental relationships and following discussion with the majority of NCHD’s involved in this project there is a definite sense that this is truly a positive step. However it must be noted that some NCHD’s did find this system to be somewhat threatening and some Doctors actively chose to ignore any symbols attached.

There was an 84% attendance rate at the red dot study day; all radiographers interviewed following the course found it to be a beneficial and worthwhile continuous professional development (CPD) exercise. The study revealed good diagnostic skills being exhibited by the radiography staff with an improvement following attendance at the course. The importance of CPD is that it ignites the fire of learning and knowledge and provides a platform to advance and improve the profession.

The RCR guideline awareness project has gleaned specific information that shows that 7.7% of the requested x-rays were deemed to be not indicated or not initially indicated, in accordance with the guidelines. On further analysis of the 7.7 % of cases, it was shown that 3.56 % were attributed to cases that were clinically described as non-specific chest pain.
Bearing in mind that radiology is a diagnostic tool that contributes to the overall patient management, but is just one facet involved in the patient profile. The RCR guidelines emphasise the importance of a thorough clinical examination, followed by a thorough description of clinical indications for the required x-ray. This focuses the radiology staff to ensure that appropriate diagnostic images are performed and a detailed focused report is provided, which endeavours to add to the clinical picture.

It is a fine balance between ensuring that the risk-benefit ratio tips to the beneficial side for the patient. We as radiographers are duty bound to ensure that the radiation doses that we dispense to our patients will ultimately be beneficial in their diagnosis. We are reliant on our medical colleagues to request appropriate examinations using their clinical skills. With this in mind we as professionals can question and discuss requests that we feel may be unjustified. In the majority of cases the x-ray will be performed once the doctor can provide a valid clinical basis, as was the case for the aforementioned initially deemed unjustified examinations being performed in this study.

Some elements that must be kept in mind are that some x-rays such as skull x-rays may be performed in the absence of a more appropriate modality, e.g. CT. In these circumstances the skull x-ray may be performed to out-rule gross pathology. However there are many schools of thought that view skull x-rays as now being obsolete. Evidence based thinking by Bandolier finds that ‘...the plain skull x-ray has no place in the assessment of mild head injury in adult patients.’ The current view is that skull x-rays hold no value, either a patient presents with indications that require a CT or another specialised modality, or they can be treated conservatively without the need for plain x-rays.

A similar situation arises with chronic lumbar spine pain. The appropriate treatment is initially that of conservative management, as per the RCR guidelines. If symptoms persist the modality of choice is MRI, many requests are again performed to out-rule gross pathology while perhaps waiting to see a specialist or awaiting a MRI.
Another factor that can be contemplated is that patients like to receive tests; this is documented in the RCR guidelines ‘...some patients take comfort in being examined’. This is another factor that General Practitioners & NCHD’s have quoted and poses problems for them in their surgeries and A&E settings when challenged by patients.

**Conclusion**

- What we can ascertain is that there was a slight reduction in the number of patients referred from A&E to radiology during the study in comparison to a similar period last year. Despite the increasing number of A&E attendances.

- It was found that pertinent clinical information was submitted in the majority of cases. This perhaps would have been the result of a system that is in place during the day where inappropriately completed requests are returned to the referrer for amendment prior to the x-ray examinations.

- Another ‘knock on’ effect, which was found to be beneficial with regard to the educational aspect of the RCR guidelines, was that a Radiologist was present during the day to support and guide both the radiographers and the NCHD’s and reinforce some aspects of the guidelines.

- The overall evaluation of the degree of initially deemed unjustified work was at a minimum, this was a good reflection on the department. There are very tight protocols that exist within the department and have done prior to the study.

- Another point that may have contributed to this efficiency is that there is a vast wealth of skill and experience within the core radiographer group, 86% of the staff are bringing more than 25 years of experience to the job. This undoubtedly is a major contributor to the quality and appropriateness of the work carried out.
It is very important to build on this impetus with regard to CPD and role extension/development within our profession. This is at the very heart of the Health Strategy, which is endeavouring to find valuable, worthwhile, attainable change within the health service, ultimately benefitting the patient and providing a value driven service.

Currently the red dot system is working extremely well and has proved to be beneficial for both patients and staff alike to date. The plan within this department for the immediate future is to continue with the red dot system, to audit and evaluate the results and act on the findings. To provide refresher courses as the need arises and to utilise the expertise within the department. As competence and confidence increase, perhaps to extend this project to include non-skeletal work.

We will continue to monitor all x-ray requests with regard to appropriateness and justification and to educate with regard to the RCR guidelines. The MWRH is currently looking at purchasing the electronic version of the RCR guidelines, making them accessible to every member of staff within the board. It is worth bearing in mind that Bandolier suggests that there is evidence to support that at least 20% of the radiological examinations carried out in the NHS hospitals were clinically unhelpful.

To move forward with regard to the RCR guidelines will require a united approach from the radiology community as a whole. We are not alone in finding this a difficult task. Blake, 1995:12-5, cites that the ….‘Royal College Working Party was clear that the problems in how to assure compliance with agreed standards of practice have yet to be resolved. It is also likely to be true that without follow-up the initial beneficial effect of the guidelines will diminish. We must try to find ways of getting the message across and to make good practice become standard.’
The overall reflection on the department was positive; the protocols that are in place are strict and effective. The NCHD’s routinely every six months receive an induction into the effective usage of the radiology department. The radiography staff showed an openness to learn and progress; their compliance with attendance at the red dot course was 84% and 100% compliance with the data collection for both studies.

On behalf of the Radiology department and Nenagh General Hospital as a whole I would like to extend our thank you to the HSEA/SIPTU for selecting us and making it possible for us to take part in these studies. I would also like to acknowledge the work and the support that Michele Monahan has extended to me personally and to this whole endeavour.

*Report by Jacqueline Noonan, Radiography Services Manager*
RED DOT REPORT
Mid-Western Regional Hospital Limerick
Mid-Western Regional Hospital Limerick

1. **Context**

   The Red Dot Pilot Study was undertaken to reduce the number of missed fractures in the A/E Department. The reason it is called Red Dot is because years ago (Pre Digital) the Radiographers used to put a Red Sticker on the X-ray Films to highlight to the referring doctor in A/E that they thought they saw an anomaly on the film. This then meant that the referring doctor would then take even greater care looking at the image to find what the Radiographer thought he/she saw.

2. **Challenge**

   In the digital era, we do not have films to stick red stickers on, so we had to devise a method of highlighting the image for the referring doctor. We had to devise a system that:
   
   - would be easy to use by both the Radiographers and the Referring Doctors.
   - would also need to take up very little time on the part of the Radiographer, so that when the Radiographer is under pressure she/he will still actually red dot the images if necessary.
   - would be able to archive the red dot, so that we could audit the images and assess the number of missed fractures.

   The Radiographers, needless to say, were anxious that they would be pressurised to come up with a diagnosis. Their fears were allayed and the emphasis was on a no blame or fault method. It was pointed out to both the Radiographers and the A/E Doctors, that there would be no finger pointing of the Radiographers if they had not red dotted a positive image or if they did red dot a negative image.

   We needed to educate the Radiographers on the technique of highlighting the images and to improve their diagnostic skills.

   Because this was a pilot study through the HSEA/SIPTU, we received 3,500 Euro to run this pilot study. We used this money to run a study weekend on Red Dot last November. This was given by two Radiographers from Bradford University and was highly successful.
Because the funding did not cover all the costs of running the course, we invited Radiographers from other centres and Health Boards and charged them accordingly. (Please find attached the breakdown of costs) We were also able to buy some reference books for the department.

3. **IMPACT**

The Consultant in the A/E Department finds that the system is working very well

- **Enhanced Customer Care:** The number of missed fractures has been drastically reduced, better service to the patient. In July 2003 there were 8 missed fractures and in January 2004 there were 3. We chose these months, as the level of expertise with the referring doctors was comparable.

- **Industrial Relations:** The Unions were involved in setting up the pilot study.

- **Reform and Development:** This is an extra dimension to the role of the Radiographer in this centre. Historically Radiographers were not involved in the diagnosis process. This has now changed and hopefully we will be able to build on this change.

- **Value for Money:** There was no cost implication for this pilot study. No extra staff was required, and no extra equipment needed to be purchased to get it up and running.

- **Staff Training:** The Red Dot Course in November helped to improve the diagnostic skills of the Radiographers. Since November we have regular film viewing and reporting sessions.
4. **CONCLUSION**

This pilot study has gone really well. The consultant in A/E gave us a presentation of his perspective of the Red Dot and it is being received very positively in A/E. The number of missed fractures has reduced significantly, more than 50%.

We are hoping that when the pilot study is complete that we will extend the areas being red dotted to include more anatomy and gradually include the entire body.

Report by Gena Nicholas, Radiography Services Manager
RED DOT REPORT

South Infirmary – Victoria Hospital, Cork
South Infirmary – Victoria Hospital, Cork


Introduction and History

Since Roentgen’s discovery of X-rays in 1895 the role of the radiographer has developed and evolved greatly. In the first three decades radiographers undertook producing and reporting of films until 1925, when the Society of Radiologists changed its articles of association restricting the radiographer’s role to film production only. Over the next 50 years there was no radiographers input beyond film production until the early 1970s when it was acknowledged that radiographers were working below their potential and their skills in film interpretation were under utilised.

Undergraduate training of radiographers stresses the importance of critically evaluating films for technical quality and for the presence of abnormalities. It was accepted that working radiographers had a lot of knowledge and experience in assessing X-rays and that this could be used to distinguish normal and abnormal radiographic appearances. It was felt that Radiographers should be able to use this knowledge in an extended capacity to aid in patients’ diagnosis.

In the 1980’s the Red Dot System was developed and is a method of informal film interpretation whereby the Radiographer who performs the X-ray studies each radiograph or image and indicates the potential presence of a fracture or abnormality by placing a red dot on the film. It was primarily introduced as an aid to junior doctors in A/E who often work out of hours without consultant or radiology backup. St James Hospital was first to implement the Red Dot scheme in Ireland in the 1990’s and have been so successful that they are now providing postgraduate training in this area. Several other hospitals throughout the country have implemented the red dot system in recent years.
**What is the Red Dot system?**

As previously described the red dot system is a method of indicating the presence of an abnormality on a film by the radiographer placing a red sticker on the film, X-Ray Packet or request form. However a red dot does not equal diagnosis and responsibility for diagnosis still rests with the referring clinician. There is no legal impetus on the radiographer and the absence of a red dot does not mean an abnormality should not be suspected.

**Aims and objectives**

The primary aim of the red dot system is to prevent missed diagnosis and increase the level of service to A/E patients with a faster overall detection of an abnormality resulting in better patient management. It improves the communication between A/E and Radiology staff and is useful in filtering out inappropriate referrals thereby reducing unnecessary examinations and patients’ exposure to ionising radiation. As previously mentioned it can assist junior doctors in A/E who often work without consultant or Radiology backup and provides a forum for discussion between the referrer and the radiographer. It ultimately results in increased standards, confidence and skill and greatly enhances the professional role of the Radiographer.

**Implementation**

Following discussion between radiologists, radiographers and A/E consultants it was decided to implement a red dot system limited to X-rays from A/E referrals. It was initially agreed to run the programme as a six-month pilot project to start on the 1st Sept 2004. The radiographers were very supportive and enthusiastic about the new venture but the general consensus was that some training was needed. As a result a red dot course was organised over a weekend in Aug 2004 with financial assistance from the HSEA. Two radiographers from the University of Bradford provided training and lectures in pattern recognition in trauma plain film radiography. All radiographers were obliged to attend these lectures as the red dot system could only work if all radiographers within the department participated. In house lectures and textbooks were also used to supplement the initial training course and provide ongoing support for radiographers. A protocol was devised and accepted by all staff members (see attached). All films that are red dotted are recorded in a logbook in which the radiographer can also comment on the suspected abnormality.
Two senior Radiographers performed an audit of this logbook in November 2004. Initial audit results showed a 75% true positive pick up rate. This was comparable with other centres that introduced the red dot system.

**Pitfalls**

This has been a most successful venture within the hospital with very positive feedback from the Radiographers, Radiologists and A/E consultants. Junior doctors have also expressed their satisfaction with the system as they now feel they can openly discuss cases with the radiographer. They have commented that they find this second opinion very useful in the on call situation when there may be few senior doctors to consult with. However as there is no orthopaedic department in the hospital and all patients with fractures or potential fractures are referred with their films to an outside centre for orthopaedic review. Due to a low return rate, films are not always reported immediately by Radiologists within the hospital so it is difficult to assess the false positive rates of fracture diagnosis. The Radiologists have however noticed a significant reduction in missed fractures coming through for reporting.

**Future**

We are currently installing a computed radiography and PACS SYSTEM in the department and throughout the hospital. This will mean that all images are kept on site and will not be lost through transferring to another hospital. This results in all films, including those referred to fracture clinics being reported. This will allow for advanced audit and better analysis of inaccurately placed red dots. It will increase the efficiency of the red dot system through rapid retrieval of previous images and old reports in cases of pathology or old fractures.

Digital radiography enables us to create folders of X-rays for teaching purpose helping ongoing training of radiographers and junior doctors in this area. It will also lead to a significant reduction in exposure to patients due to image manipulation techniques, for example, ability to look for bony and soft tissue abnormalities with one exposure.
Conclusion

We feel that the red dot pilot has been very successful in the South Infirmary - Victoria Hospital. It has increased the radiographers input from X-rays production to forming opinions on their work. Interest in plain film radiography has increased and this has led to improved standards, skills and confidence in liasing with other medical professionals. This improvement in patient service is at no extra cost to the hospital. Overall professional self-esteem has improved and radiographers feel confident to give opinions on the work undertaken and recognise our potential for the future. We hope this will lead to the development of the role of radiographer into areas such as plain film reporting in the future.

Report By:
Una Murphy, Clinical Specialist Radiographer
Rosie Twomey, Clinical Specialist Radiographer
South Infirmary-Victoria Hospital, Cork.

References


Red Dot Protocol SIVH Cork

The Red Dot system will commence on Monday 30th August 2004. Only Accident & Emergency referred patients and their radiographs will be included in the study.

A Radiographer will place a Red Dot on a Radiograph when, in their opinion, there is an abnormality indicating a fracture on the image. There is no obligation on the Radiographer to place a dot on, or to give an opinion of an image.

If a Radiographer does not place a red dot on a radiograph, it is still the responsibility of the referring A&E clinician to study the image and make a diagnosis. There are no medico-legal implications for Radiographers that incorrectly place a red dot on a ‘normal’ image or that fail to place a red dot on an ‘abnormal’ image.
RED DOT and
DEMAND MANAGEMENT REPORT
Naas General Hospital
Naas Radiology Department
Red Dot Pilot Project
Introduction

Naas Radiology Department introduced a Red Dot System in the A&E department in November 2004 following several radiographers attending a Red Dot Study day delivered by Dr’s DeLacey and Berman, following funding from the HSEA Pilot Project fund.

Radiographers were asked to indicate on the Radiograph if an abnormality was present, with no films produced in Naas Radiology Department, this was performed by annotating on the image via the PACS system. This annotation alerted the A&E Doctors that the Radiographer had seen an abnormality; however this did not constitute a report.

As in many A&E Departments throughout Ireland, A&E Consultants are often not present in the department throughout the night, and the Red Dot System allowed the Radiographers to aid the A&E Doctors through their vast experience of interpreting Radiographs.
Methodology

Radiographers were asked to participate in the Red Dot Study, however it was purely voluntary, once a radiograph had been interpreted, the Radiographer filled out an audit sheet as displayed below, and annotated the Radiograph if an abnormality was detected.

MRN ____________________
Date ________________

Region

<table>
<thead>
<tr>
<th>C Spine</th>
<th>Shoulder inc Humerus</th>
<th>Pelvis inc Femur</th>
</tr>
</thead>
<tbody>
<tr>
<td>skull</td>
<td>Elbow</td>
<td>Knee</td>
</tr>
<tr>
<td>Face</td>
<td>Wrist</td>
<td>Ankle</td>
</tr>
<tr>
<td>Foreign Body</td>
<td>Hand</td>
<td>Foot</td>
</tr>
</tbody>
</table>

Normal

Radiographer

<table>
<thead>
<tr>
<th>COB</th>
<th>CB</th>
<th>FC</th>
<th>DG</th>
<th>JG</th>
<th>LH</th>
<th>PJM</th>
</tr>
</thead>
<tbody>
<tr>
<td>CN</td>
<td>AB</td>
<td>EOB</td>
<td>NR</td>
<td>SW</td>
<td>AM</td>
<td>MM</td>
</tr>
<tr>
<td>LW</td>
<td>GW</td>
<td>PM</td>
<td>AOD</td>
<td>RD</td>
<td>CD</td>
<td>JOR</td>
</tr>
<tr>
<td>DH</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The anatomical regions for assessment were those covered during the Red Dot Study day. The information was then checked against the Radiologist’s Report which is considered the gold standard in reporting, and accuracy compared for Radiographers who had attended a Red Dot Study Day and those who hadn’t. The results were checked to assess accuracy of detecting fractures, normal variants and missed fractures. Prior to the Red Dot Study formally being introduced, two radiographers recorded all patients x-rayed whilst on-call and whilst working in the A&E department and these results were again checked against the Radiologist’s Report.
Results

Original Study September 2004

Two Radiographers participating, Superintendent 1 and Basic Grade.

134 Patients Included in Study

Body regions included in Study
Upper Limb including Shoulder Joint, Facial Bones, Skull, Cervical Spine, Lower Limb including Pelvis

Correctly identified fractures and Normal Appearances 82.5%
False Positive (No fracture Present) 17.5%

No Missed Fractures

Official Red Dot Study 28th November 2004 to 28th February 2005

Total Number of Patients included in Study 882
Total Number of Patients suitable for Inclusion 2919

Correctly Identified Fractures and Normal Appearances
Attended Red Dot Course : 86.86% Correct
Did Not attend Course : 81.66% Correct

False Positive (No fracture Present)
Attended Red Dot Course : 9.19%
Did Not attend Course : 15.35%

Missed Fractures
Attended Red Dot Course : 3.95%
Did Not attend Course : 2.99%
The results of the Project demonstrate a high standard in detection of abnormalities and normal appearance with an percentage of 86.6 % correctly identified fractures and normal appearances from Radiographers who had attended a Red Dot Study Day and 81.66% from those who hadn’t.

Approximately 30% of all applicable patients were assessed and included in this study. As ‘Red Dot’ is a voluntary scheme the Radiographers are encouraged to participate and as the Study progressed more Radiographers contributed to the Study. This directly led to a slight reduction in the accuracy of detection in the study for a week in January where more Radiographers became involved.

Missed Fractures and False positives accounted for 51% of all incorrect diagnoses as discussed by Dr DeLacey during the Red Dot Study Day.

The study demonstrates that all Radiographers are capable of assessing Radiographs for abnormalities and assisting A&E doctors with the interpretation of Radiographs, however with further education the detection rate increases.
Demand Management Naas Hospital

In Naas Hospital a Protocol for the Imaging of Abdomen’s was implemented in October 2004 in response to S.I. 478 of 2002, following guidelines from ‘Making the Best Use of a Department of Clinical Radiology’ by the Royal College of Radiologists, and involving the A&E Consultant and Radiology Clinical Director.

Abdomen Radiographs were being performed on patients with a variety of complaints from unspecific abdominal pain to constipation, where the indications did not justify the dose the patient received.

The period prior to November 2004 960 abdomen x-rays were requested from June 2004 to October 2004, on average 192 a month from Casualty alone. An abdomen x-ray equates to 0.7 mSv or 35 Chest X-Rays.

The Abdomen Policy was introduced after an information session was given to the A&E Doctors and Nurses to alert them to the unnecessary radiation dose the patient’s were receiving and more suitable investigations.

As demonstrated via the policy adopted in Naas, there will be variations in different departments regarding what the A&E Consultant and Radiology Consultant consider appropriate for abdominal X-rays.

It is important to have the backing of both A&E & Radiology Consultants and Superintendents to ensure the policies are adhered to and that the Radiographers will not be afraid to refuse an unwarranted X-ray, a right given in S.I. 478 of 2002 as Radiographers are the practitioner.

After October 2004 there has been a steady decline in the number of abdomens being requested / X-Rayed, partly due to the Radiographers gaining confidence in refusing inappropriate –Rays and A&E Dr’s learning what is a valid request.

The average for the first two months following the protocol being introduced the average per month was 108 abdomens. The average in 2005 until the end of April has seen a further reduction to 83 abdomens.

This reduction has benefits to the patients (dose) and to the Radiology department in terms of cost and managing an A&E Dept.
Abdomen X Rays

Please be aware that Abdomen X-rays are only recommended in certain circumstances and have very little diagnostic value in other abdominal conditions.

Justified Requests

Large / Small Bowel Obstruction
Acute Exacerbation of Inflammatory Bowel Disease
Constipation (Geriatric & Psychiatric Only)
Renal Colic
Ingested Foreign Body (Poisonous or Sharp) Object (Battery etc)
Ingested Foreign Body (Smooth – Coin) if not passed within 6 Days.
? AAA only if U/S not available

Acute Abdominal Pain ? Perforation – Erect Chest and Supine Abdomen

A&E Consultant __________________________ Radiology Consultant __________________________
Date __________________________ Date __________________________

Report by Peter McDonagh, Superintendent Radiographer
RED DOT REPORT
Our Lady’s Hospital Navan
Our Lady’s Hospital Navan

First Audit Report post 8 weeks pilot

Red Dot commenced on 1st September 2004. It was not possible to carry out audit prior to commencement, as A/E not computerised.

It was decided to audit all extremity examinations performed on-call. The reason extremities only were decided on was to give the Radiographers confidence with the red dot process. During the day the Radiographer was able to consult with the Radiologist if in doubt.

The results and graph indicate the pick up rate. Week one only 20% of abnormalities was picked up compared to 87% in week 8.

<table>
<thead>
<tr>
<th></th>
<th>Week1</th>
<th>Week2</th>
<th>Week3</th>
<th>Week4</th>
<th>Week5</th>
<th>Week6</th>
<th>Week7</th>
<th>Week8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Positives</td>
<td>20</td>
<td>19</td>
<td>17</td>
<td>18</td>
<td>9</td>
<td>12</td>
<td>23</td>
<td>30</td>
</tr>
<tr>
<td>Positives Red Dotted</td>
<td>4</td>
<td>9</td>
<td>14</td>
<td>17</td>
<td>7</td>
<td>11</td>
<td>20</td>
<td>26</td>
</tr>
<tr>
<td>Positives not Dotted</td>
<td>16</td>
<td>7</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Negatives Red Dotted</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>4</td>
<td>5</td>
<td>2</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Reports reviewed</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

4% of the cases that were red dotted by the radiographer and reported by the radiologist as normal were on review reported as fractures.

The Red Dot form is completed when the radiographer sees a fracture that is not obvious. The radiologist can then discuss the case with the radiographer. The feedback generally has been very positive.

All radiographers have approached the project with enthusiasm.
Red Dot Audit on Extremities on-call Navan first 8 weeks

<table>
<thead>
<tr>
<th>Week No.</th>
<th>Total +ve</th>
<th>+ve red dotted*</th>
<th>+ve not dotted*</th>
<th>-ve red dotted*</th>
<th>-ve reports reviewed as +ve</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>15</td>
<td>5</td>
<td>10</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>18</td>
<td>12</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>3</td>
<td>16</td>
<td>10</td>
<td>10</td>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td>4</td>
<td>18</td>
<td>15</td>
<td>3</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>12</td>
<td>8</td>
<td>4</td>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td>6</td>
<td>14</td>
<td>10</td>
<td>4</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>7</td>
<td>18</td>
<td>15</td>
<td>3</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>8</td>
<td>20</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>

*+ve red dotted* indicates patients with red dots present.
*+ve not dotted* indicates patients with red dots absent.
*-ve red dotted* indicates patients with red dots, but the report was reviewed as positive.
*-ve reports reviewed as +ve* indicates patients with reports reviewed as positive.
This is the second red dot audit carried out on extremities on-call in Dept of Radiology, Our Lady's Hospital, Navan. The total number of cases audited was 344. Of these 136 were positive. 92% of these cases were red dotted by the radiographers. A further 25 examinations 7% were red dotted but these were reported negative by the radiologist. On review 2 cases 8% were found to be positive.

The introduction of the red dot continues to be very successful and has been beneficial to both the radiographers and A/E staff

Since Jan 2005 the radiographers have extended the red dot to include all skeletal trauma
Red Dot Audit on extremities on-call Navan week 9-16

<table>
<thead>
<tr>
<th>Week No.</th>
<th>No of Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Total +ve</th>
<th>+ve Red dotted&quot;</th>
<th>+ve not dotted&quot;</th>
<th>-ve red dotted&quot;</th>
<th>-ve reports reviewed as+ve</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Week 10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Week 11</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Week 12</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Week 13</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Week 14</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Week 15</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Week 16</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Results of Red Dot audit performed July 2005. Navan

This audit involved 86 patients with skeletal trauma referred to radiology from the emergency department. Of the total number audited 27 cases were reported positive by the radiologist. There were 2 cases red dotted which had negative reports, but on review one of these cases changed to a positive report indicating a radiographer accuracy rate of 96.4%. Of the four cases, which were not red dotted, two were obvious fractures with displacement. To date the introduction of the red dot system has been beneficial to the radiographers, radiologists and the emergency staff. It has enhanced interpersonal communication and utilises the knowledge and experience of radiographers in the recognition of musculo-skeletal trauma. It has improved patient care at no additional cost to the health service.

July '05 Red Dot Audit

<table>
<thead>
<tr>
<th>Number of Examinations:</th>
<th>86</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number reported +ve by Radiologist</td>
<td>27</td>
</tr>
<tr>
<td>Number red dotted by Radiographer</td>
<td>22</td>
</tr>
<tr>
<td>Number incorrectly red dotted</td>
<td>1</td>
</tr>
<tr>
<td>Number not picked up by radiographers</td>
<td>4</td>
</tr>
</tbody>
</table>

- Positive exams: 76%
- Normal exams: 24%
Red Dot Audit for July 2005 Navan Hosp

Report by Mary Smith, Radiography Services Manager
RED DOT REPORT

Cavan General Hospital
Purpose

The following guidelines are designed to Instruct Radiographers and Casualty Doctors on the usage and limitations of the Red Dot System.

What is a Red Dot System?

Definition

‘Red Dot System’:
On identifying an injury/ abnormality on A&E x-rays, the Radiographer places an asterix (*) on top of the Computerised Radiography (CR) image and then releases the image to the A&E monitor. This image is designed to assist Casualty Doctors in the early diagnosis of certain injury/ abnormalities. Doctors are welcome to come to the X-Ray Department to discuss patient x-rays with the Radiographer concerned.

Responsibility

The Radiographer will take part in the Red Dot System on the understanding that the referring Casualty Doctor will examine all films, which do not have a red dot, carefully. Absence of a dot does not mean abnormality should not be suspected. The Red Dot System gives no indication of the severity of an abnormality. Responsibility continues to rest with the referring doctor. The Radiologist reports all X-Rays. The Red Dot System supplements the report rather than replacing it. There are no medico-legal implications in the use of this system.

What do we Red Dot?

- Fractures, Dislocations / Subluxations of:
  - Upper limb – including shoulder girdle
  - Lower Limb – Including pelvis
  - Spine
  - Skull
- Any Significant Bone / Joint Abnormality i.e. Metastases
- Presence of a Foreign Body
- Chest:
  - Pneumothorax
  - Fractured Ribs
  - Free Peritoneal Air

**Staff Training**

All staff should be trained in the use of the Red Dot System.

On going training for Radiographers is essential to maintain standards.

Radiologists will facilitate this with lunchtime lectures and allowing Radiographers attend reporting sessions.

**Implementation and Audit**

The Red Dot System was implemented following Consultation between Radiologists Radiographers and the A&E Consultant.

A pre-introduction audit was carried out by the Radiographers to build confidence and obtain experience of the system.

The results of this audit can be compared to pick-up rates in future audits.

To date the results of Audits show that the Red Dot System is a great success.
Table 1: Pre-Introduction Audit

<table>
<thead>
<tr>
<th></th>
<th>JUNE 2004</th>
<th>JULY 2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Positives</td>
<td>110</td>
<td>82</td>
</tr>
<tr>
<td>Positives Red Dotted</td>
<td>99</td>
<td>77</td>
</tr>
<tr>
<td>Positives Not Red Dotted</td>
<td>11</td>
<td>5</td>
</tr>
<tr>
<td>Negatives Red Dotted</td>
<td>22</td>
<td>9</td>
</tr>
</tbody>
</table>

Indicates a 90% pick up rate for June 2004 and a 94% pick up rate for July 2004.
Table 2: First three months of Red Dot System

<table>
<thead>
<tr>
<th></th>
<th>October 2004</th>
<th>November 2004</th>
<th>December 2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Positives</td>
<td>65</td>
<td>50</td>
<td>64</td>
</tr>
<tr>
<td>Positives Red Dotted</td>
<td>56</td>
<td>47</td>
<td>63</td>
</tr>
<tr>
<td>Positives Not Red Dotted</td>
<td>9</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Negatives Red Dotted</td>
<td>20</td>
<td>7</td>
<td>9</td>
</tr>
</tbody>
</table>

Indicates a 86% pick up rate for October 2004.
Indicates a 94% pick up rate for November 2004.
Indicates a 98% pick up rate for December 2004.

Report by Pauline Flood Senior Radiographer

Reviewed by Phyl Smith Radiography Services Manager and Dr Faisal Khosa Consultant Radiologist.
RED DOT REPORT

Connolly Hospital Blanchardstown
TABLE OF CONTENTS

Introduction

Methodology

Statistics

Reasons For Fractures Not Detected

Conclusion

Letter to Emergency Department

Protocols for Proposed Pilot Red Dot System
INTRODUCTION

Connolly Hospital Radiology Department embarked on a six-month “red dot system” trial between January to June 2005. This pilot study was funded by the HSEA. In November 2004, sixteen radiographers from Connolly (in conjunction with radiographers from Naas and St Colmcilles Radiology Departments) attended a red dot study day in the Academic centre, Connolly Hospital. Dr Gerald DeLacey, Dr Lars Berman and Dr Simon Morley presented these lectures; these three radiologists are recognised as the leading experts in this field. The remaining radiographers were informed of the course contents.

Radiographers were asked to indicate on a radiograph if an abnormality was present. Placing an arrow on the radiograph by the radiographer indicated where the abnormality was detected. The anatomical area surveyed was the upper and lower limb, from shoulder girdle to fingers and pelvis to toes. This arrow annotation signified to the emergency department doctors that the radiographer had detected an abnormality, but this was an observation aiding the initial diagnosis and not an official report. This system primarily assists the junior doctors in casualty, particularly when no consultant is present (night shift) and in the detection of subtle fractures.

METHODOLOGY

This was a voluntary trial for radiographers but all in the department undertook the responsibility to participate. Radiographers placed a red dot on all radiographs and their request forms to indicate the x-ray film was in the study. If an abnormality was detected an arrow was placed on the radiograph indicating pathology. Consultant radiologists, who were aware of this trial, reported on the red dot radiographs and their request forms. These radiological reports were assumed to be one hundred percent accurate in this trial.

A dedicated red dot radiographer then checked these reports against the red dot radiographs, assessing the radiographer’s accuracy in detecting fractures, normal variants, missed fractures and false positive fracture indication.

The emergency department was informed by an official meeting with their consultants and letters with an explanation and radiographic example were given to all emergency doctors (see last two pages). These results were documented and calculated when the trial terminated.
TOTAL NUMBER OF EXAMINATIONS IN SURVEY....  569

<table>
<thead>
<tr>
<th>RADIOLOGIST</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>FRACTURE</td>
<td>208</td>
</tr>
<tr>
<td>NORMAL</td>
<td>263</td>
</tr>
<tr>
<td>VARIANT</td>
<td>98</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>RADIOGRAPHER</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>FRACTURE</td>
<td>186</td>
</tr>
<tr>
<td>NORMAL</td>
<td>328</td>
</tr>
<tr>
<td>VARIANT</td>
<td>23</td>
</tr>
<tr>
<td>MISSED FRACTURES</td>
<td>22</td>
</tr>
<tr>
<td>FALSE POSITIVES....</td>
<td>10</td>
</tr>
</tbody>
</table>

PERCENTAGE OF FRACTURES DETECTED BY RADIOGRAPHERS

\[
\frac{186}{208} \times 100 = 89.42\% 
\]
REASONS FOR FRACTURES NOT DETECTED

There were twenty-two missed fractures by the radiographers in the trial. These films were analysed as to why the fractures were missed. Discretion was used in this follow up analyses, as the trial was not a “witch hunt” against radiographers who missed a fracture. It should be considered a gathering of information to study where, if any, the radiographers needed improvements in fracture detection.

In our opinion, ten of these fractures were very subtle, most radiographers indicating their viewing monitors as the reason why they missed the fractures. These monitors, primarily used to view the image by the radiographers, indicate if an x-ray image is diagnostic in quality but are less then one-mega pixel in resolution. These monitors are very accurate for assessing if an image is diagnostic but not necessarily the gold standard in subtle fracture detection. Therefore, it is recommended to view all the radiographic films when printed to accurately assess fracture detection.

Finally, the twelve obvious fractures missed were either due to the radiographer not having the time to arrow the fracture (major trauma) or, more commonly, the fracture so clear that the radiographer simply forgot to arrow the pathology. There was a very low false positive rate to which no reason could be attached.

CONCLUSION

This red dot project concurs with numerous studies in the past. It demonstrates the ability of radiographers to identify pathologies, particularly acute injuries like fractures, from normal radiographic appearances. The 89.42 percent detection will aid any emergency department and their ability to manage the patient’s treatment. It was also very encouraging the low false positive rate, which again would have an effect on patient management. It is recommended that radiographers either look at the printed film or have higher resolution monitors (more expensive) when looking for subtle fractures.

There were no statistics done to show if the radiographers who attended the training day had a higher detection rate to the radiographers who did not attend. In conclusion, this study demonstrates the need for radiographer’s skills and experience to aid the emergency department in the diagnosis of acute injuries.
Radiology Department,

JCMH,

4th January 2004

To whom it may concern,

With reference to the recent discussions between the radiology and casualty departments, the “red dot” system will commence on Monday the 10th January at 9am. I’ve attached an example of a red dot film with the arrow indicating a pathology. Also attached is the final draft of the red dot protocols.

If you have any questions please do not hesitate to contact me in the x-ray department (ext 5234).

Yours Sincerely

_____________________
Gary Monk
Senior Radiographer
JAMES CONNOLLY MEMORIAL HOSPITAL

PROPOSED PILOT RED DOT SYSTEM

OVERVIEW

It is the intention of the radiology department, JCMH in conjunction with the emergency department to implement a six-month trial “Red Dot” system. This concept involves the viewing of trauma radiographs by the radiographer and indicating any abnormality on the image. United Kingdom trials clearly demonstrate that radiographers with dedicated training and education in trauma radiography dramatically decrease the possibility of missing fractures and other pathologies.

AIMS

The aim of the red dot system is to assist the casualty team in detecting fractures or other abnormalities. The system is intent on reducing the number of missed pathologies and false positive cases. The red dot enables auditing of the “fracture detection” in the emergency department and can identify problematical areas where missed fractures are most common. The casualty/radiology team can then address these areas. The red dot thus improves patient care and helps speed up the throughput of patients, vital in a busy emergency department. The red dot fosters a good, close working relationship between the two departments.
PROTOCOLS

- the radiographer will place an arrow on the radiograph to indicate a pathology (fracture/abnormality) has been detected.

- if a radiograph does not have an arrow, it does not imply that the x-ray is normal, but rather the radiographer has not identified an abnormality, it is still the responsibility of the referring emergency department clinician to study the image and make a diagnosis.

- the areas to be assessed are strictly limited to trauma radiography of the upper extremity including the shoulder girdle and the lower extremity to include pelvis.

- the red dot system is voluntary and there is no obligation to participate on any individual radiographer. There are no medico legal implications for radiographers that incorrectly place an arrow on a “normal” image or that fail to place an arrow on an “abnormal” image.

- Radiographs and their request forms will be marked clearly with a red dot so that the casualty doctor and radiologist know whether the film is in the red dot system. This does not signal pathology as only an arrow indicates an abnormality; it simply indicates that a radiographer participating in the red dot pilot has viewed this radiograph.
METHODOLOGY

- each radiographer shall be given formal and continuous training in the interpretation of trauma radiographs. A list of trained radiographers will be noted.

- the radiographer must view the radiograph and decide whether to place a “red dot arrow” on the film. He or she shall mark the radiograph and the request form clearly with a red dot to indicate to the emergency department doctor and the radiologist that the film is in the red dot system. The radiograph is then returned to casualty for interpretation.

- if there is no marking of the film or request form despite the presence of an arrow it is assumed that this is not a red dot film.

- two audits will be done over the three month trial period

- the radiology audit will assess the radiographers accuracy in detecting fractures/abnormalities and false positive cases.

- this will be done by correlating the radiologist report with the red dot indication on the film. The casualty audit will involve the totalling of the number of missed fractures specific to the red dot system. This figure will be compared with previous six monthly periods.

- The presence of a red dot arrow on a film will indicate that there is an area of abnormality on the film as viewed by the radiographer. This may include: fracture +/- dislocation, dislocation, foreign body, joint effusions indicative to injury, presence of abnormal fluid levels to indicate injury.
IMPORTANT CONSIDERATIONS

It is anticipated that 10-12 patients a day will enter the red dot system thus ensure a study group of approximately 950-1000 radiographic examinations in the trial. It is important to compare the missed fracture rate with several previous six monthly period figures. This is an attempt to alleviate variations in the winter months where inclement weather and less daylight lead to more hazardous conditions for walking, driving and sporting activities, etc which may effect the number of patients with fractures attending casualty departments.

AUDIT REVIEW

A review between the radiographers, radiologists and casualty will take place after a three-month trial with figures examined. The red dot system may then be modified, expanded to other anatomical areas or eliminated at this time.
RED DOT AUDIT FORM

Patient Name:

Chart Number:

Please circle the region of abnormality:

Finger
Hand
Wrist
Forearm
Elbow
Humerus
Shoulder
Clavicle
Toe
Foot
Ankle
Tibia/ Fibula
Knee
Femur
Hip
Pelvis

Radiographer

AM AJ AF BM BS CM CN EM FM GM KB LS MMcV MG MOD MC MM MK NM RS SAS SS SH

Radiologist's Report: Dr S.J Dr H Dr Mck Dr An.other

Fracture Not Fractured Indeterminate Normal Variant

Comments

..........................................................................................................................................................................................................
..........................................................................................................................................................................................................
..........................................................................................................................................................................................................
..........................................................................................................................................................................................................
..........................................................................................................................................................................................................
..........................................................................................................................................................................................................
..........................................................................................................................................................................................................
Report by Gary Monk Senior Radiographer
RED DOT REPORT

Cork University Hospital
**Red - Dot Audit**

*Cork University Hospital, September 2005*

**Background:**
A red dot system has been in place in CUH for some time but the accuracy of this system has to date not been audited. The aim of this survey was to check the accuracy of the Red dot system in CUH.

**Method:**
For the first ten days of September 2005 Radiographers were required to document the cases, which were red-dotted. The following were recorded: Patient's name, DOB, MRN and Body Part on which red dot was placed. These patients’ charts were subsequently retrieved. The A/E Doctors’ notes were read to check the results of X-ray examinations performed. The Radiology Information System (RIS) was checked to access the Radiologist’s report. All data collected was typed onto an Excel spreadsheet. The body part red-dotted was correlated with the Dr’s note in the chart and with the Radiologist’s report.

**Results:**
80 patients had a red dot placed on their radiographs. One of these was a Chest radiograph, which in fact, was not ‘post trauma’ and is therefore not included in the Red dot protocol adopted for this hospital (Appendix 1). This was excluded from the study. 7 of these patients had no Dr’s note and a further 7 patients’ charts were unavailable. However 2 of these 14 did have a correct correlation with the Radiology report (i.e. Red dot and report) and will therefore be included. A total of 67 will therefore be used. 18 of 67 had a Radiologist's report available on the RIS.
63 of 67 studies were correctly red dotted. There were 2 false positive studies, however in one of these cases the A/E physician was of the same opinion as the Radiographer. There is one other probable false positive, which, is to be confirmed by a Radiologist’s report. In another instance a Red dot was placed on clavicle which was deemed an old injury but a # of the greater tuberosity was missed.

Discussion:
Radiographers’ placing of red dots correlated well with the A/E physicians. It is not possible to quantify how many cases the radiographers missed without examining all the case notes for this period. It was noted that there were fewer dotted studies in the later days. Also, this very week was the first in which the new A/E rooms were used outside normal working hours. This is bound to have had a negative effect on this study as the radiographers were grappling with a new system.

The initial pick up rate is 94% accurate.
Cork University Hospital
Department of Radiology Red Dot Protocol

The red dot system is one whereby the radiographer appends a red dot to a film that he/she believes shows an acute abnormality pertinent to the patient’s injuries.

- Only referrals from the Cork University Hospital Emergency Department will be subject to the red dot system. The system will commence on 1st February 2005 and will operate on a 24 hr basis.

- Whether or not the radiographer places a red dot on a radiograph, it remains the responsibility of the referring clinician to examine the radiograph.

- The presence (or absence) of a red dot is informal and has no legal significance. There are no medico-legal implications for any Radiographer that incorrectly places/or does not place a red dot on any radiograph.

- The system is a voluntary one. A radiographer is not obliged to participate if he/she does not wish to do so.

The following examinations will be subject to the Red Dot Protocol

Upper Extremity
- Finger
- Hand
- Wrist
- Carpal bones
- Radius and Ulna
- Elbow
- Humerus
- Shoulder
- Clavicle
Lower Extremity
- Toes
- Foot
- Ankle
- Calcaneum
- Tibia and Fibula
- Knee
- Femur
- Hip
- Pelvis

Additional Examinations
- Cervical spine
- Skull
- Facial bones
- Chest (post trauma only)
- Abdomen for FB only

What to red dot
1. A recent fracture
2. A dislocation
3. A foreign body
4. Elbow effusion

What not to red dot
1. Soft tissue swelling in the absence of a fracture
2. Long standing bony change e.g. osteoarthritis
3. Chest radiographs other than for trauma
4. Abdomen (other than for foreign body)

Names and positions (authorities) of those who have approved this protocol for clinical use
1. Dr Liam Spence, Chair, Division of Radiology.
2. Angela McGovern, Radiography Service Manager.
3. Mary Gilmartin, Risk Manager, Cork University Hospital.

Please note for this system to work effectively the X-Ray request forms must be filled out properly by the A/E doctors. Requests for plain film radiography must be justified with correct and relevant clinical details. This protocol will be subject to review.

References
Fielding JA. Improving accident and emergency radiology. Clinical Radiology 1990; 149-151

Hargreaves J, Mackay S. The accuracy of the red dot system: can it improve with training? Radiography 2003 9, 283-289

Report by Anne O Loughlin, Clinical Specialist Trauma
RED DOT REPORT

St Columcille’s Hospital Loughlinstown
St Columcille’s Hospital Loughlinstown

We introduced the Red Dot scheme in our hospital in October 2003. The scheme is now included in our Health & Safety Statement/policy document. We have always seen it as a natural role extension for Radiographers. It formalised a process already taking place and utilised skills and experience Radiographers already possessed. We have had positive feedback from A&E post introduction. Casualty officers with limited experience in film interpretation have a very useful diagnostic aid available to them over a 24 hour period. Radiographers have improved their skills/ confidence with time. We have performed an audit twice since the introduction of the scheme to assess Radiographer effectiveness. The Radiologists use a code at the end of their report to facilitate this.

I = INAPPROPRIATE RED DOT
A=APPROPRIATE RED DOT
N= NOT RED DOTTED

I have asked this week that the Radiography news publish a call for others who have any information and audited their red dot schemes to submit them so I can compare our results with others and see how we can further improve performance. We also record as Radiographers all we dot and hold Red Dot lunches, which involves the Radiologist going through these cases particularly ones people struggled with. The Radiographers have found the Red Dot an excellent learning tool and it has contributed towards the Continuing Professional Development in the Radiology Department.

Report by Marianne Coakley, Radiography Services Manager
The red dot study commenced in April 2004 as part of the pilot scheme initiated by the HSEA.

The purpose of the study was to evaluate the effectiveness whereby a radiographer placed a red dot on all x-rays which they thought were abnormal in order to alert the N.C.H.D’s in the A&E department of a potential pathology.

Prior to the start of the pilot scheme some of the radiographers in the Department attended a study weekend in the Mid Western Regional Hospital Limerick. The lecture notes from the study weekend were then distributed to all radiographers who were unable to attend the course. Throughout the pilot scheme radiographers attended A&E reporting sessions with the Consultant Radiologists to continue the education programme at a departmental level.

<table>
<thead>
<tr>
<th>Month</th>
<th>A&amp;E referrals</th>
<th>Red Dot – pathology present</th>
<th>Red Dot – no pathology present</th>
<th>Missed Pathology</th>
</tr>
</thead>
<tbody>
<tr>
<td>April</td>
<td>960</td>
<td>19</td>
<td>7</td>
<td>11</td>
</tr>
<tr>
<td>May</td>
<td>1162</td>
<td>16</td>
<td>5</td>
<td>27</td>
</tr>
<tr>
<td>June</td>
<td>1041</td>
<td>13</td>
<td>15</td>
<td>48</td>
</tr>
<tr>
<td>July</td>
<td>901</td>
<td>11</td>
<td>9</td>
<td>32</td>
</tr>
<tr>
<td>August</td>
<td>1204</td>
<td>21</td>
<td>9</td>
<td>23</td>
</tr>
<tr>
<td>September</td>
<td>1009</td>
<td>12</td>
<td>4</td>
<td>15</td>
</tr>
<tr>
<td>Total</td>
<td>6277</td>
<td>92</td>
<td>49</td>
<td>156</td>
</tr>
</tbody>
</table>
Unfortunately the results do not demonstrate the true extent of the red dot pathology present rate as the data analysed related to only reported x-rays. All x-rays with positive pathology are forwarded to the trauma clinic in the Mid Western Regional Hospital Limerick before they are reported.
The above statistics relate only to all x-rays reported in Ennis. In certain instances the positive pathology x-rays referred to the trauma clinic are not returned to this department and if they are returned they are not reported.
It is felt the true red dot – pathology present rate is actually significantly higher than these statistics would suggest.

The missed pathology rate mainly related to for example hairline fractures.

The limited pilot study has improved the service for doctors. The statistics demonstrate the radiographer’s true positive rate. The red dot scheme has been welcomed by all members of staff and has promoted greater communication between the multidisciplinary team.

The patient recall rate for missed pathology for A&E patients has reduced during his period which has resulted in a better service for patients with quicker and more appropriate referral to the trauma clinics.

The red dot pilot scheme has allowed the radiographers to utilise the skills they already have. It demonstrates the potential for radiographer role development in the future given there is adequate education and support available.

While the statistics demonstrate further training and support are required it is hoped to continue the project and at a later stage repeat the audit to assess if there has been any further progress.

_Report by Susan Coyle, Radiography Services Manager_
CHAPTER THREE

WORKING OUTSIDE OF CORE HOURS
Introduction

This section deals with extended hours of service to patients who do not fit within the ‘emergency’ classification.

A number of hospitals submitted proposals to the Joint Implementation Group with regard to providing extended services outside traditional core hours. The majority of submissions related to routine service i.e. non-emergency patients being done on a Saturday. The submissions from various hospitals differed in the type of radiological examination that would be available, these included Dexascanning, Magnetic Resonance Imaging (MRI), Computed Tomography (CT), Ultrasound and routine general x-rays for GP patients on extended waiting lists.

A schedule of payment based on the sessional rate and time in lieu was arrived at and all but one hospital had the same conditions. Merlin Park Hospital opted for fee per patient rate and no time off.

Methodology

The staff that worked on the Saturdays was surveyed on various aspects of the work involved. Questionnaire included in Appendix E.

Patients that attended for examination on Saturdays were surveyed; to ensure data was reliable a similar number of patients with comparable profiles who attended for the same examinations during Monday to Friday were also surveyed with the same questionnaire. Questionnaire included in Appendix F.

The questionnaires were analysed using a combination of SPSS and Quasar packages.
Report on Cavan General Hospital

- Pilot projects re CT and Ultrasound Scans outside routine hours

- Proposal 1
  
  CT Oncology list of 12-14 patients on one Saturday per month for six months.
  Radiologist present.
  Two Radiographers in attendance for each of two sessions.

- Proposal 2
  
  GP patient ultrasound list of up to 30 patients on one Saturday per month for six months.
  Radiologist present.
  Two Radiographers in attendance for each of two sessions.
  1 attendant for the Ultrasound session.

The primary purpose of each of these pilots was to facilitate extended waiting lists for the patients, ensuring the examinations were carried out in a timely fashion. The project commenced in July 2003 and finished June 2004.
The following are the results of the staff questionnaire:

**Number of Years Qualified**

- 1-5yrs: 0
- 5-10yrs: 0.5
- 10-15 yrs: 1
- 15-25yrs: 1.5
- >25yrs: 2

**Grade at time of pilot**

- Basic: 6
- Senior: 5
- Clinical Specialist/ Supt 1: 4
- RSM 1: 3
- RSM 2: 2
Area of working for Pilot Project

Q4. I am satisfied with the frequency of Saturdays which I work

Strongly Agree  Agree  Undecided  Disagree  Strongly Disagree
Q5. I am satisfied with the current workload on Saturdays

Q6. I have an increased level of job satisfaction working Saturdays knowing waiting lists are shorter for patients
Q7. I am willing to work Saturdays under the same conditions

Q8. I am satisfied with the staffing levels on Saturdays
Q9. I am satisfied with new Saturday duties
Satisfaction rating results of individual questions

Question 4 gives a satisfaction rating of 73.08% that Radiographers are satisfied with the frequency of Saturdays they work.

Question 5 gives a satisfaction rating of 78.85% that Radiographers are satisfied with the current workload on Saturdays.

Question 6 gives a satisfaction rating of 78.85% that Radiographers have an increased level of job satisfaction working Saturdays knowing waiting lists are shorter for patients.

Question 7 gives a satisfaction rating of 86.54% that Radiographers are willing to work Saturdays under the same conditions.

Question 8 gives a satisfaction rating of 80.77% that Radiographers are satisfied with staffing levels on Saturdays.

Question 9 gives a satisfaction rating of 77.08% that Radiographers are satisfied with new Saturday morning duties.
Cavan Hospital
Number of Saturdays worked by Radiographers per month for pilot

- 0% worked three Saturdays per month as part of pilot
- 0% worked four Saturdays per month as part of pilot
- 8% worked two Saturdays per month as part of pilot
- 92% worked one Saturday per month as part of pilot

Cavan Hospital
Number of Saturdays worked per month by Radiographers including pilot and on call

- 25% worked four Saturdays per month including pilot and on call
- 50% worked two Saturdays per month including pilot and on call
- 0% worked three Saturdays per month including pilot and on call
- 25% worked one Saturday per month including pilot and on call
Positive issues of this pilot identified by Radiographers

- Increased salary.
- Time off in lieu of Saturday working.
- Decrease in waiting times for patients and decrease in stress and pressure for staff during week.
- Increased job satisfaction.
- Increased patient throughput and satisfaction.
- Increased money and time off.
- Reduction of waiting lists.
- Increased pay and time off.
- Reduced waiting lists for patients.
- Reduce waiting lists.
- Two people doing the work. Effective team work.
- Less phone calls from GPs during week.
- Reduced waiting lists for patients.
- Increased Patient satisfaction.
- Reduced number of phone calls re appointment delays.
- Reduced waiting lists for oncology patients.
- Time off for radiographers.
- Financial benefit for staff.
- Experience for radiographers.
- Reducing waiting lists.
- Freeing scanner for in patients during week.
- Waiting lists reduced.
- Extra money earned.
- Waiting lists are reduced.
- Reduced waiting list.
- Increased salary.
- Decreased stress level during week and GP referrals not phoning re how long to wait.
- Waiting lists no longer than one month.
- Appointments promptly sent out once session date known.
- Incentive for staff due to time off.
Negative issues of this pilot identified by Radiographers

- Less free time on weekends but time in lieu is useful for time of during week.
- Interferes with family and social life at weekends.
- Query do lists after normal working hours during week instead of weekends.
- Patients have to give up their Saturdays but most do freely.
- Difficulties may arise if radiologist is unavailable i.e. he or she is sick.
- Only able to do if radiologist is present, only when they are available and not always easy to plan in advance. Possibly easier if radiologist is in house which they are not here.
- Less free time with family.
- Heavy workload on Saturday.
- Patients not following proper preparation so have to re-appoint.
- In cases of empty bladder for pelvic scan, appoint all pelvic scans early so patient has full bladder later in session.

Conclusion
This pilot proved extremely successful and was extended for a further six-month period, this means the pilot projects ran for a total of one year. In addition to the Saturday working funded by the National Pilot Projects, the hospital funded additional Saturdays to further alleviate the waiting lists.

Over the period of the pilot project 144 patients had their CT scans done outside of normal working hours, an additional 224 patients had CT scans done outside normal working hours funded by the hospital. 330 patients had their ultrasound scans done as part of the pilot project and 404 patients had their ultrasound scans done funded by the hospital.

The appointment of a full time consultant Radiologist to Cavan Hospital since the pilot projects, has allowed more patients to be treated within the normal working day and with the consequent reduction in waiting lists the need for Saturday working has been eliminated.
REPORT ON MERLIN PARK HOSPITAL

Bone Density Testing

- Proposal
  A total of 180 patients, some of whom had been waiting since October 2001, to have bone density testing done on Sat mornings over a six-month period.

Merlin Park Hospital proposal was selected for continuation of funding for an additional six weeks to assist and support the continuation of the project. It was agreed that the proposal would be on the following basis:

- Proposal
  A total of an additional 54 patients, to have bone density testing done on Sat mornings over a six-week period. This would bring the total of patients who have benefited by the pilot project to 230 by May 2004.

For this pilot project the Radiographers were paid on a fee per patient basis, which included much of the clerical duties required for the examination and booking.

The following are the results of the staff questionnaire:

Number of Years Qualified

<table>
<thead>
<tr>
<th>Years</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-5 yrs</td>
<td>0</td>
</tr>
<tr>
<td>5-10 yrs</td>
<td>0.5</td>
</tr>
<tr>
<td>10-15 yrs</td>
<td>1</td>
</tr>
<tr>
<td>15-25 yrs</td>
<td>1.5</td>
</tr>
<tr>
<td>&gt;25 yrs</td>
<td>3</td>
</tr>
</tbody>
</table>

Grade at time of pilot

<table>
<thead>
<tr>
<th>Grade</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic</td>
<td>0</td>
</tr>
<tr>
<td>Senior</td>
<td>2</td>
</tr>
<tr>
<td>Clinical Specialist/ Supt</td>
<td>3</td>
</tr>
<tr>
<td>RSM 1</td>
<td>1</td>
</tr>
<tr>
<td>RSM 2</td>
<td>1</td>
</tr>
</tbody>
</table>
Area of working for Pilot Project

Q4. I am satisfied with frequency of Saturdays which I work
Q5. I am satisfied with the current workload on Saturdays

Q6. I have an increased level of job satisfaction working Saturdays knowing waiting lists are shorter for patients
Q7. I am willing to work Saturdays under the same conditions

Q8. I am satisfied with the staffing levels on Saturdays
Q9. I am satisfied with new Saturday duties
Satisfaction rating results of individual questions

Question 4 gives a satisfaction rating of 50.00% that Radiographers are satisfied with the frequency of Saturdays they work.

Question 5 gives a satisfaction rating of 60.00% that Radiographers are satisfied with the current workload on Saturdays.

Question 6 gives a satisfaction rating of 90.00% that Radiographers have an increased level of job satisfaction working Saturdays knowing waiting lists are shorter for patients.

Question 7 gives a satisfaction rating of 80.00% that Radiographers are willing to work Saturdays under the same conditions.

Question 8 gives a satisfaction rating of 80.00% that Radiographers are satisfied with staffing levels on Saturdays.

Question 9 gives a satisfaction rating of 85.00% that Radiographers are satisfied with new Saturday morning duties.
Merlin Park Hospital
Number of Saturdays worked per month as part of pilot

0% worked less than one Saturday per month as part of pilot

100% worked less than one Saturday per month as part of pilot

Merlin Park Hospital
Number of Saturdays worked per month including pilot and on call

0% worked more than one Saturday per month including pilot and on call

100% worked less than one Saturday per month including pilot and on call
**Positive issues of this pilot identified by Radiographers**

- Reduction in patient waiting time.
- Faster treatment where necessary.
- Facilitates patients at work during weekdays.
- Reduced waiting lists and service is free.
- Reduced patient waiting list.
- Realistic patient numbers.
- Financially attractive for Radiographers.
- Patients do no need to take time off work to attend.
- Waiting lists are getting smaller.
- This is health promotion in action and can save the Health Services revenue by reducing the number of fractures needing treatment later on.

**Negative issues of this pilot identified by Radiographers**

- Expectation that patients will always be or can be seen on Saturdays.
- No time off in lieu for staff as for some other initiatives.
- Clerical duties to be done by radiographers.
- Losing time off working at weekend.
- Would prefer full day workload maybe once every six months than half day more frequently.
- Would like to get time back in lieu for working a Saturday.
- Did not attend (DNA) levels in initial months was quite high.
- Radiographers having to do appointments and clerical duties.
- Working flat out to scan ten patients without break within the session time.
- No time off in lieu for working Saturday morning.
- No pay if patients do not turn up solution is fixed rate for the session.
- Dissatisfied as we work so few Saturdays.
- Would prefer increased workload on Saturday.
- In order to have more sessions perhaps we could offer two sessions each Saturday.
Additional comments by Radiographers

- Financial incentive to radiographer is attractive but it increases workload for Seniors in checking reports and sending out results.
- Patients are very happy with Saturday appointments and DNA levels are lower than during weekdays.
- Payment per patient has made this project most efficient as DNA allows for rescheduling at no extra cost.
- I think this is an excellent service to the patients and the cost is small compared to treating fractures late.
- I would like to be offered time off as well as fee per patient.
- To give a more complete service it would be better if the patient had access to a nutritionist following the dext scan.

Conclusion

This pilot proved highly successful in reducing the waiting list from over 18 months to one that could be managed in a timely fashion. Over the eight months of the pilot 230 patients were accommodated by the pilot and had their dext scan done outside of normal working hours on Saturdays.

This type of initiative is one that could be used in the future should a similar need arise.
Report on Beaumont Hospital

Proposal Magnetic Resonance Imaging scans

MRI neurosurgical and neurology scans for up to 24 patients on two Saturdays per month for a period of six months.

The potential benefit of this is to alleviate waiting lists for a specific group of neurosurgical and neurology patients for MRI scans, and to reduce the current waiting lists of up to 8 months.

Two Radiographers to work each of the Saturdays with a Radiography Assistant.

The primary purpose of this pilot was to facilitate extended waiting lists for the patients, ensuring the examinations were carried out in a timely fashion.

The project commenced in October 2003 and finished April 2004.
The following are the results of the staff questionnaire:

Number of Years Qualified

<table>
<thead>
<tr>
<th>Years</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-5yrs</td>
<td>2.5</td>
</tr>
<tr>
<td>5-10yrs</td>
<td>2.0</td>
</tr>
<tr>
<td>10-15 yrs</td>
<td>1.5</td>
</tr>
<tr>
<td>15-25yrs</td>
<td>1.0</td>
</tr>
<tr>
<td>&gt;25yrs</td>
<td>0.5</td>
</tr>
</tbody>
</table>

Grade at time of pilot

<table>
<thead>
<tr>
<th>Grade</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic</td>
<td>1.0</td>
</tr>
<tr>
<td>Senior</td>
<td>2.0</td>
</tr>
<tr>
<td>Clinical Specialist/ Supt 1</td>
<td>2.5</td>
</tr>
<tr>
<td>RSM 1</td>
<td>3.0</td>
</tr>
<tr>
<td>RSM 2</td>
<td>3.5</td>
</tr>
</tbody>
</table>
Q4. I am satisfied with frequency of Saturdays which I work
Q5. I am satisfied with the current workload on Saturdays

Q6. I have an increased level of job satisfaction working Saturdays knowing waiting lists are shorter for patients
Q7. I am willing to work Saturdays under the same conditions

Q8. I am satisfied with the staffing levels on Saturdays
Q9. I am satisfied with new Saturday duties
Satisfaction rating results of individual questions

Question 4 gives a satisfaction rating of 14.29% that Radiographers are satisfied with the frequency of Saturdays they work.

Question 5 gives a satisfaction rating of 32.14% that Radiographers are satisfied with the current workload on Saturdays.

Question 6 gives a satisfaction rating of 42.86% that Radiographers have an increased level of job satisfaction working Saturdays knowing waiting lists are shorter for patients.

Question 7 gives a satisfaction rating of 17.86% that Radiographers are willing to work Saturdays under the same conditions.

Question 8 gives a satisfaction rating of 50.00% that Radiographers are satisfied with staffing levels on Saturdays.

Question 9 gives a satisfaction rating of 14.29% that Radiographers are satisfied with new Saturday morning duties.
Beaumont Hospital
Number of Saturdays worked per month for pilot

- 0% worked three Saturdays per month as part of pilot
- 0% worked four Saturdays per month as part of pilot
- 14% worked two Saturdays per month as part of pilot
- 86% worked one Saturday per month as part of pilot

Beaumont Hospital
Number of Saturdays worked per month including pilot and on call

- 0% worked four Saturdays per month including pilot and on call
- 25% worked one Saturday per month including pilot and on call
- 38% worked three Saturdays per month including pilot and on call
- 37% worked two Saturdays per month including pilot and on call
Positive issues of this pilot identified by Radiographers

- Positive feedback from patients included in pilot
- Patient benefited as removed from waiting list
- Slight reduction in waiting list
- Benefit to patients who got their scans earlier
- Removed small number of patients from waiting list.
- Should reduce waiting lists and hopefully reduce pressure of workload during normal working days.

Negative issues of this pilot identified by Radiographers

- Number of patients included did not impact significantly on MRI waiting list, which extends for at least nine months.
- Type of patient was restricted or limited due to non-inclusion of radiologist and nurses i.e post contrast scans and sedated patients.
- Did not impact significantly on waiting list as it is so long.
- Did not increase the service to patients during week since more immobile patients still need to be done during week.
- Reduction in waiting list not significant.
- Only patients who did not require contrast could be done.
- Feel a second scanner would be more beneficial than increasing hours on one scanner.
- Query do evenings rather than weekends.
- Too many Saturday mornings.
- Not the best way of tackling waiting lists.
- Only a select number of patients suitable. To include all patients nurses, doctors, dark room technicians, clerical staff also required.
- Do not believe or think it reduced waiting list and certainly no impact on normal working day.
- Yet again another weekend working in the month.
- Prefer to reduce number of weekends worked than increase them.
- On call commitment means we tend to work one Saturday per month already.
- Do not think staff should be asked to increase working hours.
- Not happy to work any more Saturdays or Sundays
- Would prefer to have weekends off.
- Radiographers work very long hours at present, do not need to work more weekends.
**Additional comments by Radiographers**

- Daily workload not reduced and pressure on staff daily remains unchanged.
- Sedated and post contrast patients, GA and immobile patients still remain to be scanned during the week as could not be included on Saturday pilot.
- Saturday pilot study did little to impact on the waiting lists with waiting times for scans as long during normal hours.
- Only able bodied patients were scanned with more difficult patients left to normal hours. Would require radiologist and nurse if patients who were sedated or more complex scans were carried out.
- Feel money to run a list on Saturday would be best spent buying a second up to date scanner.

**Conclusion**

This pilot did not prove as successful as hoped in reducing the waiting lists by any significant amount although 144 patients were accommodated. In addition the staff satisfaction rate fell well below other similar pilot projects. The satisfaction rating for the radiographers fell to 14.29% for the frequency of Saturdays worked and also the new Saturday duties, only 17.86% would be willing to work under the same conditions, 32.14% were satisfied with the workload. 42.86% were satisfied that the waiting lists were shorter for patients, the highest level of satisfaction was 50% and that was to do with the staffing levels. The majority of staff indicated that the increase of weekly workload for Radiographers did not have a significant impact on the lengthy waiting lists. Since the pilot project Beaumont Hospital is in the process of purchasing a second MRI scanner, which will impact on the daily workload and help reduce the waiting lists for all patient types as indicated by many of the comments above.
Report on Mater Hospital

- Pilot projects re MRI, Ultrasound Scans, GP request General X-Rays
  All to be done outside routine hours on Saturdays

- Proposal 1
  MRI list of 6-7 patients on each Saturday for a period of six months.
  One Radiographer in attendance for two sessions.

- Proposal 2
  GP patient ultrasound list of up to 20 patients on two Saturdays per month for six months.
  Two Radiographers in attendance for each of two sessions.

- Proposal 3
  GP requested general x-ray list of up to 30 patients on two Saturdays per month for six months.
  Two Radiographers in attendance for each of two sessions.

The primary purpose of this pilot was to facilitate extended waiting lists for the patients, ensuring the examinations were carried out in a timely fashion. The Radiographers were remunerated on a sessional basis, and received time in lieu. The project commenced in September 2003 and finished March 2004.
The following are the results of the staff questionnaire:

Number of Years Qualified

Grade at time of pilot
Area of working for Pilot Project

Q4. I am satisfied with frequency of Saturdays which I work

Strongly Agree  Agree  Undecided  Disagree  Strongly Disagree

0  1  2  3  4  5  6
Q5. I am satisfied with the current workload on Saturdays

Q6. I have an increased level of job satisfaction working Saturdays knowing waiting lists are shorter for patients
Q7. I am willing to work Saturdays under the same conditions

Q8. I am satisfied with the staffing levels on Saturdays
Q9. I am satisfied with new Saturday duties
Satisfaction rating results of individual questions

Question 4 gives a satisfaction rating of 59.09% that Radiographers are satisfied with the frequency of Saturdays they work.

Question 5 gives a satisfaction rating of 75.00% that Radiographers are satisfied with the current workload on Saturdays.

Question 6 gives a satisfaction rating of 70.45% that Radiographers have an increased level of job satisfaction working Saturdays knowing waiting lists are shorter for patients.

Question 7 gives a satisfaction rating of 77.27% that Radiographers are willing to work Saturdays under the same conditions.

Question 8 gives a satisfaction rating of 84.09% that Radiographers are satisfied with staffing levels on Saturdays.

Question 9 gives a satisfaction rating of 65.91% that Radiographers are satisfied with new Saturday morning duties.
Mater Hospital
Number of Saturdays worked per month for pilot

- 0% worked two Saturdays per month as part of pilot
- 0% worked three Saturdays per month as part of pilot
- 0% worked four Saturdays per month as part of pilot
- 100% worked one Saturday per month as part of pilot

Mater Hospital
Number of Saturdays worked per month including pilot and on call

- 0% worked four Saturdays per month including pilot and on call
- 27% worked three Saturdays per month including pilot and on call
- 55% worked two Saturdays per month including pilot and on call
- 18% worked one Saturday per month including pilot and on call
Positive issues of this pilot identified by Radiographers

- Less waiting for GP patients.
- More time for patients.
- More time for better quality of work.
- Decreased waiting lists
- Increased salary and time off.
- Patients satisfied as do not have to take time off work.
- Reduced waiting time for MRI for orthopaedic patients.
- Time off and increased salary during months of pilot.
- Reduced patient numbers on list.
- Greater time for patient/staff interaction.
- Shorter waiting times for patients.
- Patients do not have to take time off work.
- Great service.
- Shorter waiting lists
- Nice to scan outpatients without interruptions.
- Gave us a chance to take some of the less urgent scans off the waiting list.
- Very few DNAs as contacted beforehand.
- Routine examinations were done with very little interruption from wards, a/e, opd and others.
- Reduce waiting list.
- Saturday may suit patients.
- Time to concentrate on patients without interruptions.
Negative issues of this pilot identified by Radiographers

- Non attendance of patients
- Starts a trend towards shift work.
- Because of reduced MRI staff frequency of Saturday morning a bit much. If more staff it might work better or be on every second Saturday.
- Frequency too much due to small staff numbers rotating through MRI and so became tiring.
- Even though patient was phoned Friday to confirm appointment still one DNA a week.
- Staffing levels in MRI are quite low which means increased frequency of Saturday morning cover. Adds a lot to amount of call already being done. Solution is to increase staff levels.
- Request cards not read properly so patients booked in for incorrect examinations. Solution is for request cards to be read by radiographers and appointments to be made by radiographers.
- Amount of call expected of us already too much
- Lists had been decided and arranged at maximum twenty patients however in many cases lists exceeded this.
- I worked one saturday every month which is a lot considering the rest of the call that I already participate in.
- Because of drop in staffing levels the frequency of Saturday working will go up to one in four and this is hard to mix in with other on call duties and loss of free time

Additional comments by Radiographers

- Saturday morning lists provided a great service to patients.
- Should be considered for the future.
- Amount of call and weekend work should also be considered before being implemented on a permanent basis.
Conclusions

This pilot proved successful in reducing the waiting list from one that could be managed in a timely fashion. Over the eight months of the pilot 665 patients were accommodated by the pilot. 140 had MRI scans, 196 had ultrasound scans and 329 had their general x-rays done outside of normal working hours on Saturdays.

The number of non attendees varied considerably through the disciplines with an average of 6.5% for MRI ranging from 0%-16.6%, an average of 16% for general x-rays ranging from 3%-30% and an average of 25% for ultrasound ranging from 10%-35%. As these patients were called within 10 days of their appointments for confirmation, it represents a substantial number of those who do not attend, particularly for Ultrasound and General X-Rays, MRI patients had the best attendance record. This is a factor, which must be taken into account if a similar initiative was to take place in the future. Also to be looked at are staffing levels, which was a major influence on the pilot not continuing beyond the six months, the additional reporting requirement on the radiologists was also a considerable influencing factor.
Report on AMNCH Tallaght

- Pilot project re GP request General X-Rays to be done outside routine hours on Saturdays

- Proposal 1
  20 GP patients to be x-rayed on a Saturday morning for a period of six months.
  The potential benefit of this is to alleviate waiting lists for GP patients for general x-rays, and to maintain the waiting time for non-urgent requests to a maximum of four weeks.

The Radiographers received payment on a time in lieu basis, funding was provided for a radiographer to cover this as well as additional clerical cover.

The project commenced in July 2003 and was extended until July 2004. The Radiographers have continued this service since the end of the pilot phase.
The following are the results of the staff questionnaire:

**Number of Years Qualified**

<table>
<thead>
<tr>
<th>Years</th>
<th>1-5yrs</th>
<th>5-10yrs</th>
<th>10-15 yrs</th>
<th>15-25yrs</th>
<th>&gt;25yrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>0</td>
<td>2</td>
<td>4</td>
<td>6</td>
<td>8</td>
</tr>
</tbody>
</table>

**Grade at time of pilot**

<table>
<thead>
<tr>
<th>Grade</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic</td>
<td>18</td>
</tr>
<tr>
<td>Senior</td>
<td>12</td>
</tr>
<tr>
<td>Clinical Specialist/ Supt 1</td>
<td>6</td>
</tr>
<tr>
<td>RSM 1</td>
<td>2</td>
</tr>
<tr>
<td>RSM 2</td>
<td>2</td>
</tr>
</tbody>
</table>
Q4: I am satisfied with the frequency of Saturdays which I work.
Q5. I am satisfied with the current workload on Saturdays

Q6. I have an increased level of job satisfaction working Saturdays knowing waiting lists are shorter for patients
Q7. I am willing to work Saturdays under the same conditions

Q8. I am satisfied with the staffing levels on Saturdays
Q9. I am satisfied with new Saturday duties
Satisfaction rating results of individual questions

Question 4 gives a satisfaction rating of 75.00% that Radiographers are satisfied with the frequency of Saturdays they work.

Question 5 gives a satisfaction rating of 73.08% that Radiographers are satisfied with the current workload on Saturdays.

Question 6 gives a satisfaction rating of 79.81% that Radiographers have an increased level of job satisfaction working Saturdays knowing waiting lists are shorter for patients.

Question 7 gives a satisfaction rating of 10.58% that Radiographers are willing to work Saturdays under the same conditions.

Question 8 gives a satisfaction rating of 74.04% that Radiographers are satisfied with staffing levels on Saturdays.

Question 9 gives a satisfaction rating of 60.42% that Radiographers are satisfied with new Saturday morning duties.
AMNCH
Number of Saturdays worked per month for pilot

- 85% worked one Saturday per month as part of pilot
- 15% worked two Saturdays per month as part of pilot
- 0% worked three Saturdays per month as part of pilot
- 0% worked four Saturdays per month as part of pilot

AMNCH
Number of Saturdays worked per month including pilot and on call

- 77% worked one Saturday per month including pilot and on call
- 19% worked two Saturdays per month including pilot and on call
- 4% worked three Saturdays per month including pilot and on call
- 0% worked four Saturdays per month including pilot and on call
Positive issues of this pilot identified by Radiographers

- GP waiting lists reduced.
- Patients faith restored in medical system when they see us working on a Saturday and dealing with their cases.
- Decreased waiting times for patients.
- Reduces patient waiting list and more flexible hours for patient.
- Could be introduced for areas such as ultrasound to reduce waiting list which I think is six months.
- Reduces waiting times.
- Shorter waiting lists.
- Time off for staff working Saturday morning.
- Decreases waiting lists for GPs plain x rays.
- Reduced waiting time.
- Decreases GP waiting lists.
- GP lists are shortened. Improved patient service.
- Patient waiting list dramatically reduced.
- Patient waiting lists reduced.
- Decreased waiting lists.
- Accommodates patients working Monday to Friday.
- Lets our voices be heard.
- Reduction of waiting lists for GP patient appointments.
- Patient waiting list has been reduced and most patients appreciate it.
- Reduces waiting lists is the major bonus.
- Terms of remuneration seem good.
- GP patients do not have to wait as long for appointment.
- As no OPD patients are x rayed on Saturday morning patient throughput is quicker than during the week.
- Cuts waiting lists.
- Gives staff opportunity to earn time off.
- Waiting list reduction.
- Helps reduce waiting lists.
- Great for earning time off.
- Allows you to meet staff you would not normally work with.
Negative issues of this pilot identified by Radiographers

- DNA's very annoying should be a fine for not attending.
- Not as big an impact on waiting lists as I would have imagined.
- Occasionally some patients on Saturday morning list had only been waiting a few days for x ray.
- Some patients seem to believe they can turn up late and will still be x rayed.
- Some GP patients turn up after appointment time when we are supposed to be finished that list and doing inpatients.

Additional comments by Radiographers

- Could be introduced for ultrasound as there is always a radiologist on site on Saturday morning for CT call.
- I am not willing to work any more Saturdays. It is already very hard to get a weekend off and very tiring.
- Additional support staff required on Saturdays.

Conclusion

This pilot proved successful in reducing the waiting list from to one that could be managed in a timely fashion. Over six months of the pilot 440 patients were to be accommodated by the pilot, in fact an additional 71 were given appointments, which is an additional 16% to give a total of 511 appointments given. The number of non-attendees varied considerably through the weeks with an average of 12.3% for general x-rays ranging from 0%-35%. As these patients were called within 10 days of their appointments for confirmation, it represents a substantial number of those who do not attend. This is a factor, which has been identified by a number of participating Radiographers as a negative aspect of the pilot. The Radiography staff have decided to continue with the initiative as the overall reduction in waiting lists is seen as a positive service quality plan for the local GP’s and their patients.
Pilot projects re increased Mammography availability for pre theatre surgical patients and GP patients for General X-Rays to be done outside routine hours on Saturdays.

- **Proposal  Mammography**

  Rather than decrease the number of appointment slots available for routine mammography the proposal is to do two wire localisations on either Monday morning at 8 am or over Monday lunchtime between 1 and 2 pm. These patients would then be ready to go directly to theatre for their surgery.

  The proposal is to operate this pilot for six months. The number of patients done each week will be decided at a clinical conference on each Thursday prior to the Monday and as such will respond to the demand from the Breast Surgeons.

  The project commenced in March 2004 until September 2004.

- **Proposal  GP Patient General X-rays**

  The proposal is to operate the general area of the department from 9am on Saturday with a suggested workload of 45 patients per Saturday. Two radiographers who will work until the patients who have been given appointments have their examinations completed will staff the area.

  The potential benefit of this is to alleviate the extensive waiting lists for GP patients for general x-rays, and to maintain the waiting time for non-urgent requests to a minimum.

  The project commenced in April 2004 until October 2004.
There was a third proposal submitted to operate the MRI scanner on alternate Saturdays for a period of six months. The scanner was to be staffed by two radiographers where possible and a list of patients who require “routine” scans would be arranged for each Saturday.

Unfortunately this project did not start as the Radiologists felt unable to cope with the demand of additional reporting workload generated by the Saturday working.

The Radiographic Services Manager feels that this project would be worth revisiting in the future, using the experience gained in these pilots.
The following are the results of the staff questionnaire:

Number of Years Qualified

<table>
<thead>
<tr>
<th>Years</th>
<th>1-5yrs</th>
<th>5-10yrs</th>
<th>10-15 yrs</th>
<th>15-25yrs</th>
<th>&gt;25yrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>0</td>
<td>0.2</td>
<td>0.4</td>
<td>0.6</td>
<td>0.8</td>
</tr>
</tbody>
</table>

Grade at time of pilot

<table>
<thead>
<tr>
<th>Grade at time of pilot</th>
<th>Basic</th>
<th>Senior</th>
<th>Clinical Specialist/ Supt 1</th>
<th>RSM 1</th>
<th>RSM 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>0</td>
<td>0.5</td>
<td>1</td>
<td>2.5</td>
<td>2.0</td>
</tr>
</tbody>
</table>
Q4. I am satisfied with frequency of Saturdays which I work
Q5. I am satisfied with the current workload on Saturdays

Q6. I have an increased level of job satisfaction working Saturdays knowing waiting lists are shorter for patients
Q7. I am willing to work Saturdays under the same conditions

Q8. I am satisfied with the staffing levels on Saturdays
Q9. I am satisfied with new Saturday duties
Satisfaction rating results of individual questions

Question 4 gives a satisfaction rating of 72.34% that Radiographers are satisfied with the frequency of Saturdays they work.

Question 5 gives a satisfaction rating of 71.43% that Radiographers are satisfied with the current workload on Saturdays.

Question 6 gives a satisfaction rating of 85.71% that Radiographers have an increased level of job satisfaction working Saturdays knowing waiting lists are shorter for patients.

Question 7 gives a satisfaction rating of 89.29% that Radiographers are willing to work Saturdays under the same conditions.

Question 8 gives a satisfaction rating of 75.00% that Radiographers are satisfied with staffing levels on Saturdays.

Question 9 gives a satisfaction rating of 82.14% that Radiographers are satisfied with new Saturday morning duties.
UCHG
Number of Saturdays worked per month for pilot

0% worked four Saturdays per month as part of pilot
0% worked three Saturdays per month as part of pilot
100% worked one Saturday per month as part of pilot

UCHG
Number of Saturdays worked per month including pilot and on call

57% worked one Saturday per month including pilot and on call
29% worked two Saturdays per month including pilot and on call
14% worked three Saturdays per month including pilot and on call
0% worked four Saturdays per month including pilot and on call
Positive issues of this pilot identified by Radiographers

- Reduced waiting list for patients.
- Time owing for radiographers increased.
- Waiting lists shorter. Patients can attend at more convenient times.
- Waiting list reduced.
- Reduced waiting lists.
- Faster throughput on Saturday am.
- Patients very impressed with service.
- Requests were more legitimate as they tended to be screened by Radiography Services Manager.
- Reduced patient waiting times.
- Decreased pressure on in-patient waiting times.
- Easier to do busy GP list on Sat as there is no other interruptions.
- Clears backlog of patients. Everyone happy.

Negative issues of this pilot identified by Radiographers

- The uptake on Sat morning appointments by patients isn't always very good.
- No Radiologist present if opinion needed.
- Need for adequate vetting system of requests.

Additional comments by Radiographers

- Patients in general seemed very impressed with the flexibility of working at weekends allowing greater access to radiology services.
- Less waiting time in dept for patients.
- More flexible working hours for radiographer.
Conclusion

Provided courtesy of the Radiography Services Manager.

‘The Mammography pilot worked well but due to the varying nature of the workload and the very specific requirements linked to each patient’s examination. As the Mammography service is developing the need for a pilot like this in the future is unlikely due to the fact that extra staffing has been allowed for and cross cover is now available. The GP pilot proved extremely successful. The intention of the project was to tackle a waiting list that had built up of just over 400 patients waiting for plain radiography examinations. Over the period of the pilot the waiting times reduced from four months to less than two weeks. Projects of this kind would be useful in UCHG to tackle specific issues in the future as opposed to an ongoing routine part of the service.’

The total number of appointments given was 555. The number of non-attendees varied considerably through the weeks with an average of 17% for general x-rays ranging from 11-27%. As these patients were called within 10 days of their appointments for confirmation, it represents a substantial number of those who do not attend. This is a factor, which need consideration for any such future projects.
Appendix  E

Saturday Staff Satisfaction Survey
The data collated from this survey will be used in the evaluation of the Radiography Pilot Projects.

All information will be confidential.

**General Information**

*Please tick appropriate box*

5. **No. of Years Qualified**

- 1-5yrs
- 5-10yrs
- 10-15yrs
- 15-25yrs
- over25yrs

6. **Grade at time of pilot**

- Basic
- Senior
- Superintendent 1
- RSM 1
- RSM 2

7. **Please indicate the area of Saturday working, please tick appropriate box/boxes**

- Bone Density Testing
- MRI
- CT
- Ultrasound
- General X-Ray

The following relate to the change in working practices in the pilot project.

*The following statements relate to your feelings about various aspects of work in respect of the pilot study on Saturdays, following the duration of pilot. Please indicate level of agreement or disagreement with the following statements where circling 1 means that you strongly disagree and circling 5 means that you strongly agree.*
<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Undecided</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>5. I am satisfied with the frequency of Saturdays which I work</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6. I am satisfied with current workload on Saturdays</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>7. I have obtained increased level of job satisfaction from the pilot project working Saturdays, knowing waiting lists are shorter for patients</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>8. I am willing to continue working Saturdays under the same conditions</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>9. I am satisfied with staffing levels on Saturdays.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>10. I am satisfied with new Saturday duties</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

If you scored 1 or 2 on question one above please indicate your reasons below

-----------------------------------------------------

-----------------------------------------------------
Please indicate average number of Saturdays worked per month by circling appropriate number.

11. I have worked

<table>
<thead>
<tr>
<th>1 For pilot project</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 overall including oncall rosters and pilot project</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

8. Identify positive issues of this pilot

- ........................................................................................................................................................................
- ........................................................................................................................................................................
- ........................................................................................................................................................................

9. Identify negative issues of this pilot and possible solutions

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

Please feel free to add comment to any of the above questions

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

Please return completed forms to
Michele Monahan
National Coordinator Radiography Pilot projects
HSEA
63-64 Adelaide Rd
Dublin 2
Appendix F

Patient Satisfaction Surveys
The following survey was used to ascertain patient satisfaction with the service provided.

**NATIONAL RADIOGRAPHY PILOT PROJECT PATIENT SATISFACTION SURVEY**

**General Information**
Please tick appropriate box

1. **AGE**
   - 16-25yrs
   - 26-40yrs
   - 41-55yrs
   - 56-70yrs
   - 71yrs+
   - [ ] 16-25yrs
   - [ ] 26-40yrs
   - [ ] 41-55yrs
   - [ ] 56-70yrs
   - [ ] 71yrs+

2. **Sex**
   - Male
   - Female
   - [ ] Male
   - [ ] Female

**Your Appointment**
3.
**Were you satisfied that you received your appointment within a reasonable time after seeing your doctor?**

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very satisfied</td>
<td>Satisfied</td>
<td>Don’t Know</td>
<td>Dissatisfied</td>
<td>Very dissatisfied</td>
</tr>
</tbody>
</table>

4. **Were you aware of the length of time you would need to spend in the X-Ray Department?**

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Definitely Yes</td>
<td>Yes</td>
<td>Don’t Know</td>
<td>No</td>
<td>Definitely No</td>
</tr>
</tbody>
</table>

5. **On arrival at the hospital could you find the X-Ray Department easily?**

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Definitely Yes</td>
<td>Yes</td>
<td>Don’t Know</td>
<td>No</td>
<td>Definitely No</td>
</tr>
</tbody>
</table>
6. Were you satisfied with your radiological examination and standard of care today?

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very satisfied</td>
<td>Satisfied</td>
<td>No opinion</td>
<td>Dissatisfied</td>
<td>Very dissatisfied</td>
<td></td>
</tr>
</tbody>
</table>

7. Were you satisfied with the time of your appointment?

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very satisfied</td>
<td>Satisfied</td>
<td>No opinion</td>
<td>Dissatisfied</td>
<td>Very dissatisfied</td>
<td></td>
</tr>
</tbody>
</table>

8. Were you satisfied with the day of the week given for your appointment?

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very satisfied</td>
<td>Satisfied</td>
<td>No opinion</td>
<td>Dissatisfied</td>
<td>Very dissatisfied</td>
<td></td>
</tr>
</tbody>
</table>

9. Given a choice please select an appointment time most suited to your needs.

Please circle your choice.

<table>
<thead>
<tr>
<th>Day</th>
<th>Monday AM</th>
<th>Tuesday AM</th>
<th>Wednesday AM</th>
<th>Thursday AM</th>
<th>Friday AM</th>
<th>Saturday AM</th>
<th>Sunday AM</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Monday PM</td>
<td>Tuesday PM</td>
<td>Wednesday PM</td>
<td>Thursday PM</td>
<td>Friday PM</td>
<td>Saturday PM</td>
<td>Sunday PM</td>
</tr>
</tbody>
</table>

8. Please comment on any other aspects of your visit that satisfied/dissatisfied you

..........................................................................................................................
..........................................................................................................................
..........................................................................................................................
..........................................................................................................................
..........................................................................................................................
**Background**

These surveys were divided into two groups and colour coded there were 70 surveys in each group. One group was given to patients who attended for radiological examination on Saturday and the second group was given to a similar profile group who attended for the same radiological examination during 9am – 5pm Monday to Friday.

The following is a breakdown of four hospitals, the survey was analysed using the software package SPSS.

In each location the replies from the two groups will be placed one following the other to allow for ease of comparison between the two groups from each question.

One of the areas of interest in this survey is the response from patients when they were offered a choice of preferred appointment times. For example in the survey returns from Cavan the males who attended on Saturday had a 59% preferred choice on Saturday am as an appointment time, however a similar demographic of males who attended on Monday – Friday had a zero % preference for Saturday appointment times. This phenomenon repeats itself throughout the surveys, AMNCH Saturday female attendees saw a 41% preference for Saturday am appointments while only 8% of female Monday-Friday attendees share the same preference. This trend may be an area for investigation and further studies.
# AMNCH SURVEYS

## Saturday Survey

**Age Category of Respondent**

<table>
<thead>
<tr>
<th>Age Category</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;16yrs</td>
<td>1</td>
<td>1.7</td>
<td>1.7</td>
<td>1.7</td>
</tr>
<tr>
<td>16-25yrs</td>
<td>5</td>
<td>8.5</td>
<td>8.5</td>
<td>10.2</td>
</tr>
<tr>
<td>26-40yrs</td>
<td>11</td>
<td>18.6</td>
<td>18.6</td>
<td>28.8</td>
</tr>
<tr>
<td>41-55yrs</td>
<td>24</td>
<td>40.7</td>
<td>40.7</td>
<td>69.5</td>
</tr>
<tr>
<td>56-70yrs</td>
<td>10</td>
<td>16.9</td>
<td>16.9</td>
<td>86.4</td>
</tr>
<tr>
<td>&gt;70yrs</td>
<td>8</td>
<td>13.6</td>
<td>13.6</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>59</strong></td>
<td><strong>100.0</strong></td>
<td><strong>100.0</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

## Monday - Friday Survey

**Age Category of Respondent**

<table>
<thead>
<tr>
<th>Age Category</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>16-25yrs</td>
<td>7</td>
<td>11.9</td>
<td>11.9</td>
<td>11.9</td>
</tr>
<tr>
<td>26-40yrs</td>
<td>18</td>
<td>30.5</td>
<td>30.5</td>
<td>42.4</td>
</tr>
<tr>
<td>41-55yrs</td>
<td>19</td>
<td>32.2</td>
<td>32.2</td>
<td>74.6</td>
</tr>
<tr>
<td>56-70yrs</td>
<td>12</td>
<td>20.3</td>
<td>20.3</td>
<td>94.9</td>
</tr>
<tr>
<td>&gt;70yrs</td>
<td>3</td>
<td>5.1</td>
<td>5.1</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>59</strong></td>
<td><strong>100.0</strong></td>
<td><strong>100.0</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>
### Saturday Survey

#### Gender of Respondent

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>29</td>
<td>49.2</td>
<td>49.2</td>
<td>49.2</td>
</tr>
<tr>
<td>Female</td>
<td>30</td>
<td>50.8</td>
<td>50.8</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>59</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

### Monday - Friday Survey

#### Gender of Respondent

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>17</td>
<td>28.8</td>
<td>28.8</td>
<td>28.8</td>
</tr>
<tr>
<td>Female</td>
<td>42</td>
<td>71.2</td>
<td>71.2</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>59</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>
Saturday Survey

Gender of Respondent

Monday-Friday Survey

Gender of Respondent
Saturday Survey

Were you satisfied that you received your appointment within a reasonable time after seeing your doctor?

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid Very Dissatisfied</td>
<td>3</td>
<td>5.1</td>
<td>5.1</td>
<td>5.1</td>
</tr>
<tr>
<td>Dissatisfied</td>
<td>12</td>
<td>20.3</td>
<td>20.3</td>
<td>25.4</td>
</tr>
<tr>
<td>No Opinion</td>
<td>1</td>
<td>1.7</td>
<td>1.7</td>
<td>27.1</td>
</tr>
<tr>
<td>Satisfied</td>
<td>31</td>
<td>52.5</td>
<td>52.5</td>
<td>79.7</td>
</tr>
<tr>
<td>Very Satisfied</td>
<td>12</td>
<td>20.3</td>
<td>20.3</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>59</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Monday-Friday Survey

Were you satisfied that you received your appointment within a reasonable time after seeing your doctor?

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid Very Dissatisfied</td>
<td>5</td>
<td>8.5</td>
<td>8.5</td>
<td>8.5</td>
</tr>
<tr>
<td>Dissatisfied</td>
<td>2</td>
<td>3.4</td>
<td>3.4</td>
<td>11.9</td>
</tr>
<tr>
<td>No Opinion</td>
<td>2</td>
<td>3.4</td>
<td>3.4</td>
<td>15.3</td>
</tr>
<tr>
<td>Satisfied</td>
<td>19</td>
<td>32.2</td>
<td>32.2</td>
<td>47.5</td>
</tr>
<tr>
<td>Very Satisfied</td>
<td>31</td>
<td>52.5</td>
<td>52.5</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>59</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>
Saturday Survey
Were you satisfied that you received your appointment within a reasonable time after seeing your doctor?

Monday-Friday Survey
Were you satisfied that you received your appointment within a reasonable time after seeing your doctor?
Saturday Survey

Were you aware of the length of time you would need to spend in the X-Ray Dept?

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Definitely No</td>
<td>2</td>
<td>3.4</td>
<td>3.4</td>
<td>3.4</td>
</tr>
<tr>
<td>No</td>
<td>20</td>
<td>33.9</td>
<td>33.9</td>
<td>37.3</td>
</tr>
<tr>
<td>Don’t Know</td>
<td>14</td>
<td>23.7</td>
<td>23.7</td>
<td>61.0</td>
</tr>
<tr>
<td>Yes</td>
<td>19</td>
<td>32.2</td>
<td>32.2</td>
<td>93.2</td>
</tr>
<tr>
<td>Definitely Yes</td>
<td>4</td>
<td>6.8</td>
<td>6.8</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>59</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Monday-Friday Survey

Were you aware of the length of time you would need to spend in the X-Ray Dept?

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Definitely No</td>
<td>2</td>
<td>3.4</td>
<td>3.4</td>
<td>3.4</td>
</tr>
<tr>
<td>No</td>
<td>24</td>
<td>40.7</td>
<td>40.7</td>
<td>44.1</td>
</tr>
<tr>
<td>Don’t Know</td>
<td>7</td>
<td>11.9</td>
<td>11.9</td>
<td>55.9</td>
</tr>
<tr>
<td>Yes</td>
<td>21</td>
<td>35.6</td>
<td>35.6</td>
<td>91.5</td>
</tr>
<tr>
<td>Definitely Yes</td>
<td>5</td>
<td>8.5</td>
<td>8.5</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>59</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>
Saturday Survey
Were you aware of the length of time you would need to spend in the X-Ray Dept?

Monday-Friday Survey
Were you aware of the length of time you would need to spend in the X-Ray Dept?
### Saturday Survey

**On arrival could you find the X-Ray Dept. easily?**

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Definitely No</td>
<td>1</td>
<td>1.7</td>
<td>1.7</td>
<td>1.7</td>
</tr>
<tr>
<td>No</td>
<td>5</td>
<td>8.5</td>
<td>8.5</td>
<td>10.2</td>
</tr>
<tr>
<td>Don’t Know</td>
<td>1</td>
<td>1.7</td>
<td>1.7</td>
<td>11.9</td>
</tr>
<tr>
<td>Yes</td>
<td>42</td>
<td>71.2</td>
<td>71.2</td>
<td>83.1</td>
</tr>
<tr>
<td>Definitely Yes</td>
<td>10</td>
<td>16.9</td>
<td>16.9</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>59</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

### Monday-Friday Survey

**On arrival could you find the X-Ray Dept. easily?**

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>2</td>
<td>3.4</td>
<td>3.4</td>
<td>3.4</td>
</tr>
<tr>
<td>Yes</td>
<td>44</td>
<td>74.6</td>
<td>74.6</td>
<td>78.0</td>
</tr>
<tr>
<td>Definitely Yes</td>
<td>13</td>
<td>22.0</td>
<td>22.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>59</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>
Saturday Survey

On arrival could you find the X-Ray Dept. easily?

[Pie chart showing the distribution of responses: Definitely Yes, Yes, Don't Know, No, Definitely No]

---

Monday-Friday Survey

On arrival could you find the X-Ray Dept. easily?

[Pie chart showing the distribution of responses: No, Definitely Yes, Yes, Don't Know]
**Saturday Survey**

Were you satisfied with your radiological examination and standard of care today?

<table>
<thead>
<tr>
<th>Valid</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Dissatisfied</td>
<td>2</td>
<td>3.4</td>
<td>3.4</td>
<td>3.4</td>
</tr>
<tr>
<td>No Opinion</td>
<td>4</td>
<td>6.8</td>
<td>6.8</td>
<td>10.2</td>
</tr>
<tr>
<td>Satisfied</td>
<td>21</td>
<td>35.6</td>
<td>35.6</td>
<td>45.8</td>
</tr>
<tr>
<td>Very Satisfied</td>
<td>32</td>
<td>54.2</td>
<td>54.2</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>59</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

**Monday-Friday Survey**

Were you satisfied with your radiological examination and standard of care today?

<table>
<thead>
<tr>
<th>Valid</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Dissatisfied</td>
<td>1</td>
<td>1.7</td>
<td>1.7</td>
<td>1.7</td>
</tr>
<tr>
<td>No Opinion</td>
<td>12</td>
<td>20.3</td>
<td>20.3</td>
<td>22.0</td>
</tr>
<tr>
<td>Satisfied</td>
<td>21</td>
<td>35.6</td>
<td>35.6</td>
<td>57.6</td>
</tr>
<tr>
<td>Very Satisfied</td>
<td>25</td>
<td>42.4</td>
<td>42.4</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>59</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>
Saturday Survey
Were you satisfied with your radiological examination and standard of care today?

Monday-Friday Survey
Were you satisfied with your radiological examination and standard of care today?
## Saturday Survey

Were you satisfied with your appointment time

<table>
<thead>
<tr>
<th>Valid</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Dissatisfied</td>
<td>3</td>
<td>5.1</td>
<td>5.1</td>
<td>5.1</td>
</tr>
<tr>
<td>Dissatisfied</td>
<td>3</td>
<td>5.1</td>
<td>5.1</td>
<td>10.2</td>
</tr>
<tr>
<td>No Opinion</td>
<td>2</td>
<td>3.4</td>
<td>3.4</td>
<td>13.6</td>
</tr>
<tr>
<td>Satisfied</td>
<td>30</td>
<td>50.8</td>
<td>50.8</td>
<td>64.4</td>
</tr>
<tr>
<td>Very Satisfied</td>
<td>21</td>
<td>35.6</td>
<td>35.6</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>59</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

## Monday-Friday Survey

Were you satisfied with your appointment time

<table>
<thead>
<tr>
<th>Valid</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Dissatisfied</td>
<td>1</td>
<td>1.7</td>
<td>1.7</td>
<td>1.7</td>
</tr>
<tr>
<td>No Opinion</td>
<td>2</td>
<td>3.4</td>
<td>3.4</td>
<td>5.1</td>
</tr>
<tr>
<td>Satisfied</td>
<td>32</td>
<td>54.2</td>
<td>54.2</td>
<td>59.3</td>
</tr>
<tr>
<td>Very Satisfied</td>
<td>24</td>
<td>40.7</td>
<td>40.7</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>59</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>
Saturday Survey

Were you satisfied with your appointment time

Monday-Friday Survey

Were you satisfied with your appointment time
### Saturday Survey

**Were you satisfied with the day of the week given for your appointment**

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very Dissatisfied</td>
<td>3</td>
<td>5.1</td>
<td>5.1</td>
<td>5.1</td>
</tr>
<tr>
<td>Dissatisfied</td>
<td>1</td>
<td>1.7</td>
<td>1.7</td>
<td>6.8</td>
</tr>
<tr>
<td>No Opinion</td>
<td>3</td>
<td>5.1</td>
<td>5.1</td>
<td>11.9</td>
</tr>
<tr>
<td>Satisfied</td>
<td>25</td>
<td>42.4</td>
<td>42.4</td>
<td>54.2</td>
</tr>
<tr>
<td>Very Satisfied</td>
<td>27</td>
<td>45.8</td>
<td>45.8</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>59</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

### Monday-Friday Survey

**Were you satisfied with the day of the week given for your appointment**

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very Dissatisfied</td>
<td>1</td>
<td>1.7</td>
<td>1.7</td>
<td>1.7</td>
</tr>
<tr>
<td>No Opinion</td>
<td>2</td>
<td>3.4</td>
<td>3.4</td>
<td>5.1</td>
</tr>
<tr>
<td>Satisfied</td>
<td>29</td>
<td>49.2</td>
<td>49.2</td>
<td>54.2</td>
</tr>
<tr>
<td>Very Satisfied</td>
<td>27</td>
<td>45.8</td>
<td>45.8</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>59</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>
Saturday Survey

Were you satisfied with the day of the week given for your appointment

Monday-Friday Survey

Were you satisfied with the day of the week given for your appointment
Saturday Survey Patients Choice of Appointment

Choice of Day Time AMNCH Sat survey

- Friam: 10%
- Fripm: 2%
- Monam: 8%
- Monpm: 0%
- Satam: 45%
- Satpm: 3%
- Sunam: 5%
- Sunpm: 1%
- Thursam: 9%
- Thurspm: 1%
- Tuesam: 8%
- Tuespm: 0%
- Wedam: 8%
- Wedpm: 0%

Monday-Friday Survey Patients Choice of Appointment

Choice of Day Time AMNCH Mon-Fri survey

- Friam: 9%
- Fripm: 4%
- Monam: 20%
- Monpm: 6%
- Satam: 13%
- Satpm: 6%
- Sunam: 5%
- Sunpm: 3%
- Thursam: 2%
- Thurspm: 4%
- Tuesam: 6%
- Tuespm: 6%
- Wedam: 9%
- Wedpm: 9%
Saturday Survey Male Patients Choice of Appointment

Male Choice of Day/Time Amnch Sat Survey

Sunpm 0% Satpm 2% Sunam 7% Thursam 7% Thurspm 0% Tuesam 7% Wedam 7% Wedpm 0% Friam 9% Fripm 2%

Monam 9% Monpm 0% Satam 50% Satpm 2%

Monday-Friday Survey Male Patients Choice of Appointment

Male Choice of Day/Time Amnch Mon-Fri Survey

Sunpm 8% Satpm 9% Satam 8% Sunam 8% Thursam 3% Thurspm 3% Tuesam 14% Monpm 8% Monam 12% Monpm 8% Fripm 5% Friam 8% Wedpm 5% Wedam 5%
Saturday Survey Female Patients Choice of Appointment

Female Choice of Day/Time AMNCH Sat Survey

- Sunam: 2%
- Sunpm: 2%
- Satam: 2%
- Satpm: 5%
- Wedam: 9%
- Wedpm: 0%
- Tuesam: 9%
- Tuespm: 0%
- Thursam: 12%
- Thurspm: 2%
- Friam: 41%
- Fripm: 2%
- Monam: 7%
- Monpm: 0%

Monday-Friday Survey Female Patients Choice of Appointment

Female Choice of Day/Time AMNCH Mon-Fri Survey

- Sunam: 5%
- Sunpm: 3%
- Satam: 8%
- Satpm: 3%
- Wedam: 7%
- Wedpm: 10%
- Tuesam: 3%
- Tuespm: 7%
- Thursam: 12%
- Thurspm: 2%
- Friam: 3%
- Fripm: 10%
- Monam: 25%
- Monpm: 0%
Merlin Park Surveys

Saturday Survey

<table>
<thead>
<tr>
<th>Age Category of Respondent</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26-40yrs</td>
<td>2</td>
<td>2.9</td>
<td>2.9</td>
<td>2.9</td>
</tr>
<tr>
<td>41-55yrs</td>
<td>57</td>
<td>81.4</td>
<td>81.4</td>
<td>84.3</td>
</tr>
<tr>
<td>56-70yrs</td>
<td>11</td>
<td>15.7</td>
<td>15.7</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>70</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Monday-Friday Survey

<table>
<thead>
<tr>
<th>Age Category of Respondent</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16-25yrs</td>
<td>1</td>
<td>1.5</td>
<td>1.5</td>
<td>1.5</td>
</tr>
<tr>
<td>26-40yrs</td>
<td>4</td>
<td>6.0</td>
<td>6.0</td>
<td>7.5</td>
</tr>
<tr>
<td>41-55yrs</td>
<td>45</td>
<td>67.2</td>
<td>67.2</td>
<td>74.6</td>
</tr>
<tr>
<td>56-70yrs</td>
<td>17</td>
<td>25.4</td>
<td>25.4</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>67</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>
Saturday Survey

Age Category of Respondent

Monday-Friday Survey

Age Category of Respondent
### Saturday Survey

**Gender of Respondent**

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td>Female</td>
<td>70</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

### Monday-Friday Survey

**Gender of Respondent**

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td>Female</td>
<td>67</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Saturday Survey

Were you satisfied that you received your appointment within a reasonable time after seeing your doctor?

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Dissatisfied</td>
<td>11</td>
<td>15.7</td>
<td>15.7</td>
<td>15.7</td>
</tr>
<tr>
<td>Dissatisfied</td>
<td>21</td>
<td>30.0</td>
<td>30.0</td>
<td>45.7</td>
</tr>
<tr>
<td>No Opinion</td>
<td>7</td>
<td>10.0</td>
<td>10.0</td>
<td>55.7</td>
</tr>
<tr>
<td>Satisfied</td>
<td>17</td>
<td>24.3</td>
<td>24.3</td>
<td>80.0</td>
</tr>
<tr>
<td>Very Satisfied</td>
<td>14</td>
<td>20.0</td>
<td>20.0</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>70</strong></td>
<td><strong>100.0</strong></td>
<td><strong>100.0</strong></td>
<td></td>
</tr>
</tbody>
</table>

Monday-Friday Survey

Were you satisfied that you received your appointment within a reasonable time after seeing your doctor?

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Dissatisfied</td>
<td>17</td>
<td>25.4</td>
<td>25.4</td>
<td>25.4</td>
</tr>
<tr>
<td>Dissatisfied</td>
<td>21</td>
<td>31.3</td>
<td>31.3</td>
<td>56.7</td>
</tr>
<tr>
<td>No Opinion</td>
<td>4</td>
<td>6.0</td>
<td>6.0</td>
<td>62.7</td>
</tr>
<tr>
<td>Satisfied</td>
<td>14</td>
<td>20.9</td>
<td>20.9</td>
<td>83.6</td>
</tr>
<tr>
<td>Very Satisfied</td>
<td>11</td>
<td>16.4</td>
<td>16.4</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>67</strong></td>
<td><strong>100.0</strong></td>
<td><strong>100.0</strong></td>
<td></td>
</tr>
</tbody>
</table>
Saturday Survey
Were you satisfied that you received your appointment within a reasonable time after seeing your doctor?

Monday-Friday Survey
Were you satisfied that you received your appointment within a reasonable time after seeing your doctor?
### Saturday Survey

Were you aware of the length of time you would need to spend in the X-Ray Dept?

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Definitely No</td>
<td>2</td>
<td>2.9</td>
<td>2.9</td>
<td>2.9</td>
</tr>
<tr>
<td>No</td>
<td>24</td>
<td>34.3</td>
<td>34.3</td>
<td>37.1</td>
</tr>
<tr>
<td>Don’t Know</td>
<td>6</td>
<td>8.6</td>
<td>8.6</td>
<td>45.7</td>
</tr>
<tr>
<td>Yes</td>
<td>29</td>
<td>41.4</td>
<td>41.4</td>
<td>87.1</td>
</tr>
<tr>
<td>Definitely Yes</td>
<td>9</td>
<td>12.9</td>
<td>12.9</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>70</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

### Monday-Friday Survey

Were you aware of the length of time you would need to spend in the X-Ray Dept?

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Definitely No</td>
<td>2</td>
<td>3.0</td>
<td>3.0</td>
<td>3.0</td>
</tr>
<tr>
<td>No</td>
<td>11</td>
<td>16.4</td>
<td>16.4</td>
<td>19.4</td>
</tr>
<tr>
<td>Don’t Know</td>
<td>3</td>
<td>4.5</td>
<td>4.5</td>
<td>23.9</td>
</tr>
<tr>
<td>Yes</td>
<td>37</td>
<td>55.2</td>
<td>55.2</td>
<td>79.1</td>
</tr>
<tr>
<td>Definitely Yes</td>
<td>14</td>
<td>20.9</td>
<td>20.9</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>67</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>
Saturday Survey
Were you aware of the length of time you would need to spend in the X-Ray Dept?

Monday-Friday Survey
Were you aware of the length of time you would need to spend in the X-Ray Dept?
### Saturday Survey

**On arrival could you find the X-Ray Dept. easily?**

<table>
<thead>
<tr>
<th>Valid</th>
<th>Definitely No</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No</td>
<td>1</td>
<td>1.4</td>
<td>1.4</td>
<td>1.4</td>
</tr>
<tr>
<td></td>
<td>Don’t Know</td>
<td>1</td>
<td>1.4</td>
<td>1.4</td>
<td>2.9</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>42</td>
<td>60.0</td>
<td>60.0</td>
<td>62.9</td>
</tr>
<tr>
<td></td>
<td>Definitely Yes</td>
<td>26</td>
<td>37.1</td>
<td>37.1</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>70</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

### Monday-Friday Survey

**On arrival could you find the X-Ray Dept. easily?**

<table>
<thead>
<tr>
<th>Valid</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>5</td>
<td>7.5</td>
<td>7.5</td>
<td>7.5</td>
</tr>
<tr>
<td>Don’t Know</td>
<td>2</td>
<td>3.0</td>
<td>3.0</td>
<td>10.4</td>
</tr>
<tr>
<td>Yes</td>
<td>41</td>
<td>61.2</td>
<td>61.2</td>
<td>71.6</td>
</tr>
<tr>
<td>Definitely Yes</td>
<td>19</td>
<td>28.4</td>
<td>28.4</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>67</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>
Saturday Survey

On arrival could you find the X-Ray Dept. easily?

Monday-Friday Survey

On arrival could you find the X-Ray Dept. easily?
Saturday Survey

Were you satisfied with your radiological examination and standard of care today?

<table>
<thead>
<tr>
<th>Valid</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Dissatisfied</td>
<td>4</td>
<td>5.7</td>
<td>5.7</td>
<td>5.7</td>
</tr>
<tr>
<td>No Opinion</td>
<td>4</td>
<td>5.7</td>
<td>5.7</td>
<td>11.4</td>
</tr>
<tr>
<td>Satisfied</td>
<td>11</td>
<td>15.7</td>
<td>15.7</td>
<td>27.1</td>
</tr>
<tr>
<td>Very Satisfied</td>
<td>51</td>
<td>72.9</td>
<td>72.9</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>70</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Monday-Friday Survey

Were you satisfied with your radiological examination and standard of care today?

<table>
<thead>
<tr>
<th>Valid</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Dissatisfied</td>
<td>3</td>
<td>4.5</td>
<td>4.5</td>
<td>4.5</td>
</tr>
<tr>
<td>No Opinion</td>
<td>3</td>
<td>4.5</td>
<td>4.5</td>
<td>9.0</td>
</tr>
<tr>
<td>Satisfied</td>
<td>14</td>
<td>20.9</td>
<td>20.9</td>
<td>29.9</td>
</tr>
<tr>
<td>Very Satisfied</td>
<td>47</td>
<td>70.1</td>
<td>70.1</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>67</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>
Saturday Survey

Were you satisfied with your radiological examination and standard of care today?

Monday-Friday Survey

Were you satisfied with your radiological examination and standard of care today?
Saturday Survey Patients Choice of Appointment

Choice of Day/Time Merlin Park Sat survey

- Satam: 60%
- Satpm: 3%
- Monam: 7%
- Monpm: 3%
- Friam: 3%
- Fripm: 0%
- Wedam: 7%
- Wedpm: 1%
- Thursam: 3%
- Thurspm: 0%
- Tuesam: 10%
- Tuespm: 3%
- Wedam: 7%
- Wedpm: 1%
- Friam: 3%
- Fripm: 0%
- Monam: 7%
- Monpm: 3%

Monday-Friday Survey Patients Choice of Appointment

Choice of Day/Time Merlin Park Mon-Fri survey

- Monam: 22%
- Monpm: 4%
- Friam: 14%
- Fripm: 4%
- Wedam: 12%
- Wedpm: 4%
- Tuesam: 12%
- Tuespm: 6%
- Thursam: 1%
- Thurspm: 1%
- Satam: 9%
- Satpm: 1%
- Sunam: 0%
- Sunpm: 0%

Saturday Survey Female Patients Choice of Appointment

Female Choice of Day/Time Merlin Park Sat Survey

Monday-Friday Survey Female Patients Choice of Appointment

Female Choice of Day/Time Merlin Park Mon-Fri Survey
Saturday Survey

### Age Category of Respondent

<table>
<thead>
<tr>
<th>Age Category of Respondent</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16-25yrs</td>
<td>7</td>
<td>10.8</td>
<td>10.8</td>
<td>10.8</td>
</tr>
<tr>
<td>26-40yrs</td>
<td>14</td>
<td>21.5</td>
<td>21.5</td>
<td>32.3</td>
</tr>
<tr>
<td>41-55yrs</td>
<td>17</td>
<td>26.2</td>
<td>26.2</td>
<td>58.5</td>
</tr>
<tr>
<td>56-70yrs</td>
<td>21</td>
<td>32.3</td>
<td>32.3</td>
<td>90.8</td>
</tr>
<tr>
<td>&gt;70yrs</td>
<td>6</td>
<td>9.2</td>
<td>9.2</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>65</td>
<td>100.0</td>
<td></td>
<td>100.0</td>
</tr>
</tbody>
</table>

Monday – Friday Survey

### Age Category of Respondent

<table>
<thead>
<tr>
<th>Age Category of Respondent</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16-25yrs</td>
<td>7</td>
<td>10.4</td>
<td>10.4</td>
<td>10.4</td>
</tr>
<tr>
<td>26-40yrs</td>
<td>10</td>
<td>14.9</td>
<td>14.9</td>
<td>25.4</td>
</tr>
<tr>
<td>41-55yrs</td>
<td>28</td>
<td>41.8</td>
<td>41.8</td>
<td>67.2</td>
</tr>
<tr>
<td>56-70yrs</td>
<td>14</td>
<td>20.9</td>
<td>20.9</td>
<td>88.1</td>
</tr>
<tr>
<td>&gt;70yrs</td>
<td>8</td>
<td>11.9</td>
<td>11.9</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>67</td>
<td>100.0</td>
<td></td>
<td>100.0</td>
</tr>
</tbody>
</table>
Saturday Survey

Age Category of Respondent

Monday – Friday Survey

Age Category of Respondent
### Saturday Survey

**Gender of Respondent**

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>20</td>
<td>30.8</td>
<td>30.8</td>
<td>30.8</td>
</tr>
<tr>
<td>Female</td>
<td>45</td>
<td>69.2</td>
<td>69.2</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>65</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

### Monday – Friday Survey

**Gender of Respondent**

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>21</td>
<td>31.3</td>
<td>31.3</td>
<td>31.3</td>
</tr>
<tr>
<td>Female</td>
<td>46</td>
<td>68.7</td>
<td>68.7</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>67</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>
Saturday Survey

Were you satisfied that you received your appointment within a reasonable time after seeing your doctor?

<table>
<thead>
<tr>
<th>Valid</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Dissatisfied</td>
<td>5</td>
<td>7.7</td>
<td>7.7</td>
<td>7.7</td>
</tr>
<tr>
<td>Dissatisfied</td>
<td>9</td>
<td>13.8</td>
<td>13.8</td>
<td>21.5</td>
</tr>
<tr>
<td>No Opinion</td>
<td>2</td>
<td>3.1</td>
<td>3.1</td>
<td>24.6</td>
</tr>
<tr>
<td>Satisfied</td>
<td>31</td>
<td>47.7</td>
<td>47.7</td>
<td>72.3</td>
</tr>
<tr>
<td>Very Satisfied</td>
<td>18</td>
<td>27.7</td>
<td>27.7</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>65</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Monday – Friday Survey

Were you satisfied that you received your appointment within a reasonable time after seeing your doctor?

<table>
<thead>
<tr>
<th>Valid</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Dissatisfied</td>
<td>5</td>
<td>7.5</td>
<td>7.5</td>
<td>7.5</td>
</tr>
<tr>
<td>Dissatisfied</td>
<td>8</td>
<td>11.9</td>
<td>11.9</td>
<td>19.4</td>
</tr>
<tr>
<td>No Opinion</td>
<td>3</td>
<td>4.5</td>
<td>4.5</td>
<td>23.9</td>
</tr>
<tr>
<td>Satisfied</td>
<td>17</td>
<td>25.4</td>
<td>25.4</td>
<td>49.3</td>
</tr>
<tr>
<td>Very Satisfied</td>
<td>34</td>
<td>50.7</td>
<td>50.7</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>67</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>
Saturday Survey

Were you satisfied that you received your appointment within a reasonable time after seeing your doctor?

Monday – Friday Survey

Were you satisfied that you received your appointment within a reasonable time after seeing your doctor?
Saturday Survey

Were you aware of the length of time you would need to spend in the X-Ray Dept?

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Definitely No</td>
<td>1</td>
<td>1.5</td>
<td>1.5</td>
<td>1.5</td>
</tr>
<tr>
<td>No</td>
<td>27</td>
<td>41.5</td>
<td>41.5</td>
<td>43.1</td>
</tr>
<tr>
<td>Don't Know</td>
<td>6</td>
<td>9.2</td>
<td>9.2</td>
<td>52.3</td>
</tr>
<tr>
<td>Yes</td>
<td>27</td>
<td>41.5</td>
<td>41.5</td>
<td>93.8</td>
</tr>
<tr>
<td>Definitely Yes</td>
<td>4</td>
<td>6.2</td>
<td>6.2</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>65</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Monday – Friday Survey

Were you aware of the length of time you would need to spend in the X-Ray Dept?

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Definitely No</td>
<td>4</td>
<td>6.0</td>
<td>6.0</td>
<td>6.0</td>
</tr>
<tr>
<td>No</td>
<td>20</td>
<td>29.9</td>
<td>29.9</td>
<td>35.8</td>
</tr>
<tr>
<td>Don't Know</td>
<td>12</td>
<td>17.9</td>
<td>17.9</td>
<td>53.7</td>
</tr>
<tr>
<td>Yes</td>
<td>22</td>
<td>32.8</td>
<td>32.8</td>
<td>86.6</td>
</tr>
<tr>
<td>Definitely Yes</td>
<td>9</td>
<td>13.4</td>
<td>13.4</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>67</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>
Saturday Survey

Were you aware of the length of time you would need to spend in the X-Ray Dept?

Monday – Friday Survey

Were you aware of the length of time you would need to spend in the X-Ray Dept?
## Saturday Survey

On arrival could you find the X-Ray Dept. easily?

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid Definite No</td>
<td>1</td>
<td>1.5</td>
<td>1.5</td>
<td>1.5</td>
</tr>
<tr>
<td>No</td>
<td>15</td>
<td>23.1</td>
<td>23.1</td>
<td>24.6</td>
</tr>
<tr>
<td>Yes</td>
<td>41</td>
<td>63.1</td>
<td>63.1</td>
<td>87.7</td>
</tr>
<tr>
<td>Definitely Yes</td>
<td>8</td>
<td>12.3</td>
<td>12.3</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>65</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

## Monday – Friday Survey

On arrival could you find the X-Ray Dept. easily?

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Definitely No</td>
<td>1</td>
<td>1.5</td>
<td>1.5</td>
<td>1.5</td>
</tr>
<tr>
<td>No</td>
<td>6</td>
<td>9.0</td>
<td>9.0</td>
<td>10.4</td>
</tr>
<tr>
<td>Don't Know</td>
<td>2</td>
<td>3.0</td>
<td>3.0</td>
<td>13.4</td>
</tr>
<tr>
<td>Yes</td>
<td>45</td>
<td>67.2</td>
<td>67.2</td>
<td>80.6</td>
</tr>
<tr>
<td>Definitely Yes</td>
<td>13</td>
<td>19.4</td>
<td>19.4</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>67</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>
Saturday Survey

On arrival could you find the X-Ray Dept. easily?

Monday – Friday Survey

On arrival could you find the X-Ray Dept. easily?
Saturday Survey

Were you satisfied with your radiological examination and standard of care today?

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid No Opinion</td>
<td>14</td>
<td>21.5</td>
<td>21.5</td>
<td>21.5</td>
</tr>
<tr>
<td>Satisfied</td>
<td>14</td>
<td>21.5</td>
<td>21.5</td>
<td>43.1</td>
</tr>
<tr>
<td>Very Satisfied</td>
<td>37</td>
<td>56.9</td>
<td>56.9</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>65</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Monday – Friday Survey

Were you satisfied with your radiological examination and standard of care today?

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid Very Dissatisfied</td>
<td>1</td>
<td>1.5</td>
<td>1.5</td>
<td>1.5</td>
</tr>
<tr>
<td>No Opinion</td>
<td>1</td>
<td>1.5</td>
<td>1.5</td>
<td>3.0</td>
</tr>
<tr>
<td>Satisfied</td>
<td>19</td>
<td>28.4</td>
<td>28.4</td>
<td>31.3</td>
</tr>
<tr>
<td>Very Satisfied</td>
<td>46</td>
<td>68.7</td>
<td>68.7</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>67</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>
Saturday Survey

Were you satisfied with your radiological examination and standard of care today?

- No Opinion
- Satisfied
- Very Satisfied

Monday – Friday Survey

Were you satisfied with your radiological examination and standard of care today?

- Very Dissatisfied
- No Opinion
- Satisfied
- Very Satisfied
## Saturday Survey

Were you satisfied with your appointment time

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid Very Dissatisfied</td>
<td>2</td>
<td>3.1</td>
<td>3.1</td>
<td>3.1</td>
</tr>
<tr>
<td>No Opinion</td>
<td>6</td>
<td>9.2</td>
<td>9.2</td>
<td>12.3</td>
</tr>
<tr>
<td>Satisfied</td>
<td>25</td>
<td>38.5</td>
<td>38.5</td>
<td>50.8</td>
</tr>
<tr>
<td>Very Satisfied</td>
<td>32</td>
<td>49.2</td>
<td>49.2</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>65</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

## Monday – Friday Survey

Were you satisfied with your appointment time

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid Very Dissatisfied</td>
<td>1</td>
<td>1.5</td>
<td>1.5</td>
<td>1.5</td>
</tr>
<tr>
<td>Dissatisfied</td>
<td>1</td>
<td>1.5</td>
<td>1.5</td>
<td>3.0</td>
</tr>
<tr>
<td>No Opinion</td>
<td>4</td>
<td>6.0</td>
<td>6.0</td>
<td>9.0</td>
</tr>
<tr>
<td>Satisfied</td>
<td>31</td>
<td>46.3</td>
<td>46.3</td>
<td>55.2</td>
</tr>
<tr>
<td>Very Satisfied</td>
<td>30</td>
<td>44.8</td>
<td>44.8</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>67</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>
Saturday Survey

Were you satisfied with your appointment time

Monday – Friday Survey

Were you satisfied with your appointment time
**Saturday Survey**

Were you satisfied with the day of the week given for your appointment

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very Dissatisfied</td>
<td>2</td>
<td>3.1</td>
<td>3.1</td>
<td>3.1</td>
</tr>
<tr>
<td>Dissatisfied</td>
<td>1</td>
<td>1.5</td>
<td>1.5</td>
<td>4.6</td>
</tr>
<tr>
<td>No Opinion</td>
<td>6</td>
<td>9.2</td>
<td>9.2</td>
<td>13.8</td>
</tr>
<tr>
<td>Satisfied</td>
<td>24</td>
<td>36.9</td>
<td>36.9</td>
<td>50.8</td>
</tr>
<tr>
<td>Very Satisfied</td>
<td>32</td>
<td>49.2</td>
<td>49.2</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>65</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

**Monday – Friday Survey**

Were you satisfied with the day of the week given for your appointment

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No Opinion</td>
<td>6</td>
<td>9.0</td>
<td>9.0</td>
<td>10.4</td>
</tr>
<tr>
<td>Satisfied</td>
<td>29</td>
<td>43.3</td>
<td>43.3</td>
<td>53.7</td>
</tr>
<tr>
<td>Very Satisfied</td>
<td>31</td>
<td>46.3</td>
<td>46.3</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>67</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>
Saturday Survey

Were you satisfied with the day of the week given for your appointment

Monday – Friday Survey

Were you satisfied with the day of the week given for your appointment
Saturday Survey Patients Choice of Appointment

Choice of Day/Time Mater Sat Survey

Monday-Friday Survey Patients Choice of Appointment

Choice of Day/Time Mater Mon- Fri Survey
Saturday Survey Male Patients Choice of Appointment

Male Choice of Day/Time Mater Sat Survey

Monday-Friday Survey Male Patients Choice of Appointment

Male Choice of Day/Time Mater Mon-Fri Survey
Saturday Survey Female Patients Choice of Appointment

Female Choice of Day/Time Mater Sat Survey

Monday-Friday Survey Female Patients Choice of Appointment

Female Choice of Day/Time Mater Mon-Fri Survey
# Cavan Surveys

## Saturday Survey

**Age Category of Respondent**

<table>
<thead>
<tr>
<th>Valid</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;16yrs</td>
<td>1</td>
<td>1.7</td>
<td>1.7</td>
<td>1.7</td>
</tr>
<tr>
<td>16-25yrs</td>
<td>5</td>
<td>8.3</td>
<td>8.3</td>
<td>10.0</td>
</tr>
<tr>
<td>26-40yrs</td>
<td>18</td>
<td>30.0</td>
<td>30.0</td>
<td>40.0</td>
</tr>
<tr>
<td>41-55yrs</td>
<td>15</td>
<td>25.0</td>
<td>25.0</td>
<td>65.0</td>
</tr>
<tr>
<td>56-70yrs</td>
<td>14</td>
<td>23.3</td>
<td>23.3</td>
<td>88.3</td>
</tr>
<tr>
<td>&gt;70yrs</td>
<td>7</td>
<td>11.7</td>
<td>11.7</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>60</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

## Monday – Friday Survey

**Age Category of Respondent**

<table>
<thead>
<tr>
<th>Valid</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;16yrs</td>
<td>1</td>
<td>1.7</td>
<td>1.7</td>
<td>1.7</td>
</tr>
<tr>
<td>16-25yrs</td>
<td>10</td>
<td>17.2</td>
<td>17.2</td>
<td>19.0</td>
</tr>
<tr>
<td>26-40yrs</td>
<td>10</td>
<td>17.2</td>
<td>17.2</td>
<td>36.2</td>
</tr>
<tr>
<td>41-55yrs</td>
<td>15</td>
<td>25.9</td>
<td>25.9</td>
<td>62.1</td>
</tr>
<tr>
<td>56-70yrs</td>
<td>15</td>
<td>25.9</td>
<td>25.9</td>
<td>87.9</td>
</tr>
<tr>
<td>&gt;70yrs</td>
<td>7</td>
<td>12.1</td>
<td>12.1</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>58</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>
Saturday Survey

Age Category of Respondent

Monday – Friday Survey

Age Category of Respondent
### Saturday Survey

#### Gender of Respondent

<table>
<thead>
<tr>
<th>Gender</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>17</td>
<td>28.3</td>
<td>28.3</td>
<td>28.3</td>
</tr>
<tr>
<td>Female</td>
<td>43</td>
<td>71.7</td>
<td>71.7</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>60</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

### Monday – Friday Survey

#### Gender of Respondent

<table>
<thead>
<tr>
<th>Gender</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>19</td>
<td>32.8</td>
<td>32.8</td>
<td>32.8</td>
</tr>
<tr>
<td>Female</td>
<td>39</td>
<td>67.2</td>
<td>67.2</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>58</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Saturday Survey

Gender of Respondent

Monday – Friday Survey

Gender of Respondent
Saturday Survey

Were you satisfied that you received your appointment within a reasonable time after seeing your doctor?

<table>
<thead>
<tr>
<th>Valid</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Dissatisfied</td>
<td>5</td>
<td>8.3</td>
<td>8.3</td>
<td>8.3</td>
</tr>
<tr>
<td>Dissatisfied</td>
<td>10</td>
<td>16.7</td>
<td>16.7</td>
<td>25.0</td>
</tr>
<tr>
<td>No Opinion</td>
<td>5</td>
<td>8.3</td>
<td>8.3</td>
<td>33.3</td>
</tr>
<tr>
<td>Satisfied</td>
<td>24</td>
<td>40.0</td>
<td>40.0</td>
<td>73.3</td>
</tr>
<tr>
<td>Very Satisfied</td>
<td>16</td>
<td>26.7</td>
<td>26.7</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>60</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Monday – Friday Survey

Were you satisfied that you received your appointment within a reasonable time after seeing your doctor?

<table>
<thead>
<tr>
<th>Valid</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Dissatisfied</td>
<td>4</td>
<td>6.9</td>
<td>6.9</td>
<td>6.9</td>
</tr>
<tr>
<td>Dissatisfied</td>
<td>2</td>
<td>3.4</td>
<td>3.4</td>
<td>10.3</td>
</tr>
<tr>
<td>No Opinion</td>
<td>3</td>
<td>5.2</td>
<td>5.2</td>
<td>15.5</td>
</tr>
<tr>
<td>Satisfied</td>
<td>25</td>
<td>43.1</td>
<td>43.1</td>
<td>58.6</td>
</tr>
<tr>
<td>Very Satisfied</td>
<td>24</td>
<td>41.4</td>
<td>41.4</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>58</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>
Saturday Survey

Were you satisfied that you received your appointment within a reasonable time after seeing your doctor?

---

Monday – Friday Survey

Were you satisfied that you received your appointment within a reasonable time after seeing your doctor?
Saturday Survey

Were you aware of the length of time you would need to spend in the X-Ray Dept?

<table>
<thead>
<tr>
<th>Valid</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Def. No</td>
<td>1</td>
<td>1.7</td>
<td>1.7</td>
<td>1.7</td>
</tr>
<tr>
<td>No</td>
<td>4</td>
<td>6.7</td>
<td>6.7</td>
<td>8.3</td>
</tr>
<tr>
<td>Don’t Know</td>
<td>4</td>
<td>6.7</td>
<td>6.7</td>
<td>15.0</td>
</tr>
<tr>
<td>Yes</td>
<td>39</td>
<td>65.0</td>
<td>65.0</td>
<td>80.0</td>
</tr>
<tr>
<td>Def. Yes</td>
<td>12</td>
<td>20.0</td>
<td>20.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>60</td>
<td>100.0</td>
<td></td>
<td>100.0</td>
</tr>
</tbody>
</table>

Monday – Friday Survey

Were you aware of the length of time you would need to spend in the X-Ray Dept?

<table>
<thead>
<tr>
<th>Valid</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>8</td>
<td>13.8</td>
<td>13.8</td>
<td>13.8</td>
</tr>
<tr>
<td>Don’t Know</td>
<td>4</td>
<td>6.9</td>
<td>6.9</td>
<td>20.7</td>
</tr>
<tr>
<td>Yes</td>
<td>35</td>
<td>60.3</td>
<td>60.3</td>
<td>81.0</td>
</tr>
<tr>
<td>Def. Yes</td>
<td>11</td>
<td>19.0</td>
<td>19.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>58</td>
<td>100.0</td>
<td></td>
<td>100.0</td>
</tr>
</tbody>
</table>
Saturday Survey

Were you aware of the length of time you would need to spend in the X-Ray Dept?

Monday – Friday Survey

Were you aware of the length of time you would need to spend in the X-Ray Dept?
### Saturday Survey

On arrival could you find the X-Ray Dept. easily?

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Valid</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>1</td>
<td>1.7</td>
<td>1.7</td>
<td>1.7</td>
</tr>
<tr>
<td>Don't Know</td>
<td>3</td>
<td>5.0</td>
<td>5.0</td>
<td>6.7</td>
</tr>
<tr>
<td>Yes</td>
<td>32</td>
<td>53.3</td>
<td>53.3</td>
<td>60.0</td>
</tr>
<tr>
<td>Definitely Yes</td>
<td>24</td>
<td>40.0</td>
<td>40.0</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>60</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

### Monday – Friday Survey

On arrival could you find the X-Ray Dept. easily?

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Valid</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Don't Know</td>
<td>2</td>
<td>3.4</td>
<td>3.4</td>
<td>3.4</td>
</tr>
<tr>
<td>Yes</td>
<td>42</td>
<td>72.4</td>
<td>72.4</td>
<td>75.9</td>
</tr>
<tr>
<td>Definitely Yes</td>
<td>14</td>
<td>24.1</td>
<td>24.1</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>58</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>
Saturday Survey
On arrival could you find the X-Ray Dept. easily?

Monday – Friday Survey
On arrival could you find the X-Ray Dept. easily?
### Saturday Survey

Were you satisfied with your radiological examination and standard of care today?

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dissatisfied</td>
<td>1</td>
<td>1.7</td>
<td>1.7</td>
<td>1.7</td>
</tr>
<tr>
<td>No Opinion</td>
<td>15</td>
<td>25.0</td>
<td>25.0</td>
<td>26.7</td>
</tr>
<tr>
<td>Satisfied</td>
<td>14</td>
<td>23.3</td>
<td>23.3</td>
<td>50.0</td>
</tr>
<tr>
<td>Very Satisfied</td>
<td>30</td>
<td>50.0</td>
<td>50.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>60</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

### Monday – Friday Survey

Were you satisfied with your radiological examination and standard of care today?

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very Dissatisfied</td>
<td>2</td>
<td>3.4</td>
<td>3.4</td>
<td>3.4</td>
</tr>
<tr>
<td>Dissatisfied</td>
<td>1</td>
<td>1.7</td>
<td>1.7</td>
<td>5.2</td>
</tr>
<tr>
<td>No Opinion</td>
<td>6</td>
<td>10.3</td>
<td>10.3</td>
<td>15.5</td>
</tr>
<tr>
<td>Satisfied</td>
<td>19</td>
<td>32.8</td>
<td>32.8</td>
<td>48.3</td>
</tr>
<tr>
<td>Very Satisfied</td>
<td>30</td>
<td>51.7</td>
<td>51.7</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>58</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>
Saturday Survey

Were you satisfied with your radiological examination and standard of care today?

Monday – Friday Survey

Were you satisfied with your radiological examination and standard of care today?
Chapter Four

Report on
Pilot Project Clerical Officer
for Booking System
Radiotherapy Dept.
St Luke’s Hospital, Rathgar
Report on Pilot Project Clerical Officer for Booking System

This Pilot Project was developed and run in the Radiotherapy Department at St. Luke’s Hospital.

Aims of Project

1. Develop the existing computerised Booking System to accommodate the new priority treatment regimes as developed by the Radiation Oncologist.

2. Develop the Radiation Therapist/Booking Co-ordinators role in relation to answering queries from patients regarding their proposed treatments.

The Project

The Clerical Officer was trained in the majority of the work regarding booking of Radiotherapy, from the palliative procedures right up to the more difficult and complex radical procedures. This allowed the Booking Co-ordinator, being a Radiation Therapist Clinical Specialist, time to answer the various queries patients have relating to i.e:

- Proposed Radiation Treatment
- Discuss their treatment schedule
- Reassure patients on aspects of their treatment

When all appointments were made the Booking Co-ordinator verified all the bookings before the appointments were sent out to the patients.

The Booking Co-ordinator and the Clerical Officer have worked closely together during this Pilot Project time to develop and streamline the original system to the best of the systems capabilities.

As a result of this there is a new Patient Flow System being developed in St. Luke’s and this Pilot Project has been a great asset in allowing the Booking Co-ordinator time to attend the Steering Group meetings on this major new development, with the knowledge that the appointments and complex bookings are being dealt with by the
Clerical Officer in an efficient, effective and professional manner due to the training the Clerical Officer received under this Pilot Project Scheme.

The Steering Group has also benefited from the Pilot Project due to the valuable experience brought to these meetings by the Booking Co-ordinator who under the scheme had the opportunity and time as well as the skills and insight into the computerised booking system to help develop the new Patient Flow System.

In order to operate the new Patient Flow System effectively and efficiently, it is envisaged that two Clerical Officers will be required to assist the Booking Co-ordinator and the Clinical Post presently held by Booking Co-ordinator may need to be upgraded.

*Report by Maria Murphy Radiation Therapist, St Luke’s Hospital, Rathgar*