**NES AHP Contribution to Public Health**

Meeting with Karen Cameron, Lecturer in Radiotherapy, Glasgow Caledonian University

17 February 2022

**Summary of profession and key populations**

Therapeutic radiographers treat patients who have cancer using high energy X-rays. They work with a huge variety of patient populations from Paediatrics all the way through as cancer can affect anyone. There are hundreds of patients that go through the cancer centre every day so it's a very diverse environment. Could be people that are very affluent or who don’t have a lot. Certain cancers are more common in people from more deprived communities. All therapeutic radiography is carried out within the five cancer treatment centres in Scotland. The treatment time is very short in terms of the time patients are actually having their radiation so radiographers can see about 40 patients each day. Sometimes it is a bit of a conveyor belt, one in one out.

Therapeutic radiographers work in teams. There's generally a team of four radiographers on a linear accelerator machine but since COVID-19, staff shortages have resulted in them working in pairs. This is a safety aspect of working with radiation, for both staff and patients. Somebody needs to check what you're doing and confirm they agree you are in the right place because giving radiation in the wrong place could be devastating for the patient.

There are two aspects to radiotherapy. One aspect is the very technical aspects of the machine and the radiation or the physics behind that. The role has progressed so much with technology. Lots of diagnostic imaging is used to help with the treatment. The other aspect of radiotherapy is all about the patient. Person centred care is a big part of what therapeutic radiographers do. Patients come in every day Monday to Friday and radiographers might see these patients for six or seven weeks in a row. However, other patients come for a very short time depending on what their treatment is. Patients are seen every day and even if it’s only for 10 minutes, it's amazing how much it makes a difference to the patient.

There is a huge shortage of diagnostic radiographers but this is less of an issue for therapeutic radiographers. Diagnostic imaging is a much bigger profession than therapeutic because therapeutic radiography is a niche area. Diagnostic imaging is offered in all hospitals but therapeutic radiography is only available in the five cancer treatment centres in Scotland.

 Therapeutic radiography is very much hospital based as the machines cannot be taken anywhere else. This is a big problem for patients who live in a rural setting who may have to travel long distances for treatment. Facilities are provided for people who have to stay over, for example if they are travelling from remote islands.

The role is very much focused on treatment but they do have some links with charity based work such as Macmillan, Beatson charity, Maggies centre.

**Contribution to health protection**

Radiation protection is a big part of role; have to abide by all the rules and regulations that are in place to ensure patients and staff are protected from radiation.

**Wider determinants**

Karen was unsure how therapeutic radiographers fit into this quadrant. A social work colleague is setting up a one- stop- shop in an area of deprivation in Glasgow for people to be able to drop in but Karen has struggled to think about how radiography could be involved in that. Can’t have a drop-in centre for cancer treatment but could have for support.

Accessible services – the service runs 8am to 5pm. At times have tried offering evening appointments but found patients did not want to come out with 8am to 5pm, sometimes because public transport was an issue or it was difficult to get to the hospital if they were relying on other people. Try to be as flexible as they can with appointments if patients can't come at certain times.

No particular difficulties with certain groups, e.g. ethnic minorities, accessing the service. Can access interpreters if necessary to help out with communication.

When it comes to cancer services, most people do attend their appointments. There aren’t many missed appointments but this can occur, for example, in people with alcohol problems.

**Health improvement**

Did not necessarily see reducing recurrence of cancer as part of role, instead this would be part of supportive role of MDT in clinics, who might discuss smoking cessation, healthy diet and alcohol intake. Do provide a lot of signposting to other services. Patients often see AHPs e.g. dietitians, SLT in MDT clinics. Radiographers provide support in terms of where people can go for support.

Would have a discussion about things like smoking cessation and signpost them to services but radiographers do not have the skills to provide patients with the tools that they need to stop smoking. Do have an initial discussion with patients about how smoking and alcohol exacerbate side-effects of radiotherapy. Patients are given written information on how cancer is treated and what to expect. Health literacy is considered when developing information. Communication with patients is a big part of the role and students are taught to discuss these issues with patients.

Discussed whether diagnosis of cancer is a “teachable moment” to explore potential lifestyle changes to reduce risk of recurrence of cancer or whether this can make patients feel like they are being “blamed” for developing cancer due to their lifestyle habits. It can be difficult to get information across to patients that it is “not their fault” but that if they live a healthy lifestyle, they reduce the risk of recurrence.

Fatigue is a common side-effect in patients who are having treatment and they would be advised to take light exercise because that does help with fatigue. Patients would be advised to go for a walk or take some mild exercise to help with the fatigue and patients do come back and say that it's been very helpful. Would encourage healthy living in general while patients are having their treatment. They should listen to their body and drink plenty of fluids, particularly water.

There is a huge issue with obesity. It is one of the biggest factors now with associated with cancer and the population is getting more obese. Obesity can affect the ability to deliver treatment as the treatment couches take a maximum of 25 stone so if patients are above that, they can’t be treated. Karen is aware of patients who have had to lose weight in order to have radiotherapy as the couches are mechanical and need to be able to lift the patients up. However, obesity does not affect the dose of radiation required.

**Population healthcare**

Supported self-management is a big part of role, trying to get the patients to help themselves. Ensuring patients have the tools to help themselves and knowing who to contact if they have a problem, particularly with side-effects of treatment. It is particularly difficult for some patients because when you having radiation therapy, you don't feel anything, you don't see anything. It is not until a couple of weeks down the line when side-effects start to take place. It is important to pre-empt what might happen and give patients an explanation of what they should expect and how they can cope with that before they need to seek further advice. Patients are asked every day how they are, if they have any problems, are they managing to sleep etc.

Rehabilitation, recovery and reablement – radiographers tell patients what to expect and that they will see a doctor in 6-8 weeks time as have to allow the side-effects to settle down. Give advice on what’s the best way to help with their recovery. Lots of signposting to different services at this stage too as some patients have a difficulty with no longer being seen daily. They like coming in and seeing people. Loneliness is a big thing especially for some elderly people. Coming for treatment can mean that they have something to get up for and get out the house and be able to speak to someday every day. It can be hard for them to go back to sitting at home and having nobody there.

Preventing avoidable admissions to hospital – by seeing patients daily more likely to be able to avoid hospital admissions in terms of both encouraging patients to seek help early and ensuring issues are addressed before become serious.

Patients would be signposted to services like Macmillan to help with wider social issues like loneliness, travel insurance implications and financial implications of cancer treatment. Maggie’s is very good for doing different things with patients such as classes or can just pop in for a cup of tea. .

As a radiographer, it is more about signposting than actually having the ability to do something about these issues.

**Potential areas for contribution to public health**

Karen had given this some thought but was unsure how therapeutic radiographers could increase their contribution to Public Health, other than talking about what to expect with radiotherapy and how to deal with side-effects. By the time patients come for radiotherapy, they will already have been through lots of services. Radiotherapy is usually at the end of the treatment, which is part of the problem of how therapeutic radiographers can integrate further into public health. There is potential to widen roles in terms of knowledge and information but radiographers would need more specialised training to enable them to provide more advice and counselling. Therapeutic radiographers “are very niche”.

**How does the pre-registration curriculum support therapeutic radiographers to contribute to Public Health?**

Person-centred care is a big part of what therapeutic radiographers do. Students are taught about communication skills and organizational skills and how they can communicate with patients and get to know them. It's amazing how much you can learn about a patient in a short space of time to try to make them feel comfortable and understand the process that's going on and be involved in their treatment.

There are interprofessional modules across all four years of the programme. The students work in groups with other AHP and nursing students to look at different issues including communication, the social determinants of health, team working, person-centred care and leadership and service improvement. It is good in terms of the students seeing how other professions approach things rather than just seeing things from a radiographer’s point of view. It gives a wider perspective.

In 4th year there is a module called Supportive care in oncology, which is very much about taking a holistic view of patients rather than just their radiation treatment. It is more to think about the patient as a person, what can be done to make improvements, how can we ensure patients come for treatment, can we make things better for them. It has excellent external speakers who come in to talk about a variety of issues including the challenges that those with intellectual disabilities and issues with health literacy face when seeking cancer care. Also have someone coming in to talk about the LGBTQ+ community and any inequalities that they face in cancer care. Also someone coming in speak about IV drug users and people from deprived socioeconomic areas and the challenges that they face. Really trying to highlight the inequalities within healthcare and hopefully the speakers will also give the students ideas on how they can address these inequalities.

Alliance, a third sector organisation, comes in to talk about self management in patients who are living with cancer long term. Students learn about self-management and how they can promote it when they qualify.

Also through the entire radiotherapy and oncology module, students are taught about the epidemiology and aetiology of all the cancer sites. They look at who is likely to get a particular type of cancer, what is the deprivation status, age, number of sexual partners, age of having children etc when looking at each of the different cancer sites. Therefore, for example, students will know that the patients who come with cervical cancer tend to be young females who have quite often had several babies by the time they're 30. The head and neck patients may have alcohol dependency and may have trouble coming in for treatment every day. So if they turn up, they are treated, even if it is not at the pre-arranged appointment time. In practice education modules, we talk about clinical situations, how they would deal with certain situations and where they would signpost patients to.

Most of the diagnostic imaging students have got jobs before they have graduated. GCU trains 70-80 diagnostic radiographers per year but only around 30 therapeutic radiographers per year. A lack of practice placements limits the number of students that they can train because therapeutic radiography is a niche area.

**Practice Placements**Students have clinical placements over the four years of the program and it is roughly a 50:50 split between academic and clinical practice. Students go out in blocks of four week blocks at a time, Monday-Friday. They work with a team of radiographers and learn the trade. Not only do they work on the machines, they also go into the other services such as the clinics, the wards, nuclear medicine and the mould room where the moulds are made for the head and neck cancer patients. They learn a variety of different skills to be a therapeutic radiographer. In year 1, there is only one four-week placement, 3 in Years 2&3 and 2x5 week blocks in Year 4. Additionally there is an elective placement in the summer between Years 3 & 4 where students can choose to go wherever they wish to go, anywhere in the world except Canada and the United States.

**Impact of COVID-19 on profession**

Radiotherapy kept going through COVID, it did not stop. Therefore there is no backlog in terms of radiotherapy treatment being stopped. It is more that the services that refer to radiotherapy stopped such as screening or surgery. Additionally patients may have been hesitant to attend their GP or had difficulties accessing their GP. They are working to their maximum capacity at the moment. There are patients who have had cancer diagnosed at a later stage because screening was paused during the pandemic.

**Professional body support**

Not aware of any public health initiatives from Society of Radiographers.

**Further input**

Karen consented to being contacted again for further involvement in this work if appropriate Karen.cameron@gcu.ac.uk

**Sheila Wilson**

**21 February 2022**