**EXPOSEd Project (E**valuation of **X**-Ray **P**PEfor **O**rthopaedic **S**urgeonsintheatr**E):**

A BOTA National Survey of Trauma & Orthopaedic Surgeons, trainees and doctors to establish their experience of radiation personal protective equipment (PPE) use in the operating theatre.

**Summary**

**Aim:**

To evaluate the **accessibility** and **utility** of current **radiation PPE** provision, and understand the **experiences** and **radiation protection practises** of **orthopaedic** surgeons, trainees and **doctors** in the operating theatre in the **UK.**

**Eligibility/inclusion criteria:**

**Any orthopaedic** consultant, trainee, or **doctor** currently working in orthopaedics in an **NHS hospital** within the **UK.**

**Deadline:**

The survey will be open for responses from 26th June until midnight on Wednesday 7th August.

**Survey link:**

To complete the survey, click here: <https://forms.gle/TysVhnwrdgTXY7pe9>

**Investigators:**

**Steering Committee:**

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**Project Support:**

British Orthopaedic Association

British Orthopaedic Trainees Association

**Abstract**

**Background:**

Image guided procedures using ionising radiation are a crucial part of procedures performed in Trauma & Orthopaedics. The increased incidence of cancer in orthopaedic staff exposed to ionising radiation is well reported and recent studies have demonstrated increased risk of breast cancer in female orthopaedic surgeons in the US1-4. This has caused concern, prompting further research to assess the level of radiation exposure to different areas of the body and to consider better-fitting lead gowns including axillary protection5-7.

Legislation mandates that exposure of staff and patients to ionising radiation is kept “As Low As Reasonably Achievable” (ALARA)8. Exposure to radiation can be reduced by shielding with radiation personal protective equipment (PPE). The International Atomic Energy Agency (IAEA) recommend wearing “wrap around torso protection with a minimum of 0.25mm Lead Weight Equivalence (LWE)” for general orthopaedic surgeons (excluding lumbar spine and pelvic operating)9.

Raza et al. showed a lack of training and understanding of ionising radiation legislation and practices amongst orthopaedic surgeons, with only 19% feeling they received adequate training10. Interventional radiology trainees in the UK have reported poor provision of radiation PPE and dose monitoring11. Local and regional projects have been conducted to assess the provision of radiation PPE for orthopaedic surgeons specifically, but so far, a fully comprehensive national assessment of this is lacking.

**Aims:**

This national survey aims to evaluate the accessibility and utility of current radiation PPE provision and explore the experiences and radiation practices of orthopaedic surgeons, trainees and doctors in the UK.

**Methods:**

A short survey will be sent out to all orthopaedic surgeons, trainees and doctors of all grades, via member mailing lists through the British Orthopaedic Association (BOA), the British Orthopaedic Trainees Association (BOTA), all Training Programme Directors (TPD), and BOTA regional representatives across the UK. It will also be publicised on the BOA and BOTA Twitter accounts and through other social media outlets. The survey will be accepting responses from Wednesday 26th June 2024 until midnight on Wednesday 7th August, for a total of 6 weeks. Survey responses are confidential and will be stored on a password protected, secure cloud drive for analysis. Descriptive statistics will be used to analyse the data, with number, mean and relative percentages presented for continuous and categorical variables.

**Expected outcomes of the study:**

This survey will assess the current situation and experiences of orthopaedic doctors in the UK in relation to radiation PPE and associated practices. It is anticipated that the results will be shared to help inform potential change in this area.

**Ethics:**

Ethical approval is not required for this project as it does not involve patient data.

**References:**

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