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Addressing the UK's sonographer shortage through new initiatives higher education: Evaluating the perspectives of ultrasound unit managers

**Lorelei Waring: Paul Miller; Amanda Marland; Shelley Smart**
University of Cumbria

**Background:** Over the last decade, progressively fewer available posts in UK sonography have been filled\(^1\). As such, interventions in higher education (HE) to attract new blood have become a matter of increasing interest for medical imaging research\(^2\). While this corpus of literature has produced a range of actionable findings to date, the views of employers in clinical ultrasound around how the issue might be addressed in HE have remained largely unresearched.

**Methods:** Three models of ultrasound education were proposed to N=20 ultrasound department leads in public (n=17) and private (n=3) units:

1. The direct entry undergraduate model (DEUM);
2. The direct entry postgraduate model (DEPM); and
3. The 3+1 postgraduate model (31PM).

Participants were encouraged to express a preference, reasons for their preference, and which components of each model were desirable/undesirable. Using a Straussian model of Grounded Theory\(^5\),\(^6\), extended accounts provided were analysed.

**Results:** Of the participants, n=9 indicated a sole preference for the DEPM, while n=3 indicated a sole preference for the 31PM. However, n=8 found variable strengths/weaknesses in each. Qualitative concerns thematised as:

1. The feed of undergraduate entry programmes into extant pay banding.
2. A lack of life, communication and time management skills synergistic with younger graduates.
3. Sustaining the current quality of sonographers without a prior background in plain radiography.
4. Condensing ultrasound learning into too brief a period.

**Conclusions:** There is no simple solution in HE to the sonographer shortage. Unit managers' perspectives add depth to our understanding of what might be required.

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Charting the practical dimensions of understaffing from a managerial perspective: Everyday consequences of the UK's sonographer shortage

**Lorelei Waring: Paul Miller; Gareth Bolton; Charles Sloane**
University of Cumbria

**Background:** The Society and College of Radiographers reports that, by 2014, 18.1% of UK ultrasound vacancies remained unfilled, a substantial rise from the 10.9% reported in 2011, and the 10.1% reported in 2009\(^1\),\(^2\). Indeed by 2013, the UK government's Migration Advisory Committee had listed sonography as an official 'shortage specialty'\(^3\),\(^4\). The research reported herein is designed to lend qualitative depth to our current understanding of the "coal-face" situation in the UK's ultrasound units from the perspective of their managers.

**Methods:** Using a Straussian model of Grounded Theory\(^5\),\(^6\), extended accounts provided by N=20 ultrasound department leads in public (n=17) and private (n=3) units were analysed.

**Results:** Three global themes emerged from the analysis. The first addresses how a lack of staff in the broader economy has created a migratory system that works chiefly to the advantage of the most junior and the most senior clinicians, often leaving mid-career professionals in a borderline impossible situation. The second highlights how the knowledge economy in many departments is being stymied by early retirement and late-career migration, rendering questions about how advanced expertise in ultrasound might be obtained and sustained by the remaining experienced clinicians. The third underscores how it is often workplace instability, rather than simple short staffing, that is most damaging to staff morale, planning capacity and clinical self-efficacy.

**Conclusions:** This work ideally opens up debates on some largely undiscussed practical contingencies of the sonographer shortage, and can help ground future deductive research in the real-world experience of key actors.