

Demonstration of Student Progress in Ultrasound

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Background

NHS Scotland Academy's National US Training Programme (NUTP) is a collaborative initiative between NHS Education for Scotland (NES) and the Golden Jubilee National Hospital (GJNH). NUTP aims to address the high demand for ultrasound services and long waiting times by increasing the number of trained sonographers and ultrasound practitioners from all health backgrounds including medical, allied health professions, nursing and midwifery.

NUTP offers protected training, mentorship, and access to state-of-the-art facilities for learners by offering an enhanced practical experience.

Since inception in November 2022, NUTP has helped train 140 learners whilst scanning nearly 18K patients (22K examinations). NUTP has also delivered immersive masterclasses to nearly 300 learners across each of Scotland's 14 NHS boards.

NUTP are proud recipients of Society of Radiographer's Scottish Radiography Team of the Year 2025.

Aim

To visually demonstrate learner progress and level of independence in ultrasound over time.

Method

Standardisation of training is vital in the face of increasing demand and reduces care variations and establishes protocols for learners (1). Standardisation of practice promotes efficacy, regardless of the provider, location, or background of the professional. This is pertinent in an unregulated profession such as ultrasound.

Accurate assessments play a key role in standardisation of training, without accurate assessment, it is difficult to fully understand the skill levels of students leaving training. Most forms of in-house training for ultrasound are performed by reviewing learner progress over time with subjective reflection on generalised progress alongside formal assessments and sign off from a Higher Education Institute.

A trial of a quantitative measure of assessment was undertaken which document was performed using Microsoft Excel. A simple spreadsheet was created, requiring minimal user input to plot progression over time. The training sonographer documents if a scan or report was performed assisted or unassisted, as well as documenting the difficulty of the study or report (fig1). Definitions of assisted and unassisted and difficulty grading were defined in a pre-agreed, supporting policy document.

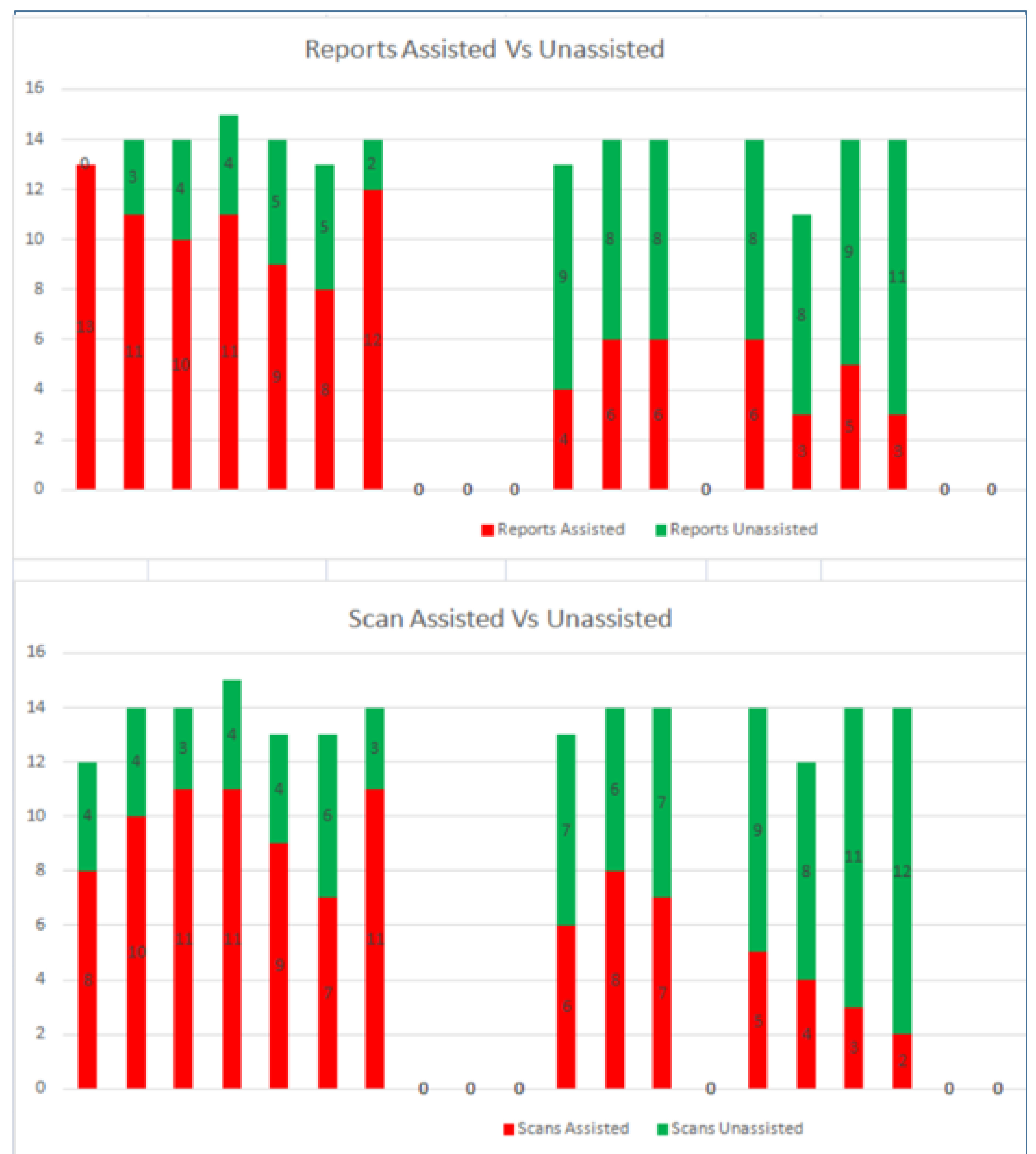
The excel sheet automatically populated the data points on charts to provide a real-time infographic (fig 2).

Week 1	Date	Scan Assisted	Scan Unassisted	Difficulty	Reports Assisted	Reports Unassisted	Region scanned	Sono Initials
Day 1	05/10/2024	1		Low	1		Abdomen	STM
Day 1	05/10/2024	1		Low	1		Kidneys	STM
Day 1	05/10/2024	1		Hard	1		Abdomen	STM
Day 1	05/10/2024	1		Low	1		Abdomen	STM
Day 1	05/10/2024	1		Medium	1		Pelvis TV & TV	STM
Day 1	05/10/2024		1	Low	1		Liver	STM
Day 1	05/10/2024	1		Medium	1		Abdomen	STM
Day 1	05/10/2024		1	Medium	1		Abdomen	STM
Day 1	05/10/2024	1		Low	1		Pelvis TA	STM
Day 1	05/10/2024		1	Low	1		Urinary Tract	STM
Day 1	05/10/2024		1	Low	1		Pelvis TV & TV	STM
Day 1	05/10/2024			Low	1		Abdomen	STM
Day 1	05/10/2024	1		Low	1		Abdomen	STM
DAILY TOTALS			8	4	13	0		

Results and Conclusion

The authors' noted that levels of assistance required by learners decreased over their time at the academy whilst levels of independence increased. These findings were measurable with accurate documentation. Data points and a real-time infographic make student progression easy to demonstrate.

Excel can facilitate targeting individual scan types which in which learners may have struggled and thereafter, NUTP can offer training in specific areas. This helps ensure training is tailored to the learner and optimizes their learning experience.



Feedback

"I am unsure if I would have been able to complete my training without the NUTP. NUTP was a lifeline at the start of my training. Having the NUTP provided me with a supporting, patient and cohesive learning environment which is difficult to achieve within my place of work." (*learner*)

"Overall, an extremely positive, relaxed learning environment. I feel I thrived massively at the academy, the trainers are very approachable & friendly and go out their way at every opportunity to support you!" (*learner*)

"We are very grateful for the training offered to our registrar group by the academy team. The feedback was universally glowing and the clear, rapid improvement in learners' skills was tantamount to the excellent teaching they received"

(*Radiology Training Programme Director*)

Reference

- Dimmer A, Baird R, Puligandla P. Role of practice standardization in outcome optimization for CDH. World J Pediatr Surg. 2024 Mar 21;7(2):e000783. doi: 10.1136/wjps-2024-000783. PMID: 38532942; PMCID: PMC10961560.