

2018 Training Data Analysis

Topic: Ultrasound Training

Background

Overall there is a perception amongst trainees of a lack of access to sufficient ultrasound training, which has been a persistent theme in trainee feedback over several years. Several Deaneries/Health Education Offices have reported lack of resources. The limited resources include lack of consultant trainers, national shortage of sonographers and lack of sufficiently staffed junior doctor rotas to enable protected ultrasound training.

The 2017 report concluded that overall the trend in both Obstetric and Gynaecology, basic ultrasound training is positive with both areas showing improvement in trainee satisfaction compared to 2016 survey. Analysis of ePortfolio reports demonstrated 96% completion of basic ultrasound modules. However, the TEF report scores are just above 50th centile, and therefore sustained efforts are necessary to ensure ongoing improved trainee satisfaction.

Training issues/Questions

- To determine whether the trainees' perception of training in basic modules has improved over the last 12 months by comparing the TEF (Training Evaluation Form) results from 2017 and 2018.
- Identify the regional trends in change in trainees' perception as reported in TEF 2018.
- Ascertain trainees' satisfaction of maintenance of ultrasound competencies once they have completed the modules
- Ascertain the uptake and completion of intermediate ultrasound training modules from ePortfolio supervisors' reports completed in 2017.

Analysis

Basic Ultrasound training

Basic ultrasound modules are targeted at ST1-3 trainees and the RCOG training matrix mandates that they should be completed by the end of ST3. In the 2018 TEF report, overall satisfaction in basic ultrasound training remains low, a similar trend reported last year. Northern Ireland, is the only region scoring above 70 and achieving a green RAG rating. Overall, basic obstetric ultrasound training (57.0) scored slightly higher than basic gynaecological ultrasound training (51.0).

	Basic Gynae Ultrasound	Basic Obstetric Ultrasound
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Deanery	Score 2017	Score 2018	Rank 2018	Score 2017	Score 2018	Rank 2018
East Midlands	42.2	38	15	55.6	47.3	15
East of England	51.9	52.6	7	56.6	60.7	5
Kent, Surrey, Sussex	46.3	51.5	8	54.6	58.1	7
London	50.9	49	11	54.1	52.7	11
Mersey	49.4	42.8	13	62.7	53.5	10
North Western	36.8	38.7	14	50.8	51.9	13
Northern	58.5	57.9	3	62.6	57.2	8
Northern Ireland	76.9	75.7	1	86.3	83.6	1
Oxford	43.1	50.2	10	53.4	51.2	14
Peninsula	53.8	50.8	9	57.8	53.5	9
Scotland	55.9	62.9	2	63.6	66.6	2
Severn	55.9	56.3	5	64.1	62.6	3
Wales	36.2	45.8	12	50.4	52.7	12
Wessex	58.1	56.9	4	60.9	59.2	6
West Midlands	55	54	6	62.2	61.5	4
Yorkshire & Humber	37.8	32.7	16	45.2	40.5	16

Table 1: Average TEF score by deanery from basic ultrasound indicator questions

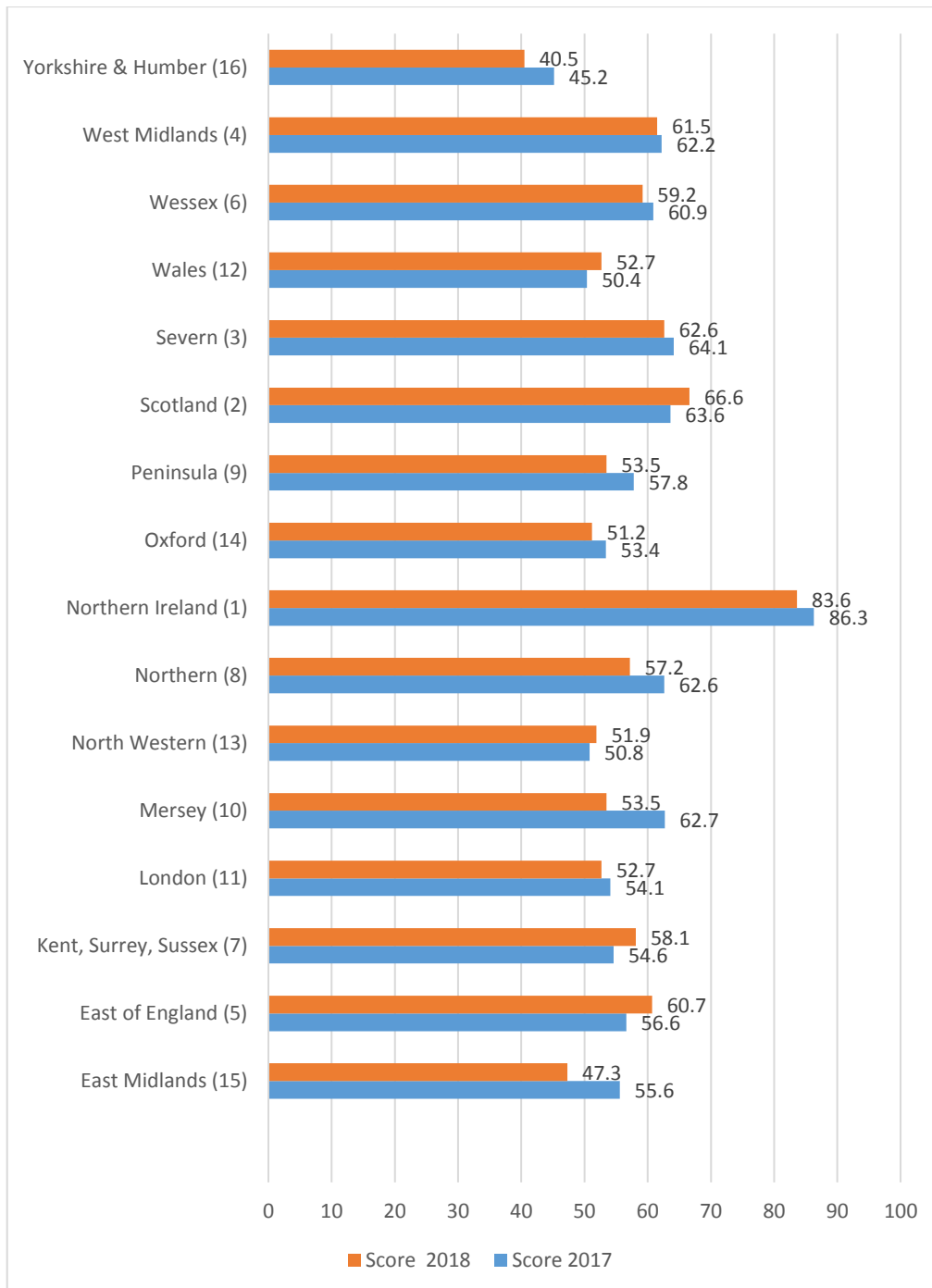


Figure 1: Comparison of regional TEF scores from 2017 and 2018 in basic obstetric ultrasound training (from Table1). 2018 rank is in brackets next to LETB name

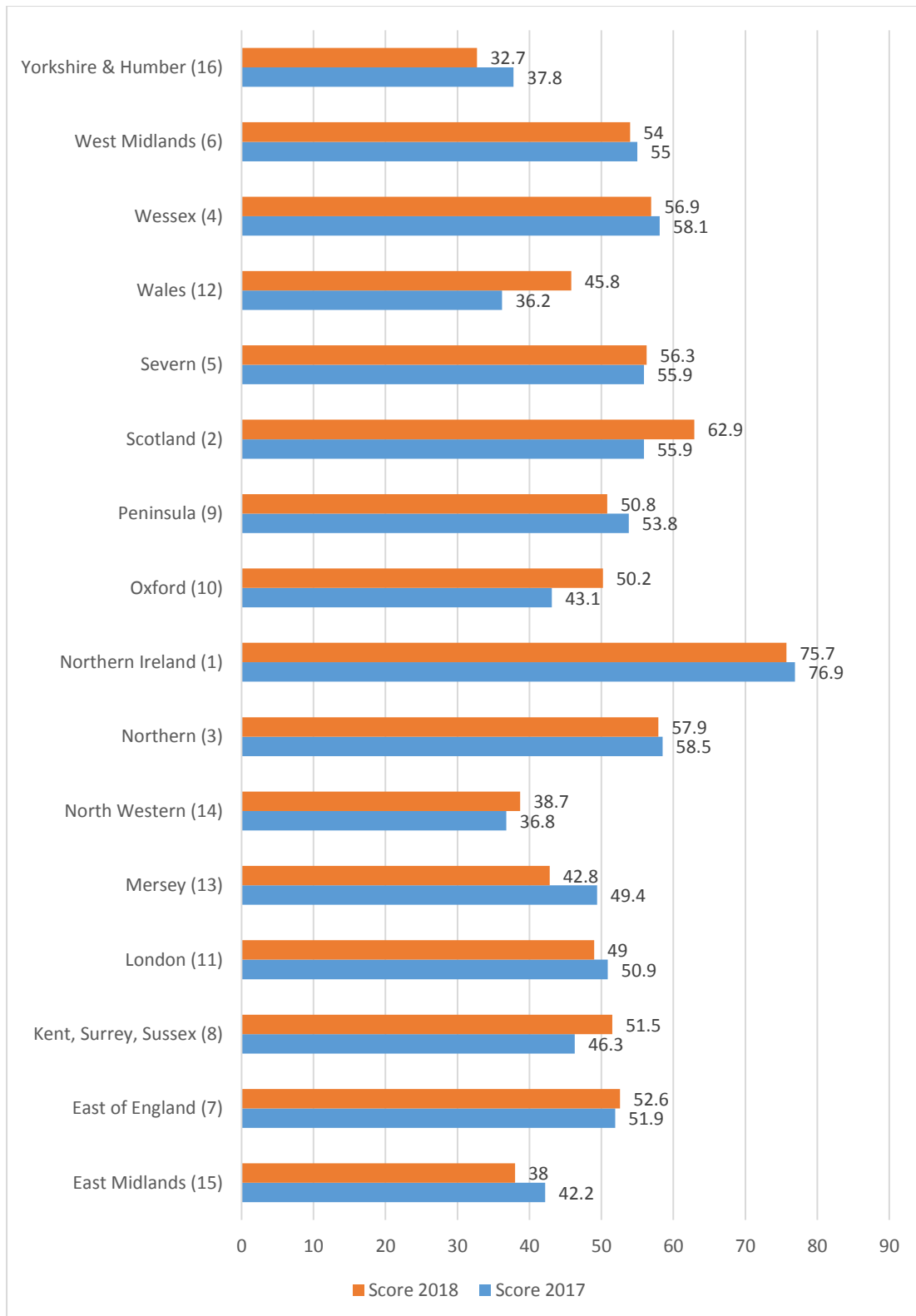


Figure 2: Comparison of regional TEF scores from 2017 and 2018 in basic gynaecological ultrasound training (from Table1). 2018 rank is in brackets next to LETB name

Regional variation in trainee satisfaction continues to persist (Table 1). The three lowest ranked deaneries show a downward trend in the TEF score, whereas in 2017, we reported an upward trend in scores, especially in the lower-performing deaneries.

Analysis of the 2017 supervisors' reports (ePortfolio) of trainees within active training posts, shows 85% (1194/1390) of trainees in training years 3-7 have completed the basic module in early pregnancy and 87% have completed the basic obstetric module (1205/1390). This is comparable to the 2016 supervisors' report. On review of the workforce demographics, there was no correlation between the proportion of Less Than Full Time trainees, nor the size of the deanery and reported satisfaction in ultrasound training.

Intermediate ultrasound training

Training in intermediate ultrasound modules was assessed in the annual training evaluation forms. Table 2, 3 and 4 summarise the proportion of trainees who have commenced and completed the intermediate modules set out in the RCOG curriculum. This was collated from supervisors' reports in trainees' e-Portfolio who were in active training posts in 2017.

Deanery	Total number of trainees	Commenced n (%)	Completed n (%)*
East Midlands	141	12 (9%)	5 (41%)
East of England	149	26 (17%)	6 (23%)
Kent, Surrey, Sussex	97	18 (19%)	2 (11%)
London	392	90 (23%)	22 (24%)
Mersey	80	8 (10%)	4 (50%)
North Western	132	5 (4%)	3 (60%)
Northern	98	7 (7%)	4 (57%)
Northern Ireland	60	21 (35%)	4 (19%)
Oxford	64	9 (14%)	4 (44%)
Peninsula	25	2 (8%)	0
Scotland	174	29 (17%)	16 (55%)
Severn	103	15 (15%)	2 (13%)
Wales	84	6 (7%)	0
Wessex	64	13 (20%)	5 (38%)
West Midlands	140	11 (8%)	6 (55%)
Yorkshire & Humber	194	7 (4%)	3 (43%)

Deanery	Total number of trainees	Commenced n (%)	Completed n (%)*
East Midlands	141	21 (15%)	8 (38%)
East of England	149	45 (30%)	16 (36%)

Kent, Surrey, Sussex	97	25 (26%)	4 (16%)
London	392	145 (37%)	37 (26%)
Mersey	80	19 (24%)	7 (37%)
North Western	132	9 (7%)	3 (16%)
Northern	98	21 (21%)	10 (48%)
Northern Ireland	60	20 (33%)	3 (15%)
Oxford	64	14 (22%)	4 (29%)
Peninsula	25	5 (20%)	0
Scotland	174	21 (12%)	10 (48%)
Severn	103	28 (27%)	6 (21%)
Wales	84	7 (8%)	1 (14%)
Wessex	64	12 (19%)	8 (67%)
West Midlands	140	19 (14%)	13 (68%)
Yorkshire & Humber	194	8 (4%)	4 (50%)

Table 4: Intermediate module: Benign Gynaecology (obtained from supervisors' report 2017)

Deanery	Total number of trainees	Commenced n (%)	Completed n (%)*
East Midlands	141	25 (18%)	24 (96%)
East of England	149	33 (22%)	29 (88%)
Kent, Surrey, Sussex	97	24 (25%)	23 (96%)
London	392	135 (34%)	124 (92%)
Mersey	80	11 (14%)	10 (91%)
North Western	132	11 (8%)	10 (91%)
Northern	98	21 (21)	18 (86%)
Northern Ireland	60	21 (35%)	19 (90%)
Oxford	64	11 (17%)	10 (91%)
Peninsula	25	4 (16%)	4 (100%)
Scotland	174	29 (17%)	26 (90%)
Severn	103	35 (34%)	33 (94%)
Wales	84	8 (10%)	7 (88%)
Wessex	64	13 (20%)	9 (69%)
West Midlands	140	21 (15%)	17 (81%)
Yorkshire & Humber	194	7 (4%)	3 (43%)

**This percentage represents the proportion of trainees completing the module, following commencement.*

Access to intermediate level training does not always correlate with the TEF score for basic training. Some regions performing poorly in basic ultrasound training also report low uptake of intermediate training modules, however others appear to perform better in providing intermediate compared to basic training. Overall, early pregnancy and benign gynaecology modules seem to have a higher uptake compared to normal fetal anatomy.

Normal fetal anatomy: Uptake of this module ranges from 4% to 35% with Northern Ireland, Wessex and London showing the highest uptake. The proportion of trainees who go onto complete the modules range from 11 to 60% North western, Northern Scotland and West Midlands demonstrate the highest completion rate. Interestingly, in some of the deaneries where uptake was high this did not correlate with those completing the training. Trainees were more likely to complete in deaneries with a lower uptake. This could reflect the training opportunities available when there are fewer number of trainees doing intermediate level modules and hence more likely to be able to complete the module.

Early Pregnancy: Uptake ranges from 4% to 37% and 0-68% completion rate. London, Northern Ireland and East of England show the highest proportion commencing the module. West Midlands, Wessex and Yorkshire & Humber report the highest completion rate amongst trainees who have completed.

Benign Gynaecology: There is a range of 4% to 35% uptake rate with London, Northern Ireland and East of England deaneries reporting the highest uptake. Overall, 14 out of the 16 regions report >80% completion rate amongst trainees who commenced the module. Highest rates of completion were achieved in Peninsula, Kent, Surrey & Sussex, and East Midlands.

Maintenance of Ultrasound skills

Maintenance of ultrasound skills upon completion of the basic modules were addressed in TEF 2018, where 37% (452/1216) and 49% (598/1230) 'Agreed/Strongly agreed' that they were able to maintain skills in basic obstetrics and basic gynaecology modules respectively.

Maintenance of skills upon completion of intermediate modules is summarized in table 5. Satisfaction in maintenance of skills seems to be better in 'Early Pregnancy' than in 'Normal Fetal Anatomy and 'Benign Gynaecology' of trainees satisfied with maintenance of skills.

Table 5: Opportunities for assessment and maintenance of intermediate ultrasound skills (TEF 2018)*		
Module	Adequate opportunity of training	Adequate opportunity to maintain skills
Normal fetal Anatomy	48% (56/117)	51% (39/76)
Benign Gynaecology	55% (95/173)	55%(62/113)
Early pregnancy complications	70% (85/122)	71% (63/89)

*Percentage represent responses 'Agree / Strongly agree'

Conclusions

Overall, TEF 2018 reports low levels of satisfaction in basic ultrasound training and maintenance of skills. Although analysis of ePortfolio supervisors' report suggests

acceptable levels of attainment of basic ultrasound modules. Maintenance of skills has marginally improved from 38% (2017) to 41% this year.

This is the first report analysing uptake and completion of intermediate modules and it is encouraging to note some regions successfully facilitate training in intermediate ultrasound skills. Amongst the three intermediate modules, there is wide regional variation in uptake and completion, however benign gynaecology module seems to have a higher uptake and completion rate.

Recommendations

1. Trainers and trainees from regions demonstrating outstanding performance and improvement can share their experience and practice (see appendix). Each region highlighted in the report as performing well can be asked to complete a brief survey on their ultrasound training structure and delivery. This could be shared in 'Training News' and disseminated in the ultrasound network meeting.
2. Factors that limit maintenance of basic ultrasound skills can be ascertained with additional questions in the TEF and address with a specific action plan in order to improve trainee satisfaction. (See suggested changes to TEF question below)

Suggestions for changes to TEF questions

Addition of question on maintenance of skills suggested below:

Module name: Basic obstetric ultrasound training/ Basic gynaecological ultrasound training				
What factors enable you to maintain your ultrasound skills? Please rate each factor.				
	Strongly agree	Agree	Disagree	Strongly disagree
Dedicated clinical ultrasound sessions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dedicated teaching ultrasound sessions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Protected time from rota/ service commitments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Access to ultrasound simulators	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Access to portable scanners	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Engaged and motivated trainers (Obs & gynae consultants/senior trainees)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Engaged and motivated trainers (Sonographers/ midwifery trainers)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

No conflict of interest for ultrasound training with other disciplines (e.g. sonographers, midwives)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Appendix: Example surveys to be completed by trainees and trainers in high-performing LETBs

1. BASIC ULTRASOUND TRAINING - for Trainers

Congratulations on being part of a region recognized for high trainee satisfaction in ultrasound training. Please take a few minutes to complete this short survey on structure and delivery of the ultrasound training in your region. This will be disseminated through the college to heads of schools and trainees committee, in order to improve quality of ultrasound training across UK.

Please indicate your role?

- Head of School
- Training programme director
- Deanery ultrasound co-ordinator
- College Tutor
- Educational supervisor
- Other: _____

Does your LETB organise an annual theory course for Basic Obstetric ultrasound?

- Yes
- No

Does your LETB organise an annual theory course Basic Gynaecology Ultrasound course?

- Yes
- No

Do the trainees have dedicated/protected sessions for ultrasound training in their time table?

- Yes
- No

Do your trainees have access to a simulation trainer in your unit/region?

- Obstetrics only
- Gynaecology only
- Both Obstetrics and gynaecology
- None of the above

Who delivers ultrasound training in your unit/region? (Please tick all that apply)

- Obstetrics consultants
- Gynaecology consultants

- Sonographers
- Midwives
- Senior O&G trainees
- Radiologist
- Other: _____

Please indicate how much you agree or disagree with the following statement:

Your obstetrics and gynaecology trainees are engaged and motivated in seeking opportunities in ultrasound training

Strongly Agree <input type="checkbox"/>	Agree <input type="checkbox"/>	Neither agree or disagree <input type="checkbox"/>	Disagree <input type="checkbox"/>	Strongly disagree <input type="checkbox"/>
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Where do your trainees obtain the majority of their basic obstetric ultrasound training? (Please tick all the apply)

- Protected ultrasound training sessions
 - Part of clinical sessions for ultrasound lists
 - Ad hoc in antenatal clinics
 - Ad hoc on labour ward
 - Ad hoc ECV clinic
 - Ad hoc induction suite
 - Simulation models
 - Others-please use free text
-

Where do your trainees obtain the majority of their basic gynaecological ultrasound training? (Please tick all the apply)

- Protected ultrasound training sessions
 - Part of clinical sessions for ultrasound lists
 - Ad hoc in early pregnancy services
 - Ad hoc in gynaecology emergency services
 - Ad hoc in TOP clinics
 - Simulation models
 - Others-please use free text
-

What factors enable maintenance of ultrasound skills? (Please stick all that apply)

- Dedicated clinical ultrasound sessions

- Dedicated teaching ultrasound sessions
- Protected time from rota/ service commitments
- Access to ultrasound simulators
- Access to portable scanners
- Engaged and motivated trainers (Obs & gynae consultants/senior trainees)
- Engaged and motivated trainers (Sonographers/ midwifery trainers)
- No conflict of interest for ultrasound training with other disciplines (e.g. sonographers, midwives)

Please use the box below to comment on why you believe that your region is able to delivery satisfactory ultrasound training:

2. BASIC ULTRASOUND TRAINING - for Trainees

Congratulations on being part of a region recognized for high trainee satisfaction in ultrasound training. Please take a few minutes to complete this short survey on structure and delivery of the ultrasound training in your region. This will be disseminated through the college to heads of schools and trainees committee, in order to improve quality of ultrasound training across UK.

Please indicate your training grade?

- ST1-3
- ST4-7

Please indicate whether you work full time or less than full time?

- Full Time
- Less than Full Time

Does your LETB 12organise an annual theory course for Basic Obstetric ultrasound?

- Yes
- No

Does your LETB organize an annual theory course Basic Gynaecology Ultrasound course?

- Yes
- No

Do you have dedicated/protected sessions for ultrasound training in your time table?

- Yes No

Do you have access to a simulation trainer in your unit/region?

- Obstetrics only
 Gynaecology only
 Both Obstetrics and gynaecology
 None of the above

Please indicate how much you agree or disagree with the following statements:

Your obstetrics and gynaecology trainers are engaged and motivated in providing ultrasound training

Strongly Agree <input type="checkbox"/>	Agree <input type="checkbox"/>	Neither agree or disagree <input type="checkbox"/>	Disagree <input type="checkbox"/>	Strongly disagree <input type="checkbox"/>
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Your sonographer/midwifery trainers are engaged and motivated in providing ultrasound training

Strongly Agree <input type="checkbox"/>	Agree <input type="checkbox"/>	Neither agree or disagree <input type="checkbox"/>	Disagree <input type="checkbox"/>	Strongly disagree <input type="checkbox"/>
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Where do you undertake the majority of your basic obstetric ultrasound training?
(Please tick all the apply)

- Protected ultrasound training sessions
 Part of clinical sessions for ultrasound lists
 Ad hoc in antenatal clinics
 Ad hoc on labour ward
 Ad hoc ECV clinic
 Ad hoc induction suite
 Simulation models
 Others-please use free text

Where do you undertake the majority of your basic gynaecology ultrasound training?
(Please tick all the apply)

- Protected ultrasound training sessions
 Part of clinical sessions for ultrasound lists
 Ad hoc in early pregnancy services
 Ad hoc in TOP clinics
 Ad hoc in gynaecology emergency services
 Simulation models

Others-please use free text

Do you have adequate opportunities to maintain your skills?

Yes No

What factor enable maintenance of your ultrasound skills? (Please stick all that apply)

- Dedicated clinical ultrasound sessions
- Dedicated teaching ultrasound sessions
- Protected time from rota/ service commitments
- Access to ultrasound simulators
- Access to portable scanners
- Engaged and motivated trainers (Obs & gynae consultants/senior trainees)
- Engaged and motivated trainers (Sonographers/ midwifery trainers)
- No conflict of interest for ultrasound training with other disciplines (e.g. sonographers, midwives)

Please use the box below to comment on why you believe that your region is able to delivery satisfactory ultrasound training: