Setting Up A New Service
A Sonographer’s Perspective & Lessons Learned
Team Ultrasound!

- Workforce Challenges
- Service Needs
- Government Targets
- Financial Targets
- Quality improvement
- Patient experience
Workforce Challenges

• HCPC Registered Sonographers (as Diagnostic Radiographers) have been on the Migration Advisory Committee’s Shortage Occupation List (SOL) since 2008

• 2015 HEE commissioned Centre for Workforce Intelligence (CfWI) to review current status of sonographers in the US
Workforce Challenges
CfWI Findings 2016

- ~33% of Ultrasound workforce are aged 50 plus
- Agency, locum and bank (ALB) staff make up around 12% of the total ultrasound workforce
- The total snapshot vacancy rate at the time of survey, was around 10%
- This vacancy comprises post not filled by substantive or ALB staff
SO

• Investing in people
  – Knowledge and Skills
• Retention
• Recruitment
Lesson 1

Be Prepared
Be Prepared

• Do you need a business case?
• Do the CCGs need to be consults?
• Does it need to be taken through new procedure governance?
• Financial considerations – how will your department get the income? Will you need to purchase new equipment?
Be prepared

• Start with the assignment of mentor
• Plan with how the teaching will be delivered
  – What extra knowledge does the sonographer require?
  – What extra skills does the sonographer require?
• Write a protocol and take it through local governance procedures
• Decide how assessment of competence will be carried out
## Assessment of Competence

### • Log Book

**Before the Procedure**

<table>
<thead>
<tr>
<th>No</th>
<th>Criteria</th>
<th>Pt 1</th>
<th>Pt 2</th>
<th>Pt 3</th>
<th>Pt 4</th>
<th>Pt 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Check LMP, recording the day of the cycle and whether irregular or regular, relevant obstetric history</td>
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<td>2</td>
<td>Record any history of infections/surgeries</td>
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<td>3</td>
<td>Check the patient’s cervical smear checks are current</td>
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<td>4</td>
<td>Give a full explanation of the procedure and gain consent before continuing</td>
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</tr>
</tbody>
</table>

Adapted from Wigan & Wrightington Fertility Centre
Assessment of Competence

For a baseline scan:

<table>
<thead>
<tr>
<th>No</th>
<th>Criteria</th>
<th>Pt 1</th>
<th>Pt 2</th>
<th>Pt 3</th>
<th>Pt 4</th>
<th>Pt 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Image the uterus in TS and LS as a minimum standard and record the endometrial thickness</td>
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<tr>
<td>6</td>
<td>Note the position and number of cornua</td>
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<td>7</td>
<td>Image the ovaries making relevant measurements where necessary</td>
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<tr>
<td>8</td>
<td>Record and pathology and location</td>
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<tr>
<td>9</td>
<td>If there are uterine fibroid, state their relationship to the uterine cavity</td>
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<tr>
<td>10</td>
<td>Once catheter in situ, image its position in the uterine cavity</td>
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</tbody>
</table>
Assessment of Competence

• Aseptic /Sterile techniques
• Other infection control measures
• Emergency contingencies
• PGDs ?
# Assessment of Competence

<table>
<thead>
<tr>
<th>Well below expectation for stage of training</th>
<th>Borderline for stage of training</th>
<th>Meets expectation for stage of training</th>
<th>Above expectation for stage of training</th>
<th>Well above expectation for stage of training</th>
<th>Unable to comment*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Demonstrates understanding of indications, relevant anatomy and technique</td>
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<tr>
<td>2. Explains procedure/risks to patient, obtains/confirms informed consent where appropriate</td>
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<td>3. Uses appropriate analgesia or safe sedation/drugs</td>
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<td>4. Usage of equipment</td>
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<tr>
<td>5. Infection prevention and control</td>
<td>Unsatisfactory</td>
<td>Satisfactory</td>
<td></td>
<td></td>
<td>Not applicable</td>
</tr>
<tr>
<td>6. Technical ability</td>
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<tr>
<td>7.</td>
<td>Seeks help if appropriate</td>
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<tr>
<td>8.</td>
<td>Minimises use of ionising radiation for procedures involving x-rays</td>
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<tr>
<td>9.</td>
<td>Communication with patients/staff</td>
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<tr>
<td>10.</td>
<td>Quality of diagnostic images</td>
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<tr>
<td>11.</td>
<td>Judgement/Insight</td>
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<tr>
<td>12.</td>
<td>Quality of report of procedure</td>
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</tbody>
</table>
## Assessment of Competence

<table>
<thead>
<tr>
<th>Rating</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Trainee requires additional support and supervision</strong></td>
<td>Demonstrates basic radiological procedural skills resulting in incomplete examination findings. Shows limited clinical judgement following encounter</td>
</tr>
<tr>
<td><strong>Trainee requires direct supervision</strong> (performed at level expected during Core training)</td>
<td>Demonstrates sound radiological procedural skills resulting in adequate examination findings. Shows basic clinical judgement following encounter</td>
</tr>
<tr>
<td><strong>Trainee requires minima/indirect supervision</strong> (performed at the level expected on completion of Core Training)</td>
<td>Demonstrates good radiological procedural skills resulting in sound examination findings. Shows good clinical judgement following encounter</td>
</tr>
<tr>
<td><strong>Trainee requires very little/no senior input and able to practise independently</strong> (performed at level expected during Higher Training)</td>
<td>Demonstrates excellent and timely radiological procedural skills resulting in a comprehensive examination. Shows good clinical judgement following encounter</td>
</tr>
</tbody>
</table>
Assessment of Competence

Remember it won’t just be the Sonographer that may need to Competent!

• Clinical Imaging Assistants/HCSW
Sign off criteria for Clinical Imaging Assistants HyCoSy Procedure

Identity check
- Introduce yourself to the patient.
- Clearly identifies the patient’s full name, date of birth and address.
- Ensure the patient is fully aware of the procedure they have attend for.
- Check patient’s current medication and allergies. Ensure the Practitioner performing the procedure is aware.
- Ensure the Ultrasound Procedures WHO form is completed.

Equipment check
- Ensures that all equipment is available and in working order.
  - Procedure table
  - Ultrasound machine
  - Procedure trolley
  - Bristol maid trolley
- Understand how to report equipment faults or failures.
- Ensure the Superintendent and/or Practitioner performing the procedure is aware of any issues.

Procedural checks
- Collect all necessary equipment for use during the procedure.
- Cleans procedure trolley/equipment prior to every use.
- Set up the HyCoSy trolley/open sterile pack
- Add any extra equipment as required by the Practitioner performing the examination.
- Aids where appropriate the health care practitioner in positioning of the patient and the equipment.
- Completes all necessary documentation where appropriate.
- Cleans all equipment as per NHS trust policy.
- Ensures that the health care practitioner disposes of all waste following as per the waste management policy.
- Assist patient from procedure to waiting area or discharged as appropriate and ensures patient has received follow up instructions and aftercare, including what to do if they have concerns/reaction following the procedure.
- Cleans and prepares the room ready for next procedure.
- Scan all relevant documentation as appropriate into CRIS system including the completed Ultrasound WHO form.

Professional Responsibilities
- Acts in a professional manner at all times.
- Ensure patient dignity.
- Ensure patient confidentiality.
- Ensure that all samples are dealt with in an efficient and timely manner.
- Refer the patient to an appropriate person to answer any questions if they are unclear of the answer themselves.
- Seeks advice from a health care practitioner where appropriate.
- Understands relevant emergency procedures.
- Understand where and how to seek medical advice.
- Understand possible complication that could arise from the procedure and where to seek advice from.

I........................ Have witnessed .......................... Has completed the relevant sign off criteria and am confident that said person is competent and confident in their ability to complete the procedure unsupervised.

Date of Assessment
Assessor
Signature

I have read, understood and demonstrated my ability to assist in this procedure unsupervised, in line with the above sign off criteria and am confident in my ability to complete this procedure unsupervised.

Date of Assessment
Assessor
Signature
“Team Working is at the heart of clinical practice today. Imaging is pivotal to the modern healthcare and is an essential component to many patient journeys. The complementary and combined skills of radiologists and radiographers are, therefore, vital to delivering services today in the UK.”

Research indicates

• Healthcare teams that function effectively provide higher quality patient care
• Members of those teams have relatively lower stress levels
• A diverse range of professional groups working together is associated with higher levels of innovation in patient care
Lesson 2

Ultrasound isn’t the only knowledge you’ll need

Learning from the MDT is the key to put the knowledge from the textbooks into practice
Meeting the Demand
Turn to Evidence Based Practice

Lesson 3
One Size Does NOT Fit All
Service Needs & Targets

• NICE
  • 2004 (2012 update) NICE Guideline on Fertility states where appropriate expertise is available, screening for tubal occlusion using HyCoSy should be considered as an effective alternative for HSG

• Financial Targets
  • Increased income
  • Often more patients in a session
  • Sonographer & Assistant Vs Radiologist & Nurse

• If “one stop” it reduces cost as only one OPD attendance but can be more difficult to sort out the “accounts”
Evidence Based Case of Need

• It is estimated that tubal factors account for up to 40% of the causes of sub fertility in women. Tubal blockage can involve the proximal part, the mid part or the distal part.

• Proximal (uterotubal) obstruction occurs in 10–25% of women with tubal disease.
Currently, there are three recognised and routinely practised methods for assessing the patency of the Fallopian Tubes:

- Laparoscopic test with a Dye injection (Lap & Dye):
- Hysterosalpingogram (HSG)
- Hysterosalpingo-Contrast-Sonography (HyCoSy)
Evidence Based Case of Need

• Non-ionising radiation procedure – Published data reports that there are no increased risk factors to either the patient or their chances of becoming pregnant following exposure to the low levels of ionising radiation associated with the HSG procedure. This is supported by the high usage of the HSG technique worldwide and the tight regulation surrounding radiological procedures eliminating unsafe procedures. However, it is universally recognised and considered best practice that patients should not be subjected to any unnecessary x-rays and where possible, an alternative diagnostic technique should be used. IR(ME)R legislation
Evidence Based Case of Need

- The Lap and Dye test for tubal patency testing is widely accepted as the Gold standard
- Invasive nature
- General anaesthesia.
- Lap & Dye is still recommended for patients who have co-morbidities such as pelvic inflammatory disease, previous ectopic pregnancy or endometriosis.
Evidence Based Case of Need

• The concordance between either HSG or HyCoSy and Laparoscopy are generally in the region of 85%.

• Taking Laparoscopy as the gold standard, studies have shown HyCoSy to have a sensitivity approaching 100% and a specificity between 60% and 90%

• No GA, No Radiation, Mild Analgesia

• Spontaneous pregnancy rates equal to HSG
Evidence Based Case of Need

Advantages

• Most patients are referred for USS pelvis as well as HSG, therefore HyCoSy negates the need for this additional attendance.

• Sonographers are of course also able to assess other pathologies of the uterus, endometrium and ovaries.
Lesson 4

Reiteration!
Be Prepared
Patient Information

• Information is the key to a superior service
  – What is a HyCoSY?
  – Why Do I need a HyCoSY?
  – Risks or complications?
  – Preparation for a HyCoSY
  – Booking your appointment
  – What will happen during the procedure?
  – What will happen after the procedure?
Lesson 5

Robust Clinical Governance and Audit
Robust Clinical Governance and Audit

• Protocols are ratified by Radiology clinical governance & Trust clinical governance
• Audit – Who, How and What?
• Prove that what you are doing is safe and beneficial
WHO

Ultrasound Guided Procedure Safety Checklist
Adapted for local use from WHO safety checklist

**Sign In**
- Patient has confirmed
  - Identity
  - Site (including puncture site)
  - Procedure
  - Consent
- All essential imaging reviewed where applicable
- Is the patient on anticoagulant therapy requiring additional measures?
  - Yes
  - No
- Does the patient have any known allergies?
  - Yes
  - No

**Time Out**
- Confirm all team members have introduced themselves
- Confirm all team members are aware of the site and procedure
- Confirm all team members are aware of any critical issues where applicable

**Sign Out**
- Radiologist/Practitioner/Clinical Imaging Assistant confirms:
  - Specimens have been labelled correctly
  - Sample taken to the laboratory
  - All post procedure imaging has been undertaken in required
  - All post procedural information has been passed to the patient and team (including post op care)
- Local anaesthetic used
- Details.........................................................
- Procedure Performed
- Details.........................................................
- Signed.........................................................
- Date.........................................................

Ultrasound ULHT: September 2016 Review 2018
Audit

• An yearly audit of random patient records
  – Correct use of the WHO form & any other documentation
  – Assesses if any complications are recorded in the radiology report
  – Assess Adequacy rate
  – Operator is expected to produce this in appraisal
Increasing Capacity with Sonographers

• Does that mean we are de-skilling others?
  • Alternative not a replacement
  • Enough work for everyone out there!
  • As service gains in momentum and clinical confidence so does the workload!!!

• Can the department create the capacity in ultrasound without affecting other US services such as Cancer priority scans?
Success Story

- Workforce Challenges
- Service Needs
- KPI Targets
- Financial Targets
- Quality improvement
- Patient experience
Success Story

• Our established clinics such as Head & Neck have benefited by a measurable Scanning and Reporting Quality Improvement

• Development into other areas
  – Biopsies
  – MSK injections
  – Other Interventional Ultrasound Procedures
  – HyCoSy
Top Tips

- Identification of training needs & a mentor
- Protocols & assessment competencies
- Work with managers if there is business case required
- Make friends with the Gynaecologists and Fertility Nurses
- Clinical Governance and Audit
“If you do what you’ve always done, you’ll get what you’ve always got”
References

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