Editorial

# Reporting and Documentation of Obstetric Ultrasound Scans

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## Introduction

An ultrasound scan report serves as a critical communication tool between the operator and various stakeholders, including patients and referring clinicians. It is generally expected that the individual performing the scan will also generate the report. These reports typically address specific clinical questions, and obstetric ultrasound is no exception. Both clinicians and patients anticipate clear, concise, and accurate reports, which should follow a logical structure, include differential diagnoses where applicable, and provide recommendations for further management. Despite the existence of model reporting templates developed by various national and international ultrasound societies, no universal consensus exists for all scenarios. Nonetheless, the need for reliable documentation of ultrasound examinations is indisputable, and representative images should be recorded in a retrievable format. The duration of storage for these images and reports should align with clinical needs and comply with relevant legal and local policies.

## Good Practice

Obstetric ultrasound examinations should adhere to established standards whenever possible. However, it is nearly impossible to cover all clinical situations that operators might encounter in their daily practice. The purpose of reporting is to accurately interpret the images and contextualize the findings within the given clinical condition alongside results from other investigations. The Ultrasound Subcommittee of the European Society of Radiologists issued a position statement in 2020 on the use of ultrasound in imaging, recommending that medical documentation include the items presented in **Box 1** as best practice.

Most referring clinicians are not image specialists and rely heavily on the written report rather than images. Therefore, it is crucial to deliver a comprehensive written or printed report promptly. Reports should be concise and clear, avoiding ambiguous terminology such as "TOF," which may be interpreted differently (e.g., tetralogy of Fallot vs. tracheoesophageal fistula). Irrelevant information should be omitted whenever possible.

Clinical questions related to the reason for referral should be addressed, and reports should be as conclusive as possible or offer potential differentials for inconclusive findings. Indicating the reason for the test is advisable as it may direct the examination to specific target organs after completing the standard components. Reports should guide the referring clinician in further management. For instance, during an early pregnancy scan for viability, the operator should also comment on dating and guide the clinician on the timing of the nuchal translucency (NT) scan. Once a reliable dating scan is completed, the estimated due date (EDD) should not be changed in subsequent examinations. In twin pregnancies, reporting must include the type of chorionicity, and a growth scan report must include various measurements plotted on a standard growth chart. These examples illustrate the necessity for detailed and specific reporting, which is beyond the scope of this article.

**Box 1** European Society of Radiology Ultrasound Subcommittee Recommendations for Items to be included in Medical Documentation

- Patient identity (name and age)
- Investigator identification
- Date of examination (time if required by local recommendations)
- Indication for the examination
- Possible limitations of the examination due to scanning conditions, etc.
- Organ-specific description of findings, except for normal findings
- Pathology characteristics
- (Suspected) diagnosis
- Derived diagnostic and/or therapeutic consequences and/or suggestions for other investigations

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## Producing an Imaging Report

Producing a report is a systematic process rather than an isolated event. The individual responsible for the report should comprehend both the explicit and implied information provided in the clinical details, possess the necessary technical knowledge, and be capable of analyzing the observed images. Interpretation should consider previous multimodality images, if available. The reporting process should conclude with appropriate communication with the patient and the referring clinician.

## Tabulated or Text Format

In the United Kingdom, general practitioners (GPs) have shown a preference for radiological reports in a tabulated format over free text, as they are easier to read. Moreover, as the length of the report increases, finer details become more obscure to the reader. For a "normal" scan, GPs ranked the briefest report poorly for not specifying which organs had been examined. Various software based tabulated reporting formats are available, offering detailed, organ wise, systematic reporting platforms for routine and targeted examinations such as fetal echocardiography and fetal neurosonography. These software based reports are easy to produce, provide useful checklists, and facilitate archiving despite being relatively expensive. In the absence of software based reporting facilities, templates produced by peer groups, such as the mid-trimester fetal ultrasound scan report form for singleton pregnancies by the International Society of Ultrasound in Obstetrics and Gynecology (ISUOG), may be used.

## Demographic Details

There is a lack of consistency in demographic details included in reports by practitioners worldwide. The American College of Radiology Practice recommends a set of demographic details (**Box 2**), but adherence to any prescribed format is generally poor. Certain patient characteristics unique to obstetrics, such as gravida, parity, and the date of the last menstrual period, are important components of the ultrasound report and should be included in the identifier section.

Box 2 American College of Radiology Practice Recommendations for Demographic Details

- The facility or location where the study was performed
- Name of patient, age or date of birth, and gender
- Name(s) of referring physician(s) or other health care provider(s). If the patient is self referred, that should be stated
- Name or type of examination
- Date of examination
- Time of the examination, if relevant (e.g., for patients likely to have more than one of a given examination per day)
- Inclusion of the following additional items is encouraged:
  -Date of dictation
  -Date and time of transcription

## Web Resources

Several authentic web resources are available and should be utilized whenever possible. Many of these resources are free of charge. The Fetal Medicine Foundation in the United Kingdom provides NT based risk calculation software to accredited sonographers. Similarly, "Medicina Fetal Barcelona" and "Perinatology.com" offer resource rich Webs sites with useful calculators and evidence based guidelines. The ISUOG and the Society of Fetal Medicine (SFM) have also produced practice guidelines for commonly performed examinations, which are freely accessible and should be used as appropriate.

## Archiving

There is concern that ultrasound examinations and their reports are not always properly archived within hospital information systems. However, this task is technically feasible, either as a separate archive or, ideally, within the hospital Picture Archiving and Communication System (PACS). Modern ultrasound machines typically have sufficient memory to store images until they are transferred to the PACS. Additionally, modern ultrasound devices are Digital Imaging and Communications in Medicine (DICOM) capable of facilitating the archiving workflow. Patients can also be registered on a DICOM worklist, ensuring a seamless record of events and preventing information loss.

## Medicolegal Aspects

Adherence to the Pre conception and Pre Natal Diagnostic Techniques Act (PCPNDT) rules in India, or similar legislations in other countries, is of paramount importance. Operators must ensure they are approved by the local PCPNDT authority and operate within the law. Ultrasound practitioners are legally accountable for their professional actions, including the reporting of ultrasound examinations. The name and status of the sonographer issuing the report should be clearly recorded, and they should take responsibility for the accuracy of the report and ensure it is communicated to the appropriate personnel when required. Operators should be aware of their limitations and seek clinical advice when necessary.

Technology has revolutionized obstetric practice in recent years, playing a crucial role in legal actions, such as cases of missed anomalies or alleged negligence. A high quality report and well taken images may be the only defense for the operator under such circumstances. Although disclaimers about test limitations or suboptimal conditions may offer some legal protection, thorough explanations can help set realistic patient expectations.

## Conclusion

Accuracy, brevity, and clarity are essential components of effective report writing. Reporting formats vary globally,

 

ranging from tabulated checklists to descriptive essays or single sentences. However, the primary aim remains to communicate findings to caregivers. All reports must be archived in a retrievable manner. Practices performing obstetric imaging as part of their clinical services should continuously audit their performance and correlate findings with clinical outcomes.

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Conflict of Interest
None declared.

## Suggested Reading

1 European Society of Radiology (ESR) Position statement and best practice recommendations on the imaging use of ultrasound from the European Society of Radiology ultrasound subcommittee. Insights Imaging 2020;11:115
2 Grieve FM, Plumb AA, Khan SH. Radiology reporting: a general practitioner's perspective. Br J Radiol 2010;83(985):17–22
3 Salomon LJ, Alfirevic Z, Berghella V, et al. ISUOG Practice Guidelines (updated): performance of the routine mid-trimester fetal ultrasound scan. Ultrasound Obstet Gynecol 2022;59(06): 840–856
4 American College of Radiology Practice Parameters for communication of diagnostic imaging findings: Revised 2020 (Resolution 37). Reston, VA: American College of Radiology; 2020
5 The ACOG & AIUM Practice Bulletin Number 175,. December 2016

 