



Thoracic Society of Australia and New Zealand

RECOGNITION OF COMPETENCY IN THORACIC ULTRASOUND

Clinical Guideline

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OBJECTIVE

TSANZ aims to provide a pathway for training and competency for clinicians to gain the necessary theoretical and procedural skills to safely assess and manage thoracic disease using bedside thoracic ultrasound, as defined in this document.

Defining ‘competent in thoracic ultrasound’

‘Competent in thoracic ultrasound’ is defined as the ability to accurately and safely use bedside ultrasound to evaluate a pleural effusion, determine a safe site for thoracentesis or chest tube insertion, to assess pleural pathology or parenchymal lung disease, and rule out a pneumothorax.

The level of competency of a clinician may not equate to that of an experienced radiologist and it is expected that competent thoracic clinicians maintain close relationships with such individuals in their practice.

Target group

Recognition of competency is directed at respiratory physicians or trainees..

Initial competency assessment requirements

Competence is recognised following successful completion of the following 4 assessment requirements:

1. Attendance and successful completion of an approved course, including a TSANZ endorsed or Australasian Society for Ultrasound in Medicine (ASUM) accredited course.
2. Maintenance of logbook - Minimum 40 correctly completed scans including:
 - a. 10 “Normal” scans and
 - b. 10 Successful ultrasound assisted thoracenteses or ICC insertions (need not be real time),
 - c. 10 Intrapulmonary pathologies.

Some of these scans may be completed at the course.
3. Formative assessments (UG-STAT, no pass score) after first 5-10 and 20 scans by supervisor.
4. After completion of requirements (2) and (3), a barrier assessment (UG-STAT, pass score 90%) by an assessor not directly involved in the candidates training (the assessor may be at the same or a different institution). If a pass is not achieved, assessment can be repeated after each 10 additional scans.

Re-certification of competency

A logbook should be maintained and submitted to TSANZ every 3 years for ongoing certification with a minimum of 15 bedside thoracic ultrasound procedures performed or supervised each year. If this number is unable to be achieved, re-attendance at another accredited course will be required to maintain competency.

Transition period for recognition of current competency

For a 24 month period after adoption of these guidelines by the TSANZ in March 2017, members who have already achieved the required skills and experience in thoracic ultrasound will be able to apply for recognition of competency. During the 24 month introductory period applicants will need to submit the following documentation:

1. A description of Training, certificate of completion of relevant courses and teaching experience
2. Completed logbook
3. Evidence of completed UG-STAT with 90% pass mark achieved.

Once approved, applicants will need to complete the required re-certification every 3 years.

Members with existing ultrasound competency with the Australasian School of Ultrasound in Medicine (ASUM), the Royal College of Radiologists, American Thoracic Society, American College of Chest Physicians and similar are eligible to apply for recognition of competency by the TSANZ. TSANZ recognition of competency will be granted on presentation of documentation from recognised training establishments which meet the TSANZ criteria.

Administration of competency records

The TSANZ Office administers the process and maintenance of individual competency records. An administration fee is to be paid on submission for applications for competency assessment and re-certification. Fees and payment are administered by the TSANZ Office. TSANZ will undertake administrative review of submitted logbooks to ensure the correct number of scans and provision of all necessary scan details. Clinical assessment must be undertaken by the supervisor. From time to time, TSANZ may undertake a clinical audit of submitted log books.

Logbook

The minimum requirement for thoracic ultrasound log books are the following entries for each recorded scan:

- | | |
|------------------------------------|---|
| 1. Patient record no. or initials. | 5. Intervention – yes/no. If yes, type of intervention. |
| 2. Date of scan. | 6. Complications – yes/no. If yes, details. |
| 3. Indication. | 7. Assessor details including name, position and institution. |
| 4. Clinician findings. | |



Dissemination plan and review

The pathway document will be disseminated by publication in *Respirology*, by direct emailing to TSANZ members, and on the TSANZ website. The clinical currency of the document will be reviewed after 5 years by the IP-SIG.

Learning Outcomes

Detailed below are the required learning outcomes for all Thoracic Ultrasound training courses. TSANZ endorsement of a Thoracic Ultrasound course will be based on assessment against these learning outcomes.

General

1. Understand the basic physics of how an image is produced using ultrasound
2. Become familiar with the ultrasound knobology and the principles of image optimisation
3. Recognise patterns associated with both normal and diseased thoracic anatomy

Specific

1. Be familiar with the components of a 2D ultrasound image i.e. probe type, orientation, depth, focus, gain, harmonics, dynamic range, frequency control, image capture
2. Appreciate the many forms of artefact affecting thoracic imaging
3. Understand basic principles of operating ultrasound equipment including techniques for image optimization and transducer selection.
4. Acquire skills to locate normal
 - a. Chest wall
 - b. Diaphragm
 - c. Lung
 - d. Kidneys
 - e. Liver and spleen
 - f. Heart
 - g. Lung
5. Acquire skills to identify and assess
 - a. Pleural effusions – simple/complex/loculated
 - b. Pleural based masses
 - c. Pneumothorax (loss of lung sliding and lung point including M-mode ultrasound)
 - d. Pulmonary consolidation and atelectasis
 - e. Pulmonary oedema and right heart failure (internal jugular vein imaging)
6. Appreciate (not in detail) the utility of real-time needle guidance in selected circumstances.
7. Recognise the technical and individual limitations of using bedside ultrasound
8. Appreciate limitations to practice of a non-radiologist sonographer and indications for further referral.



Appendix 1

Assessor requirements

To be eligible to complete either formative or barrier assessments and sign off logbooks, assessors must meet one of the following 4 categories:

1. Clinician with ASUM CCPU qualification and minimum 2 years thoracic US experience.
2. Clinician with TSANZ thoracic ultrasound competence with minimum 2 years thoracic US experience.
3. Practicing ultrasonographer.
4. Practicing radiologist.

Appendix 2

TSANZ endorsement of Thoracic Ultrasound courses

For a course to be endorsed by TSANZ, an application for course endorsement should specify:

1. Time allocation to didactic (1.5-3 hours suggested) and hands-on (2-4 hours suggested) course components.
2. The faculty to participant ratio (minimum of 1:4).
3. Details of the final written assessment / end of course test.
4. Course Convenor/s qualifications, confirming that they meet the Assessor Requirements defined in this document.
5. Confirmation that each of the learning outcomes specified in this document will be addressed in the course.

Any application for course endorsement should be submitted to the TSANZ Office and will be considered in accordance with the TSANZ Endorsement of Training Courses Policy.

Appendix 3

Notes to assessors

1. When scoring the UG-STAT, each question is allocated a specific score for a successfully completed item. Part scores cannot be given. For example, in Question 11, the score entered must be a 0, 9 or 18.
2. If the candidate is unable to correctly identify the needle insertion site (Question 9), they cannot be given an "excellent" mark in Question 11; at best, they can only be given "satisfactory".
3. A mark of 90% or above in the "barrier" UG-STAT is regarded as a pass and indicates the candidate can submit their logbook and paperwork for formal recognition of competence in thoracic ultrasound.



Frequently Asked Questions (FAQs)

1. What is a “normal” scan considered to be?

A subject with no known thoracic pathology.

2. Does an applicant need to be a TSANZ member?

Yes

3. What happens to the competency certification if a person is suspended from practice?

The certification is voided and needs to be re-gained once a member is approved to practice.

4. What is the purpose of TSANZ defining standards for recognition of competence?

The Recognition of Competence document sets out the best practice clinical guidelines for performing a procedure and provides objective evidence of competence through completion of a TSANZ endorsed thoracic ultrasound course, directly observed assessment tasks and the submission of a log book. The requirements for TSANZ to endorse a course provider to deliver training are also specified in the document and again reflect current best practice.

5. Is TSANZ mandating that members must obtain this recognition of competence in order to practice bedside thoracic ultrasound?

No. Recognition of competence in thoracic ultrasound is offered as a service to Members to provide a pathway to achieve competence and is not a compulsory program.

6. Does completion of this program equate to accreditation?

No. The TSANZ is not an accrediting body and is therefore unable to accredit individuals. What is provided is a statement that recognises competence in a particular skill that can be presented to an accreditation body, such as a hospital Medical and Dental Appointments Advisory Committee, to confirm that a level of procedural competence has been achieved.

7. How does this impact on clinicians who perform bedside thoracic ultrasound but decide not to apply for the recognition of competency?

Clinicians may continue to practice bedside thoracic ultrasound without a recognised qualification in ultrasound or recognition of competence certificate. However, the TSANZ encourages all clinicians practising thoracic ultrasound to obtain the competency certification to ensure optimal standards and patient safety.

8. How do I find an assessor at my local institution?

Many hospitals have a “lead” pleural clinician with whom you can speak regarding assessing your progress, performing the UG-STAT assessments and signing off on your logbook. If you are having problems finding an appropriate assessor, you could approach IP-SIG convenors through the TSANZ office to discuss how to find one.

9. Will Assessors be remunerated?

No. Assessors will be recruited to perform the required assessments in a voluntary role as part of capacity building for the sector.





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