A Shared Aspiration ***A review of the quality of care provided to adults who underwent a chest drain insertion or pleural aspiration***	
What is the report is looking at	**Patients aged 18 and older who were admitted to hospital between 01/01/2024 and 31/12/2024 and had a chest drain inserted or pleural aspiration undertaken.**
Countries that are covered?	**England, Wales, Northern Ireland and Jersey.**

Recommendation no: 1

Agree minimum standards for chest drain insertions* and pleural aspirations that can be used for all patients, by all specialties.

- The minimum standards should align with the associated guidance listed below and include all the **AREAS FOR IMPROVEMENT** highlighted by this study.

**Chest drains inserted in trauma patients were excluded from this study as they are undertaken on a separate pathway.*

Documenting the agreed minimum standards on a proforma for medical (non-trauma) procedures would support process reliability from decision making to discharge.

British Thoracic Society as the secretariat in collaboration with the Intensive Care Society, College of Intensive Care Medicine, Royal College of Emergency Medicine, Royal College of Physicians, Society for Acute Medicine, Surgical Royal Colleges, Royal College of Radiologists, Royal College of Nursing, and the Association of Respiratory Nurse Specialists.	**CHAPTER 3 PAGE 16** Organisational survey data showed that respiratory medicine was the most common specialty for pleural procedure training, with programmes provided in 96/104 (92.3%) hospitals (F3.1). Training records were maintained and updated in only 55/124 (44.4%) hospitals and a register of competent clinicians was kept in 23/157 (14.6%) hospitals. **CHAPTER 4 PAGE 17** Reviewers identified opportunities to improve care prior to the admission in 68/563 (12.1%) patients, most commonly through rapid access to a specialist pleural clinic, which could help to prevent the emergency admission and take pressure off the acute care pathway. **CHAPTER 4 PAGE 18** Reviewers identified 82/563 (14.6%) patients for whom a less invasive approach could have been taken with better decision making and considered that the quality of care was affected in 39/82 patients.	**BRITISH THORACIC SOCIETY: QUALITY STANDARD FOR PLEURAL DISEASE** **BRITISH THORACIC SOCIETY: GUIDELINE FOR PLEURAL DISEASE** **BRITISH THORACIC SOCIETY: CLINICAL STATEMENT ON PLEURAL PROCEDURES** **INTENSIVE CARE SOCIETY: CHEST DRAIN SAFETY CHECKLIST** **COLLEGE OF INTENSIVE CARE MEDICINE: SAFETY CHECKLISTS NatSSIPs2 and LocSSIPs** **ROYAL COLLEGE OF EMERGENCY MEDICINE: POST-PROCEDURAL CARE**

	CHAPTER 4 PAGE 18 For patients with a pleural effusion, these data describe a group with severe frailty for whom reviewers felt that intervention should have been avoided and palliative care would have been more appropriate. This is particularly relevant when previous attempts at drainage have provided little or no symptomatic relief. **CHAPTER 5 PAGE 19** Consent processes showed considerable variation across cases reviewed. Written consent was documented in only 314/563 (55.8%) cases reviewed, with the remainder comprising verbal consent, best-interest decisions or undocumented consent (T5.1). **CHAPTER 5 PAGE 19** At an organisational level, procedure-specific consent forms were used in only 68/173 (39.3%) hospitals (T5.2). **CHAPTER 5 PAGE 20** Procedure safety checklists (LocSSIPs) were not routinely documented, being present in only 182/526 (34.6%) cases reviewed and reported by clinicians for 353/755 (46.8%) patients (F5.9). **CHAPTER 5 PAGE 20** It was reported from 23/163 (14.1%) hospitals that they did not routinely employ LocSSIPs for chest drain insertion. **CHAPTER 5 PAGE 21** Data from the patient survey showed that 23/45 patients experienced at least moderate pain during the procedure and 21 post-procedure, suggesting that pain is a significant issue for patients (F5.14). **CHAPTER 5 PAGE 21** In the view of the reviewers there was room for improvement in the pain management of 65/373 (17.4%) patients. Furthermore, reviewers were unable to answer in 190 cases,	**ROYAL COLLEGE OF EMERGENCY MEDICINE: BEST PRACTICE GUIDELINE ON CONSENT** **GENERAL MEDICAL COUNCIL: PROFESSIONAL STANDARDS: DECISION MAKING AND CONSENT** **NATIONAL SAFETY STANDARDS FOR INVASIVE PROCEDURES (NatSSIPs2)** **GIRFT: RESPIRATORY MEDICINE**

	suggesting that documentation was often insufficient to judge the quality of pain management. **CHAPTER 5 PAGE 21** Ultrasound guidance was used for 344/369 (93.2%) patients (T5.6). However, among the 25 patients who did not have an ultrasound, case reviewers considered this appropriate in seven patients. **CHAPTER 6 PAGE 23** A post-procedure plan provides clear guidance on decisions regarding monitoring, imaging, and drain removal, all of which are clinically and operationally important. Nearly a quarter of patients (106/440; 24.1%) (unknown in 13) had no documented post-procedure plan. **CHAPTER 6 PAGE 23** While chest radiography was commonly recorded, other important elements, including drainage targets (170/334; 50.8%), monitoring plans and pain management (128/334; 38.3%), were frequently omitted (F6.1). **CHAPTER 6 PAGE 23** Of the patients with an effusion, 34/338 (10.0%) had more than 1500ml of fluid drained within the first hour after insertion (F6.2). **CHAPTER 6 PAGE 23** The chest drain was checked on a daily basis in 264/325 (81.2%) patients (T6.1). However, a significant minority did not have a daily drain check documented. **CHAPTER 6 PAGE 23** The median length of time a drain was in place was 2.9 days (F6.3). In total, 75/396 (18.9%) chest drains were not left in place for an appropriate duration (T6.2), with both premature removal (n=26) and prolonged retention (n=43) observed (unknown in six).	

	CHAPTER 7 PAGE 24 The data also suggested that there was a perception that it was not easy to extract data (or to analyse themes or long-term trends in safety events) from the risk management systems used (T7.2). **CHAPTER 7 PAGE 24** There were 70/153 (45.8%) hospitals that reported a local audit approach. However, free text comments noted that this approach was commonly limited to procedures undertaken by the pleural team and would therefore systematically exclude procedures undertaken out of hours, which were the focus of this review. **CHAPTER 7 PAGE 24** The reviewers stated that additional learning was possible in 96/423 (22.7%) cases reviewed (unknown in 140). This included choice of procedure, safety processes (such as LocSSIPs), consent, post-procedure care including drain removal, and management of anticoagulants around the time of the procedure.	
Recommendation no: 2		
Embed mechanisms to optimise the safety of chest drain insertion and pleural aspiration out of hours. ▪ By not undertaking a procedure out of hours unless it is an emergency; ▪ By ensuring there are senior clinicians available to decide whether the procedure needs to be undertaken as an emergency; *and* ▪ When an emergency procedure is required, ensuring it is undertaken by a clinician who has the core skills to perform it safely. *NB: Chest drains inserted in trauma patients were excluded from this study as they are undertaken on a separate pathway.* *See also recommendation 1 - the minimum standards that should be applied for all patients.*		
Commissioners working with their local trusts/health boards.	**CHAPTER 3 PAGE 16** Just 16/173 (9.2%) hospitals ensured that a competent operator was present on their on-call rota and only 62/173 (35.8%) hospitals had an escalation protocol for complex or high-risk patients out of hours. **CHAPTER 3 PAGE 16** During working hours, pleural procedures in the study population were most commonly performed by respiratory medicine consultants or respiratory/pleural nurses (370/536; 69.0%).	**ROYAL COLLEGE OF EMERGENCY MEDICINE LEARNING: ATTAINING COMPETENCY** **JOINT ROYAL COLLEGES OF PHYSICIANS TRAINING BOARD: CURRICULUM FOR INTERNAL MEDICINE STAGE 1 IMPLEMENTATION AUGUST 2019** **GIRFT: RESPIRATORY MEDICINE**

	CHAPTER 3 PAGE 16 Out of hours during the week, this fell to 24/86 (27.9%), with many being undertaken by emergency medicine clinicians (38/86; 44.2%). The remaining procedures were performed by clinicians in: general medicine, 9/86 (10.5%), critical care medicine 11/86 (12.8%), acute medicine (4/86), general surgery (2/86) and interventional radiology (1/86). **CHAPTER 3 PAGE 16** Weekends showed a similar pattern but with equal proportions of procedures undertaken by respiratory medicine and emergency medicine clinicians (48/146; 32.9%) (F3.2). **CHAPTER 3 PAGE 16** Published data from the healthcare professional survey showed that self-reported confidence in chest drain insertion among non-respiratory medical registrars diminishes with increasing time since their last pleural procedure. The survey also showed that doctors in specialties with experience of pleural procedures within the last year were more likely to feel confident inserting a chest drain without supervision. However, in no specialty were all doctors confident with pleural procedures. **CHAPTER 3 PAGE 16** Organisational survey data showed that respiratory medicine was the most common specialty for pleural procedure training, with programmes provided in 96/104 (92.3%) hospitals (F3.1). Training records were maintained and updated in only 55/124 (44.4%) hospitals and a register of competent clinicians was kept in 23/157 (14.6%) hospitals. **CHAPTER 3 PAGE 16** When asked whether they had ever performed an out of hours pleural procedure, 63/64 (98.4%) doctors in respiratory medicine and 63/83 (75.9%) doctors in emergency medicine reported having done so. A lower percentage of doctors in intensive care medicine (85/159; 53.5%) and general medicine (121/391; 30.9%) had actual out of hours experience (T3.1).	

	CHAPTER 4 PAGE 17 Reviewers identified opportunities to improve care prior to the admission in 68/563 (12.1%) patients, most commonly through rapid access to a specialist pleural clinic, which could help to prevent the emergency admission and take pressure off the acute care pathway. **CHAPTER 4 PAGE 18** There was a delay in the decision to insert a chest drain in 94/477 (19.7%) patients. patients. Delays in decision making occurred in all the wards where patients were located (F4.2) (unknown in 85). They were also distributed both within and outside of normal working hours. **CHAPTER 4 PAGE 18** There were further delays in carrying out the procedure after the decision had been made in 139/563 (24.7%) instances. They occurred when the patient was under the care of all clinical specialties and the reasons for delay were frequently not documented. **CHAPTER 4 PAGE 18** Clinical questionnaire data showed that 186/936 (19.9%) patients required transfer to a new location for their procedure (unknown in 42). The transfer contributed to a delay for 37/186 (19.9%) patients. **CHAPTER 5 PAGE 19** It was of note that formal policies for chest drain insertion were not available in 22/173 (12.7%) hospitals. **CHAPTER 5 PAGE 22** Pleural services were involved for 143/522 (27.4%) patients (T5.13). For the 379 patients where a service was not used reviewers believed it should have been for 144/357 (40.3%) but identified 213 patients where this was considered appropriate (T5.14).	