3. Introduction of specific LA fields on our online bronchoscopy reporting system.

Bronchoscopy and EBUS reports were re-audited following each intervention (total 19 cases).

Results Maximum recommended dose of midazolam in ≥ 70 yrs (3.5mg), was exceeded in 19% of EBUS cases and 5% of bronchoscopy cases pre-intervention. Following virtual teaching, 0% exceeded maximum recommended dose.

Maximum recommended dose of fentanyl (50mcg) was exceeded in 22% of EBUS and 4% of bronchoscopy cases pre-intervention. Following virtual teaching, maximum dose was exceeded in 1.6% of EBUS and 0% of bronchoscopies.

Pre-interventions, 1% and 2% lidocaine use was correctly documented in 17% of procedures and instillagel use was correctly documented in 33% of procedures. Following poster implementation, 1% lidocaine use was correctly documented in 75% of procedures, 2% lidocaine use was correctly documented in 88% of procedures and instillagel use was correctly documented in 60% of procedures. Following LA-field implementation, 1% lidocaine use was correctly documented in 91% of procedures, 2% lidocaine use was correctly documented in 91% of procedures, and instillagel use was correctly documented in 66% of procedures. (figure 1)

Conclusions Virtual teaching for bronchoscopists increased awareness of safe PSA, thus reducing previously exceeded recommended doses of sedatives. Implementation of a bronchoscopy suite poster, and specific recording fields for LA, has improved documentation practices. Methods introduced continue to be used in our trust's bronchoscopy suite.

REFERENCE

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P125 AUDIT OF COMPLICATIONS OF PERCUTANEOUS CT GUIDED LUNG BIOPSIES CARRIED OUT AT ROYAL ALEXANDRA HOSPITAL AND INVERCLYDE ROYAL HOSPITAL IN 2019 AND 2020

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Background Percutaneous CT guided lung biopsy (PCLB) is used for histological diagnosis of pulmonary disease and is preferred to surgical biopsy due to its fewer complications.

The British Thoracic Society (BTS) recommend that operators audit their practise to calculate complication rates to inform patients about risks. Complication rates should be similar to, or lower than those from the national survey: pneumothorax (20.5% of biopsies), pneumothorax requiring chest drain (3.1%), haemoptysis (5.3%), and death (0.15%).

Aims This audit aims to calculate whether the complication rates of percutaneous CT guided lung biopsy were acceptable when compared to the aforementioned BTS guidelines.

It also aims to ascertain what risk factors there may be for developing a more severe pneumothorax as a consequence of the procedure.

Methods 153 patients had a PCLB at Royal Alexandra and Inverclyde Royal Hospitals. Their biopsy reports and follow up chest X-rays were reviewed for evidence of haemoptysis, pneumothorax, air embolus, or death. Their immediate

discharge letters were used to view their hospital stay lengths and to see which patients needed a chest drain inserted during their stay.

Each patient's lesion diameter and the distance that the biopsy needle travelled through the chest wall to reach the lesion were measured.

Complication rates were calculated and compared with the quoted rates. Potential risk factors for a severe pneumothorax were assessed.

Results Pneumothorax rate was 21.6%.

Pneumothorax requiring a chest drain rate was 7.2%.

Haemoptysis rate was 10.5%.

No deaths were reported as a consequence of the procedure.

Patients that developed a pneumothorax requiring a chest drain were on average 4 years older. They had an average 0.6cm greater distance travelled by the needle to the lesion and were 0.4 cm smaller in diameter.

Conclusions Complication rates were acceptable when compared to BTS guidelines.

Older age, smaller lesions, and lesions further from pleura are risk factors for a serious pneumothorax.

P126 AMBULATORY PNEUMOTHORAX WITH THE PLEURAL VENT IN A DGH IN THE NORTH EAST OF ENGLAND

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Introduction Ambulatory pneumothorax management saves inpatient days and is feasible with the Rocket pleural vent (PV) at the expense of higher rate of complications in primary spontaneous pneumothorax (PSP) (RAMPP study¹). The HiS-Pec study² in secondary spontaneous pneumothorax (SSP) showed that PV was probably dangerous. We have a local service with strict inclusion criteria (WHO PS 0–2, ambulant patients) using the PV.

Methods We retrospectively analysed all pneumothoraces managed with a PV from March 2018-April 2021.

Results 50 patients were identified. Table 1 shows the characteristics of 32 patients with PSP and 16 patients with SSP managed with the PV. The other 2 patients were iatrogenic

Abstract P126 Table 1

	PSP	SSP
Number	32	16
Mean age (years)	30.9	61.5
Mean number of days PV in situ	5.9	4.5
Current tobacco smokers	17	1
Current marijuana smokers	11	0
Ex-smokers	0	15
Never smokers	14	0
Number with Respiratory comorbidity	2	16
<i>Description of comorbidity</i>		
Previous pneumothorax	2	2
COPD	0	12
Asbestosis	0	1
Non specific fibrotic lung disease	0	1
Lung cancer	0	1
Rheumatoid lung disease	0	1

Abstract P126 Table 2

Adverse events (total)	PSP (12)	SSP (2)	Was a change in intervention required?
Description of adverse events			
Re-expansion pulmonary oedema (REPE)	1		No
Pain	5		1 vent was removed, and patient observed
Allergic reaction to dressing	1		ICD inserted
Surgical emphysema (SE) with no kinks or blockage	2	1	3 required ICD
Blockage of PV with fibrin or secretions or kinked on rib, causing SE	3	1	PV in patient with SSP replaced with another. All 2 PSP patients required an ICD

pneumothoraces secondary to image guided biopsies. Table 2 shows the adverse events related to those vents. Total number of bed days saved are 267.

Conclusions Complication rates are comparable RAMPP trial and commoner with PSP patients. There is no indication of the PV being unsafe in SSP, but our cohort is highly selective and thus at risk of significant bias. Our protocol works locally and we are happy to share it if needed.

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P127 LANCASHIRE AND SOUTH CUMBRIA REGIONAL TRACHEOSTOMY TEAM: ANNUAL IMPACT OF A SPECIALIST COMMISSIONED SERVICE

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Evidenced annual impact of a specialist commissioned regional tracheostomy team aiming to reduce the risk of community tracheostomies.

There are an increasing number of tracheostomies being inserted nationally with no national framework for ongoing review following discharge to the community setting. This has the potential to result in poor clinical outcomes and ongoing dependence on acute care services and high cost packages of care. Prior to this service innovation, community tracheostomy patients were managed primarily by GP's with very few patients receiving specialist input. We found that this was resulting in repeated hospital admissions, lack of specialist review to assess for weaning potential and due to the lack of tracheostomy competent placements, was causing individuals to be relocated away from their families. £301,000 investment from regional Clinical Commissioning Groups (CCG's) was secured in April 2020 to create a specialist Nurse/Allied Health Professional led team consisting of 2.5 team members: Nurse (Clinical Lead), Physiotherapist and Speech and Language Therapist. Quantitative and qualitative data was collected during the first year of substantive funding to evidence service impact including: number of community decannulations with associated continuing health-care cost saving, reduced dependence on secondary care,

improved access to community placements, hospital admission avoidances and lived patient experiences. A total cost saving of £405,050.68 with an additional cost avoidance of £2,700,000 from acute in-reach decannulations during the first 6-month COVID-19 wave was achieved over this 12-month period. We have demonstrated the positive impact specialist tracheostomy services can have across primary and secondary care with the aim of this service model being used for national service provision pathway developments. Specialist tracheostomy services can achieve huge impact within the community setting both to improve clinical outcomes for this vulnerable patient group and to achieve substantial annual cost saving to the NHS.

P128 DEVELOPMENT OF A PULMONARY NODULE VIRTUAL PATHWAY

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Introduction Pulmonary nodules are monitored at our hospital as per BTS guidance.¹ Previously, most patients were seen for a new patient appointment and follow-up appointments were planned in anticipation of interval CT scan results. Results would be acted on when the report reached the requesting consultant, with the follow-up appointment postponed if CT findings were stable.

This system had several flaws. The volume of nodules detected made it difficult to see all patients in clinic. Follow-up appointments would often be out of sync with scans leading to unnecessary appointments. As follow-up demand often outstripped capacity, outpatient follow-up did not act as an effective safety-net for problems with reports reaching requestors.

Development of a Virtual Pathway We developed a new pathway, improving several aspects of the system. Patients suitable for the Virtual Pathway are identified by Respiratory consultants based on referrals, CT results or via MDT. Patients are sent an information leaflet about pulmonary nodules with the option of requesting further information, rather than routinely offering new patient appointments. Interval scans are tracked by a database managed by a Specialty Doctor who ensures that scans have been requested, acted on, and patients notified of results.

Outcomes In the first year we tracked 244 follow-up scans, including 136 for nodule surveillance. Other reasons included follow-up of inflammatory change, lymph nodes and anterior mediastinal abnormalities. Only three nodule patients requested a new patient telephone consultation for further information. The database identified several 'near misses', including (1) a requesting consultant name being incorrectly transcribed, leading to the report not reaching the requesting consultant; (2) one overdue scan due to a radiology booking error, and (3) one scan that was not requested. No follow-up appointments were required for patients with stable findings.

Conclusion Development of a Pulmonary Nodule Virtual Pathway, utilising an interval scan database, reduced outpatient appointments whilst improving safety netting of pulmonary nodule surveillance.