

finance teams, staff costs include the full cost to the organisation including superannuation (13%) and national insurance contributions.

Results 8(33.3%) of 24 SP were discharged from ED. 16(PSP : SPS = 7 : 9) were admitted; 10 (62.5%) accepted to have DC. Please see the results tabulated.

Conclusions Carefully organised DC for SP is safe, cost effective and meets with high patient approval and satisfaction.

TABLE 1: Ayrshire Criteria for Domiciliary Care (DC) of Spontaneous Pneumothorax with HV	
Patient has Persistent Air Leak	
Patient understands Pneumothorax and treatment principles	
Patient is independent for all ADLs	
Patient has family at home	
Patient understands Heimlich Valve (HV) action	
Patient and family want Domiciliary Care with HV	
Patient willing to come for 72 hourly CWR	
Patient has telephone at home	
Patient agrees to only sponge bath during DC	
Patient able to give informed consent	
Nursing staff express no concerns	

TABLE 2: Healthcare cost avoidance by DC of SP		
AYRSHIRE INDEX	Bed days saved by DC for 10 SP with a mean Ayrshire Index of 62%	Cost avoidance @£448/day
Duration of DC of SP with HV as % of total duration of SP (days)	59	£26,432
Mean for 10 patients = 62% (Range 5%-94%)		

TABLE 3: Cost of Resource Use in Delivering DC for SP

Cost of Ambulatory Bag With HV (Bags changed once a week)	Cost of CWR @ £162 per visit	Cost of Xray @ £52 per CXR	Additional Costs	Total resource cost
£182	£3,888	£1,352	Consultant time @ £28.30 per patient plus One off Nurse Training cost: £262.91	£5,967.86

Table 4: Potential resultant Cost Savings by providing Domiciliary Care (DC) for eligible patients with Spontaneous Pneumothoraces (SP) using an ambulatory Heimlich Valve (HV).	
Cost avoidance by DC for SP (Table 2) minus Cost of resource use in delivering service (Table 3)	
= £20,464.14	
For 10 patients with a mean Ayrshire Index of 62%	

Table 5: Complications encountered with our cohort of patients with DC for SP with HV	
1) One patient became anxious with DC : Readmitted	
2) One patient had minor self limited surgical emphysema - continued with DC. Uneventful resolution	
3) One patient disconnected the ICD himself and reconnected it as he thought the HV was blocked. This Patient was removed from DC as his compliance with medical instructions was deemed inadequate. He completed the rest of his treatment as an in-patient. He did not suffer any complications.	
No episodes of infections	
No episodes of bleeding.	
No episodes of tension Pneumothoraces	
No deaths	

Table 6: Patient Satisfaction with Domiciliary Care (DC) for eligible patients with Spontaneous Pneumothoraces (SP) using an ambulatory Heimlich Valve (HV)	
Assessed continuously during CWR and formally with a Patient Satisfaction Questionnaire. Some relevant responses are given below	
Overall Patient Satisfaction with Service: High	
Did patients feel supported throughout DC : Completely Agree (100%)	
Were patients given sufficient information prior to consent : Dis-	
Were patients worried when DC for SP was suggested? Somewhat: 15% Not at all : 30% A little : 55%	
What helped patients make up mind to have DC for SP?	
a) Wanted to be at home for my treatment. b) Confidence in the medical team	

Abstract 211 Figure 1

P212 SHOULD INTERCOSTAL TUBE DRAINAGE BE THE FIRST INTERVENTION IN THE MANAGEMENT OF PRIMARY SPONTANEOUS PNEUMOTHORAX WITH COMPLETE LUNG COLLAPSE?

MB Ganaie, S Bikkamallu, MA Khalil, MA Afridi, M Haris, IR Hussain; *University Hospitals of North Staffordshire, Stoke-on-Trent, United Kingdom*

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Introduction and Objectives Primary Spontaneous Pneumothorax (PSP) is a common presentation with significant variation in severity and treatment strategies globally. There is no differentiation between 'large' PSP with complete lung collapse and 'large pneumothorax' in the current treatment algorithms. Previous studies comparing needle aspiration (NA) and intercostal tube (ICT) drainage for all PSP requiring intervention have shown no significant difference in immediate success rate, early failure rate and length of stay. We aimed to compare NA with ICT as the first intervention in those with complete lung collapse.

Methods Retrospective, observational study of 212 consecutive pneumothorax episodes between January 2012 and December 2012. Those with secondary spontaneous pneumothorax (SSP), history of trauma and iatrogenic pneumothorax were excluded. Pneumothorax with no visible aerated ipsilateral lung on plain chest radiograph was defined as 'complete lung collapse'. Patient records and plain chest radiographs on PACS were reviewed and data was analysed. Values of $p < 0.05$ were considered statistically significant.

Results Of the 212 episodes, 51 (33%) were PSP. Median age was 29 years (IQR 22-38); male 33(75%), female 18(25%). 5 (1%) were observed; 28(55%) had NA and 18(36%) had ICT as 1st intervention. NA was successful in 13(46%) which is comparable to previous studies. 33(65%) required hospitalisation and median length of stay (LOS) for all PSP was 4 days. 18(35%) required definitive surgical intervention.

Conclusion Our results show significantly better lung re-inflation rates with ICT as the first intervention in the management of PSP with complete lung collapse and there was no added benefit in performing NA. We propose a further sub-group of PSP with complete lung collapse in which NA should not be attempted, however well-designed prospective studies are required to validate this.

Abstract P212 Table 1 - PSP with complete lung collapse

	Needle aspiration as 1 st intervention (n=6)	ICT drainage as 1 st intervention (n=10)	P value
Age, years, median(IQR)	30 (25-32)	32.5 (29-38)	>0.99
Smoking history	1 (17%)	3 (30%)	>0.99
Never smoked, n(%)	2 (33%)	1 (10%)	0.51
Ex-smokers, n(%)	3 (50%)	6 (60%)	>0.99
Current smokers, n(%)			
Symptoms	5 (83%)	8 (80%)	>0.99
Chest pain, n (%)	4 (67%)	10 (100%)	0.125
Dyspnoea, n (%)			
Length of stay, days, median(IQR)	5.5 (4-10)	9 (4-13)	-
Successful lung re-expansion, n(%)	0	6 (60%)	0.03
Requiring surgical intervention, n(%)	2 (33%)	4 (40%)	>0.99

Categorical variables shown as n(%), comparisons made with Fisher's exact test; Continuous variables shown as median (25th- 75th percentile), comparisons made with Wilcoxon signed rank test.

P213 NEVER EVENTS & THE CHECKLIST MANIFESTO FOR INTERCOSTAL CHEST DRAINS

B Khan; *Darent Valley Hospital, Dartford, Kent, UK*

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Background In the complex medical environment, clinicians commonly face varying challenges especially when undertaking invasive procedure with the risk of potential to harm patients. Checklists have a role in not only helping overcome human fallibility, but also ensuring that key steps are adhered to in order to ensure patient safety.

Intercostal chest drains are amongst the most invasive procedure undertaken in Internal Medicine, often out of hours and in emergent clinical situations, and possibly in less than ideal environments and with limited or no supervision. All of these factors have been highlighted in the 2008 UK National Patient Safety Agency (NPSA) report highlighting 780 events of harm including 12 deaths from intercostal chest drain insertions¹. The NPSA Never Events² list includes wrong site surgery, and in the respiratory discipline this encompasses the inserting of a chest drain on the wrong side. Never Events are preventable because: there is guidance that explains what the care or treatment should be; there is guidance to explain how risks and harm can be prevented; and there has been adequate notice and support to put systems in place to prevent them from happening.

Methodology A systematic review of available literature around chest drain insertion, proformas and checklists was conducted.