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.

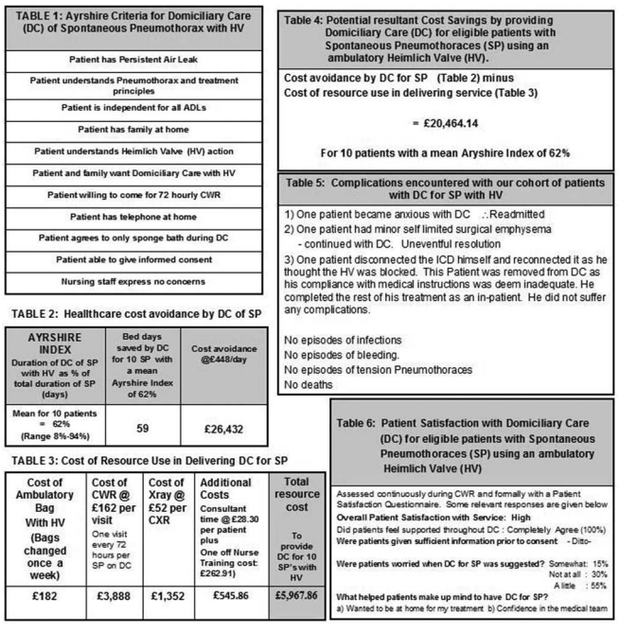

TABLE 1: Ayrshire Criteria for Domiciliary Care (DC) of Spontaneous Pneumothorax with HV

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 Duration of DC of SP with HV as % of total duration of SP (days)	Bed days saved by DC for 10 SP with a mean Ayrshire Index of 62%	Cost avoidance @£448/day
Mean for 10 patients = 62% (Range 8%-94%)	59	£26,432

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 One visit every 72 hours per SP on DC	Cost of Xray @ £52 per CXR	Additional Costs Consultant time @£28.30 per patient plus One off Nurse Training cost: £262.91)	Total resource cost To provide DC for 10 SP's with HV
£182	£3,888	£1,352	£545.86	£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 Aryshire 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 deem 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 - Ditto-
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?

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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 1st intervention (n=6)	ICT drainage as 1st 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– 75thpercentile), comparisons made with Wilcoxon signed rank test.

P213 NEVER EVENTS & THE CHECKLIST MANIFESTO FOR INTERCOSTAL CHEST DRAINS

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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.

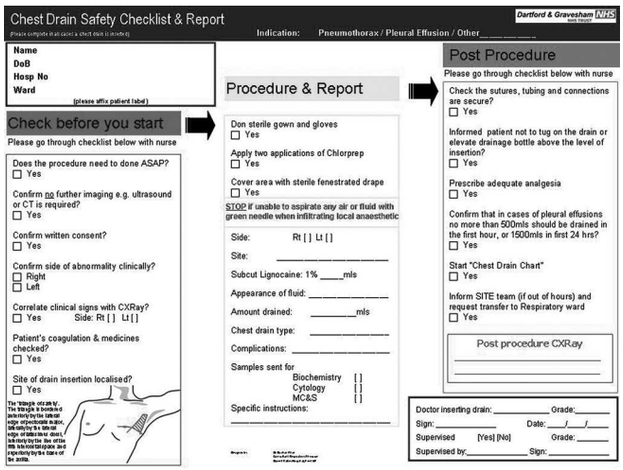
Methodology A systematic review of available literature around chest drain insertion, proformas and checklists was conducted.

Other relevant checklists e.g. WHO surgical safety checklist were also reviewed. After an iterative design process involving chest physicians, general physicians, trainees and nurses, a checklist was devised, piloted and introduced into practice.

Conclusion The Chest drain safety checklist was introduced in August 2011, and has since been adopted by the A&E Department and also neighbouring hospitals. Since its introduction, there have not been any adverse incidents in the Medical Department involving intercostal chest drain insertions. There is more confidence amongst nursing staff as they feel more involved and engaged. Trainees find the structured approach particularly helpful in ensuring key steps are not missed and patient safety ensured, and seek supervision and assistance more readily.

REFERENCES

1. NPSA Rapid Response Report 2008 NPSA/2008/RRR003
2. The NPSA 'never events' 2011/2012, Department of Health



Abstract P213 Figure 1.

P214 IMPROVING OUTCOMES–THE WORK OF A SPECIALIST MESOTHELIOMA MDT

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10.1136/thoraxjnl-2013-204457.366

Introduction Mesothelioma is an uncommon malignancy with a poor prognosis, and in order to improve its management all cases within each cancer network should be discussed at a specialist MDT, which advises individual cancer units on the best treatment approach for their patients. We have reviewed the work of the specialist mesothelioma MDT for the Mersey and Cheshire Network (MCCN) since its inception in 2009.

Aim and Methods We assessed all patients referred from the 6 contributing lung cancer units (A to F) over 4 years, looking at histology, performance status (PS), investigations undertaken, treatments offered, and mortality rate.

Results Of 182 patients (mean age 76 years [SD 8], median PS 1, 157 male), 11 (6%) had a clinical diagnosis only. One hundred and seventy one patients had a tissue diagnosis (45% epitheliod, 7% sarcomatoid, 13% mixed, 29% unspecified). This was obtained by VATS in 79/171 (46%) and CT-guided biopsy in 43/171 (25%). 21 (12%) had a cytological diagnosis only.

MDT advice on treatment options was offered in all cases; 88 (48%) received radiotherapy and 51 (28%) chemotherapy. 142 (78%) patients have died (median survival of 378 days). 1-year and 2-year survival rates were 51.3% and 16.9% respectively. However, in those who received chemotherapy, survival improved significantly (1-year 91.7% and 2-year 63.5% respectively; both $p < 0.0001$).

Data for individual cancer units is given in the table (table 1).

Conclusions We have shown that those patients offered active treatment have a distinct survival advantage compared to the remainder. The cooperation of 6 cancer units in the MCCN to form a specialist mesothelioma network with a regular MDT has shown that this approach can improve the outcome for this unfortunate group of patients.

Abstract P214 Table 1.

PARAMETER	Unit A	Unit B	Unit C	Unit D	Unit E	Unit F
Number	34	27	50	23	20	28
ALIVE	18%	19%	30%	13%	15%	29%
RADIOTHERAPY	53%	59%	38%	52%	35%	57%
CHEMOTHERAPY	29%	33%	30%	22%	30%	21%
VATS	35%	30%	46%	30%	55%	64%
MEDIAN SURVIVAL (DAYS)	193	404	388	500	128	374

P215 ALTERING PRACTICE IN MESOTHELIOMA–THE VALUE OF SPECIALIST MDT INPUT

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10.1136/thoraxjnl-2013-204457.367

Introduction Mesothelioma is an uncommon malignancy with a poor prognosis, and in order to improve its management all cases within each cancer network should be discussed at a specialist MDT, which advises individual cancer units on the best treatment approach for their patients. The regional specialist mesothelioma MDT for the Mersey and Cheshire Cancer Network (MCCN) was incorporated in 2009, and we were interested to assess the effect this had on the outcome of mesothelioma patients attending our large cancer unit.

Method We compared clinical parameters for all our mesothelioma patients before and after the inception of the specialist MDT, looking at symptoms, investigations carried out, the histological rate and type, and treatments offered.

Results Fifty five patients were diagnosed between 2007 and 2011(mean age 75 years [SD 7.35], median WHO performance status 1, 46 male). Most (85%) were symptomatic at presentation–18 (32%) had chronic cough, 27 (49%) pain and 38 (69%) dyspnoea. 23 (42%) had documented asbestos exposure. Diagnosis was made clinically in 1 patient and by cytology alone in 4 patients.

Abstract P215 Table 1.

Parameter		2007–8	2010–11	p -value
Number		19	24	
Diagnostic Test	CT-biopsy	4	5	NS
	VATS	11	17	NS
Treatment	Radiotherapy	7	16	<0.05
	Chemotherapy	7	6	NS
	Decortication	6	1	<0.05
	Other Surgery	6	2	<0.05