

Appendix 2: Addition tables [posted as supplied by author]

Table A: Unit costs and sources

	Unit	Cost/unit	Source
Clinical costs associated with the trial			
Tele-monitoring costs t+ asthma service Transmission charge	Cost per patient Reimbursed per patient	£64.10 £5.00	Contracted cost to provide t+ asthma monitoring for up to 156 people = £10,000
Practice nurse trial consultations Consultation	per minute	£0.47	Personal Social Services Research Unit.[PSSRU]
Other healthcare costs during the 6 months of the trial			
General practitioner (including Out of Hours) Surgery consultation Telephone consultation GP visit (including travel time)	per consultation per consultation per consultation	£36.00 £22.00 £58.00	Personal Social Services Research Unit.[PSSRU]
Practice nurse Clinic consultation Telephone consultation	per consultation per consultation ⁱ	£11.00 £5.50	Personal Social Services Research Unit.[PSSRU]
Walk-in centre attendance	per attendance	£33.00	Personal Social Services Research Unit.[PSSRU]
Respiratory out-patients costs New referral Follow-up appointment	per consultation per consultation	£186.00 £118.00	DH reference costs.[DH]
Accident and Emergency	per attendance	£111.00	
Inpatient costs Admission <1 days Admission <4 days	per admission per admission	£269 £1097.00	DH reference costs.[DH]
Asthma prescribing costs in the 6 months of the trial			
Bronchodilators Inhaled steroids Add-on therapy ⁱⁱ Combination inhalers ⁱⁱⁱ Antibiotics (for chest infections) Devices (Peak flow meters, spacers) Prednisolone (for acute asthma)	per inhaler, device or tablet		British National Formulary.[BNF]

Prices are in £ sterling for the year 2008.

ⁱ Assuming the telephone consultation at half the duration of a surgery consultation

ⁱⁱ Long-acting bronchodilators, leukotriene receptor antagonists, theophyllines, anticholinergics, cromones

ⁱⁱⁱ Combination inhalers: inhaled steroids + long-acting beta₂ agonists

Sources:

PSSRU: Curtis L. Unit Costs of Health and Social Care 2008. Personal Social Services Research Unit University of Kent. Available from www.pssru.ac.uk (accessed December 2011)

DH: Department of Health. National Schedule of Reference Costs 2007-08 for NHS Trusts and PCTs. Available from http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_098945 (accessed December 2011)

BNF: British Medical Association and Royal Pharmaceutical Society. *British National Formulary September 2008*. London, BMJ Group and Pharmaceutical Press: 2008

Table B: Per-protocol analysis*

		Baseline Mean (SD)	6 months Mean (SD)	Mean change (95% CI)	Mean difference of mean change (95% CI)
<i>Primary outcomes</i>					
ACQ	Mobile phone-based monitoring (n=66)	2.30 (0.72)	1.42 (0.98)	0.88 (0.66 to 1.10)	0.04 (-0.25, 0.33)
	Paper-based monitoring (n=79)	2.16 (0.61)	1.24 (0.80)	0.92 (0.73 to 1.11)	
KASE-AQ (Self-efficacy scale)	Mobile phone-based monitoring (n=48)	77.4 (9.0)	82.0 (11.8)	-4.6 (-7.6 to -1.6)	0.2 (-3.6, 3.9)
	Paper-based monitoring (n=58)	80.1 (9.8)	84.5 (9.6)	-4.4 (-6.8 to -2.0)	
KASE-AQ (Attitude scale)	Mobile phone-based monitoring (n=52)	79.6 (7.0)	82.1 (10.6)	-2.5 (-4.6 to -0.4)	-0.2 (-3.1, 2.7)
	Paper-based monitoring (n=53)	80.6 (6.4)	83.3 (8.1)	-2.8 (-4.8 to -0.7)	
<i>Questionnaire-based secondary outcomes</i>					
miniAQLQ	Mobile phone-based monitoring (n=35)	4.30 (0.94)	5.27 (1.32)	-0.97 (-1.16 to -0.69)	0.11 (-0.31, 0.54)
	Paper-based monitoring (n=45)	4.57 (0.94)	5.43 (1.17)	-0.86 (-1.18 to -0.53)	
mPEI	Mobile phone-based monitoring (n=67)	6.03 (3.45)	7.13 (4.22)	-1.10 (-2.15 to -0.06)	1.42 (-0.02, 2.86)
	Paper-based monitoring (n=72)	7.33 (3.71)	7.01 (4.01)	0.32 (-0.69 to 1.33)	

* This table includes only subjects that had complete information for each respective questionnaire at all time points

Table C: Trends over time: Intention-to-treat analysis of repeat values

	Baseline Mean (SD)	3 months Mean (SD)	6 months Mean (SD)	Mean change (95% CI)		Repeat measures p-values*	
				Baseline to 3 months	Baseline to 6 months	Within group	Between group
<i>Primary outcomes</i>							
ACQ							
Mobile phone-based monitoring (n=139)	2.32 (0.73)	1.95 (0.89)	1.57 (0.99)	0.37 (0.25 to 0.49)	0.75 (0.61 to 0.89)	< 0.001	0.680
Paper-based monitoring (n=139)	2.29 (0.77)	1.78 (1.05)	1.56 (1.09)	0.50 (0.36 to 0.64)	0.73 (0.57 to 0.89)		
KASE-AQ (Self-efficacy scale)							
Mobile phone-based monitoring (n=110)	77.4 (9.5)	78.7 (9.9)	81.8 (11.1)	-1.3 (-2.6 to 0)	-4.4 (-6.1 to -2.7)	0.067	0.492
Paper-based monitoring (n=121)	78.0 (10.5)	78.5 (11.1)	80.4 (11.5)	-0.5 (-1.6 to 0.6)	-2.4 (-3.9 to -0.9)		
KASE-AQ (Attitude scale)							
Mobile phone-based monitoring (n=118)	80.0 (7.4)	80.6 (8.3)	81.8 (9.5)	-0.5 (-1.3 to 0.2)	-1.7 (-2.9 to -0.6)	0.389	0.340
Paper-based monitoring (n=122)	79.4 (7.2)	80.0 (7.8)	81.2 (8.6)	-0.6 (-1.5 to 0.3)	-1.8 (-2.9 to -0.6)		
<i>Questionnaire-based secondary outcomes</i>							
miniAQLQ							
Mobile phone-based monitoring (n=97)	4.25 (0.91)	4.67 (1.38)	5.0 (1.32)	-0.43 (-0.60 to -0.26)	-0.75 (-0.94 to -0.57)	0.001	0.495
Paper-based monitoring (n=104)	4.34 (1.08)	4.81 (1.32)	4.99 (1.34)	-0.47 (-0.65 to -0.29)	-0.65 (-0.84 to -0.46)		
mPEI							
Mobile phone-based monitoring (n=136)	5.83 (3.67)	6.20 (3.77)	6.79 (4.0)	-0.37 (-0.89 to 0.15)	-0.96 (-1.62 to -0.31)	0.135	0.485
Paper-based monitoring (n=135)	6.93 (3.78)	6.30 (3.83)	6.71 (3.92)	0.64 (0.07 to 1.20)	0.22 (-0.44 to 0.88)		

* adjusted for age and gender † Two-way interactions between all outcomes and groups examined were not significant except for mPEI which was significant (p = 0.024)