

**The clinical and cost-effectiveness of point-of-care tests  
(CoaguChek system, INRatio2 PT/INR monitor and ProTime  
Microcoagulation system) for the self-monitoring of the  
coagulation status of people receiving long-term vitamin K  
antagonist therapy compared with standard UK practice:  
systematic review and economic evaluation**

**Additional cost-effectiveness analysis scenarios prepared for the Diagnostic  
Advisory Committee**

**Produced by the Aberdeen HTA group**

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## **Scenarios incorporating additional costs for patient access to monitoring/dosing software**

At the meeting of the Diagnostic Advisory Committee on January 8, 2014, some concerns were raised regarding the potential omission of additional costs, from the economic model, of providing access to dosing/monitoring software for patients who self-manage their anticoagulation therapy. It was noted that the implementation of self-monitoring may require self-managing patients to have direct access to dosing software through a web-based interface linked with their clinic’s system. While the additional licensing cost for this (per patient) is unknown, the analysis below presents maximum values this parameter could reach for self-monitoring (with CoaguChek XS) to remain below given thresholds of willingness to pay per QALY gained. In each analysis all other base case parameter values and assumptions are held constant, with 50% of patients self-testing and 50% self-managing. Finally, an alternative approach is considered whereby self-managers phone in or send in all test results and a nurse enters the result on the clinic system (as per self-testing).

### Threshold values for additional software/administration costs for self-monitoring patients

The following Tables present threshold values for the additional cost per self-monitoring patient for access to monitoring/dosing software through a web-based interface. In the primary analysis, this additional cost is applied only to patients in the model that are self-managing. This is because access to clinic software is already accounted for in the model for self-testers, via the cost of the patient phoning in each test result and the nurse entering the result in the clinic system. However, a second analysis (Table A2) reports threshold values for the increased software costs assuming all self-testers are also given direct access to the system to enter their results (note that this will double count the cost of entering test results into the system for self-testers).

**Table A1:** Threshold values for cost-effectiveness when the additional cost is applied to self-managing patients only

<b>Ceiling ratio of WTP per QALY gained</b>	<b>Threshold value for the additional cost (per patient per year) of access to monitoring/dosing software</b>
£20,000	£188.48
£30,000	£284.24

Note: results expressed for mixed self-monitoring with CoaguChek XS

**Table A2:** Threshold values for cost-effectiveness when the additional cost is applied to self-monitoring (self-testing and self-management).

<b>Ceiling ratio of WTP per QALY gained</b>	<b>Threshold value for the additional cost (per patient per year) of access to monitoring/dosing software</b>
£20,000	£95.04
£30,000	£143.32

Note: results expressed for mixed self-monitoring with CoaguChek XS

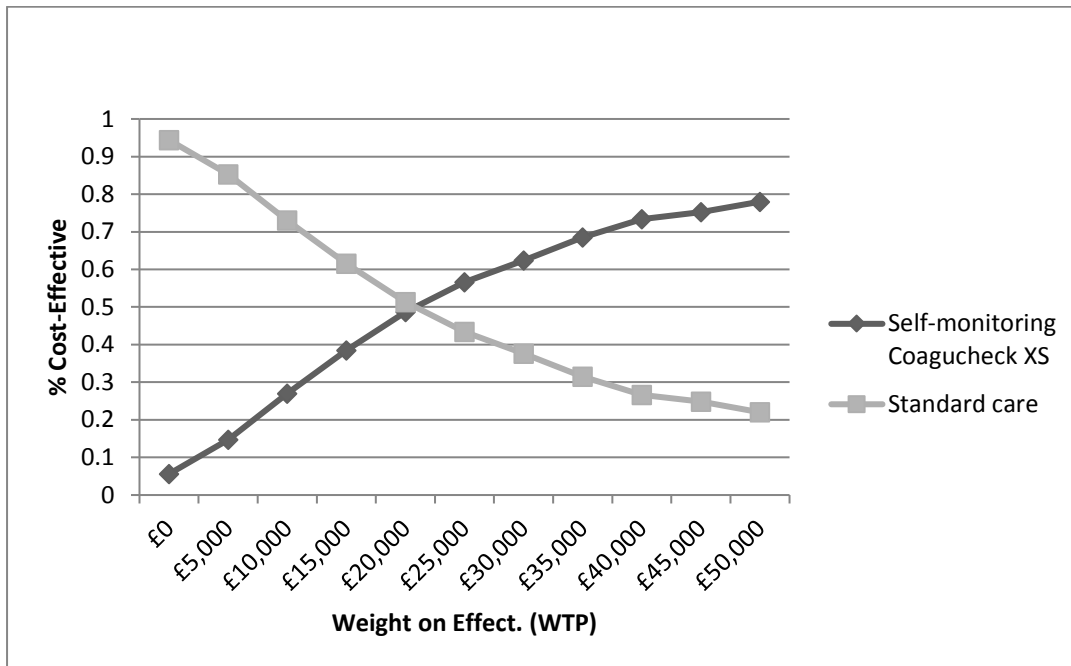
Table A3 reports the incremental cost-effectiveness results for mixed self-monitoring (50% self-testing / 50% self-management) assuming that it does cost an additional £190 per self-managing patient per year to have access to dosing software via a web based interface. Figure A1, shows the corresponding cost-effectiveness acceptability curve for CoaguChek XS applying this same assumption.

Table A4 shows the results for the alternative manual approach whereby self-managing patients phone in their results and dose (based on a paper algorithm) and a nurse in the clinic enters this into the clinic system. Figure A2 shows the results of the probabilistic analysis for this alternative model.

**Table A3:** Incremental cost-effectiveness of self-monitoring with CoaguChek XS (assuming it costs an additional £175 per self-managing patient per year for access to dosing software).

<b>Strategy</b>	<b>Mean costs</b>	<b>Incremental costs</b>	<b>Mean QALYs</b>	<b>Incremental QALYs</b>	<b>ICER*</b>
Standard monitoring	£7,324	-	5.479	-	-
Self-monitoring (CoaguChek XS)	£7,876	£552	5.507	0.027	£20,157

**Figure A1:** Cost-effectiveness acceptability curve for self-monitoring with CoaguChek XS (assuming it costs an additional £190 per self-managing patient per year for access to dosing software)



**Table A4:** Incremental cost-effectiveness of self-monitoring with CoaguChek XS (assuming self-managing patients phone in all their results to clinics for monitoring purposes)

Strategy	Mean costs	Incremental costs	Mean QALYs	Incremental QALYs	ICER*
Standard monitoring	£7,324		5.479		
Self-monitoring CoaguChek XS)	£7,625	£301	5.507	0.027	£10,987

**Figure A2:** Cost-effectiveness acceptability curve for self-monitoring with CoaguChek XS (assuming self-managing patients phone in all their results to clinics for monitoring purposes)

