

Liquid Gold: the cost-effectiveness of urine sample collection methods for young pre-continent children (Appendices)

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APPENDIX 1: CLINICIAN SURVEY**TABLE A1: Clinician Survey Results**

Survey of 20 expert clinicians. For each data point:

1. Clinician first asked for their estimate of the value based on their local clinical practice
2. Clinician then shown the value obtained from the literature review (model estimate)
3. Clinician then asked if the model estimate was an acceptable input for a general model based on plausible reflection of their observed local practice

	Clinician Estimate	Model Estimate	Model Estimate Reasonable
BAG			
Time	97mins	85mins	95% yes
Success	67%	96%	45% yes *
Send To Lab	48%	72%	70% yes *
Contaminated	67%	46%	90% yes
Recall If Contaminated	33%	N/A	N/A
CLEAN CATCH			
Time	83mins	30mins	75% yes *
Success	60%	64%	100% yes
Send To Lab	76%	80%	95% yes
Contaminated	26%	27%	100% yes
Recall If Contaminated	40%	N/A	N/A
5 MINUTE VOIDING STIMULATION (QUICK-WEE METHOD)			
Time	N/A	5mins	N/A
Success	49%	30%	95% yes
Send To Lab	79%	85%	95% yes
Contaminated	23%	27%	100% yes
Recall If Contaminated	37%	N/A	N/A
CATHETER			
Time	12mins	12mins	100% yes
Success	83%	90%	95% yes
Send To Lab	96%	95%	100% yes
Contaminated	11%	12%	95% yes
Recall If Contaminated	60%	N/A	N/A
SPA			
Time	8mins	N/A	N/A
Success	57%	44%	80% yes
Send To Lab	98%	100%	95% yes
Contaminated	5%	1%	100% yes
Recall If Contaminated	72%	N/A	N/A

* Where less than 80% of surveyed clinicians felt that the model estimate was a plausible reflection of their local practice, a counterfactual scenario analysis using the mean clinicians estimate was performed to determine the importance of that variable.

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APPENDIX 2: PROCESS MAPPING

Table A2: Results from 10 observed procedures

N.B Bag urine collection not performed in our clinical setting

Mean Procedure Time	Median Procedure Time	Mean Operator Time	Mean Assistant Time	Outcomes	Mean Equipment Use
CLEAN CATCH					
71mins	50mins	6mins	0	4 success 2 stopped 2 void & missed 1 retry 1 try other method	1 gauze 1 dressing pack 2 specimen jars 1 saline ampoule 1 bluey
5 MINUTE VOIDING STIMULATION (QUICK-WEE METHOD)					
9mins	8.5mins	7.4mins	0	3 success 6 try other method 1 retry	1 dressing pack 1 specimen jar 2 saline ampoule 1 bluey 2 gloves
CATHETER					
12mins	11mins	10mins	14.5mins	9 success 1 try other method	1 dressing pack 2 specimen jar 1 clorhex ampoule 1 lubricant 1 sterile gloves 1 catheter 1 syringe
SPA					
8.5mins	8.5mins	8.5mins	8mins	2 successful 8 try other method	1 dressing pack 1 specimen jar 1 clorhex ampoule 1 sterile gloves 1 needle 1 syringe

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APPENDIX 3: SENSITIVITY ANALYSES

TABLE A3: Sensitivity Analyses Results

	Urine Bag (GBP)	Clean Catch (GBP)	Voiding Stimulation (GBP)	Catheter (GBP)	SPA (GBP)
BASE CASE (AVERAGE COST OF OBTAINING AN ULTIMATELY DEFINITIVE SAMPLE)					
	112.28	64.82	52.25	49.39	51.84
ONE WAY SENSITIVITY ANALYSES OF KEY VARIABLES					
Staff Costs +20%	114.36	66.4	53.97	53.1	53.3
Staff Costs -20%	110.2	63.23	51.19	45.69	49.7
Equipment Costs +20%	112.62	65.07	52.51	49.88	52.15
Equipment Costs -20%	111.94	64.56	51.98	48.91	51.49
Bed Costs +20%	130.36	71.44	54.24	52.34	53.58
Bed Costs -20%	94.2	58.2	50.25	46.45	50.09
Doctor performs all procedures	112.84	65.74	53.38	49.39	51.84
Senior doctor performs all procedures	119.05	72.22	60.98	59.92	60.3
ONE WAY SENSITIVITY ANALYSES FROM SURVEY COUNTERFACTUALS					
Urine bag effectiveness reduced to 67%	119.43	-	-	-	-
Bag sample sent for culture if dipstick negative reduced to 48.5%	105.57	-	-	-	-
Clean Catch time increased to 83.25mins	-	118.15	-	-	-
PROBABILISTIC SENSITIVITY ANALYSIS FROM 1000 SIMULATIONS (MEAN, 95% CONFIDENCE INTERVAL) (AVERAGE COST OF OBTAINING AN ULTIMATELY DEFINITIVE SAMPLE)					
	126.43 (59.92-323.38)	65.03 (30.27-313.48)	51.21 (40.97-105.95)	48.60 (33.54-131.71)	50.67 (39.72-97.93)