

1 **TITLE**

2 The true relative financial cost of Planned Caesarean Birth (PCB) versus Planned Vaginal
3 Birth (PVB) in England for the year 2018/19 taking into account litigation and compensation
4 for harm: a sensitivity analysis.

6 **AUTHORS**

7 Jonathan H West(1) ; Myles J Taylor(2) ; Michael Magro(3)

8 (1) Former NHS Consultant in Obstetrics & Gynaecology. 2 Trews Weir Reach, Exeter EX2
9 4EG; Telephone 01392 279610

10 (2) Consultant Obstetrician & Gynaecologist, Royal Devon & Exeter NHS Foundation Trust

11 (3) Consultant Obstetrician & Gynaecologist, Barking, Havering and Redbridge University
12 Hospitals NHS Trust. Former Darzi Fellow, NHS Resolution (2016-7)

13

14 Correspondence: Jonathan H West - jw@multiverse1.com

15

16 Running head: True cost of planned caesarean study

17 **ABSTRACT**

18 **Objective:** To determine the true financial costs of Planned Caesarean Section and Planned
19 Vaginal Birth in England for the year 2018/19 after accounting for litigation and compensation
20 for harm (LCFH)

21 **Design:** Sensitivity analysis

22 **Background:** Average base costs per delivery remitted to NHS maternity providers for
23 Planned Caesarean Birth (PCB) and Planned Vaginal Birth (PVB) in 2018/19 were £3,948
24 and £3,270 respectively leading to a perception that PCB is more costly than PVB. Indemnity
25 costs potentially related to planned mode of delivery, however, add an average of
26 £1,571/delivery to overall costs.

27 **Method:** Retrospective analysis of costs according to planned mode of birth was performed
28 based on data and previous research published by NHS Resolution and NHS England.
29 Weighting of results according to PCB and PVB rates was performed in a manner similar to
30 the sensitivity analysis of PCB v PVB (without accounting for LCFH) performed by the
31 National Institute for Health and Care Excellence (NICE) in 2011

32 **Results:** Additional costs of LCFH resulted in revised costs of £4,245 and £5,030 for PCB
33 and PVB respectively – a cost advantage of £785 per delivery in favour of PCB.

34 **Conclusion:** Providers should not be discouraged from offering or women refused PCB on
35 grounds of cost.

36

37

38 Introduction

39 In April 2019 we published an analysis¹ of the causes and costs of litigation and
40 compensation for harm (LCFH) for maternity care for the year 2017/18. In this publication our
41 objective has been to evaluate how these claim costs, liabilities and charges related to the
42 planned mode of birth (PVB v PCB) in 2018/19.

43
44 Caesarean birth (CB) is often subject to negative perceptions by the public and health
45 professionals, especially with respect to its cost relative to planned vaginal birth. Examples of
46 this include: newspaper headlines (*'NHS policing pregnancies to put women off caesareans:
47 Mothers-to-be are having to beg for the procedure as hospitals face pressure to cut costs'*)²;
48 the economic analysis accompanying the NICE Guideline on CS (*'.. the costs of birth and
49 downstream costs associated with the outcomes... found that a planned vaginal birth was
50 approximately £700 cheaper than a maternal request CS. This implies that the NHS could
51 save £4.9 million for every percentage point reduction in Css'*)^{3 p217}; the National Audit
52 Office (*'.. the most common reasons for maternity claims have consistently been mistakes in
53 the management of labour and relating to caesarean sections.... The Department's objectives
54 include decreasing the number of 'unnecessary interventions' by promoting normal births'*)⁴
55 p16; and a plethora of journal publications e.g. *'FIGO position paper: how to stop the
56 caesarean section epidemic'*⁵.

57
58 NICE guidance is that PCB should be offered to women who request it but in a report

59 published by the charity 'Birthright' in August 2018⁶ it was noted that only 26% of NHS Trusts
60 are prepared to do this in line with their recommendation. Providing balance to negative
61 representations of the costs of PCB NICE also assessed that PCB may be cost-effective
62 when downstream costs such as urinary incontinence^{3 p220} were taken into account. Despite
63 the significant contribution that litigation and compensation for harm (LCFH) makes to
64 maternity costs, however, NICE did not and has not since considered it 'appropriate' to
65 include these in its economic models^{7 p94}.

66

67 **METHOD**

68 Authoritative sources of information and relevant previous analysis were identified and utilised
69 for reasons and in the manner that follows below.

70

71 NHS Resolution is tasked with the management of LCFH for NHS patients in England and
72 runs the Clinical Negligence Schemes for Trusts (CNST). Income to defend or settle claims
73 and provide compensation for harm is derived principally from members of the schemes and
74 subscriptions are adjusted annually to cover payments expected to be required for the
75 following year. Charges to subscribers lag behind actual costs of harm however because of
76 factors beyond NHS Resolution's control such as delays between incidents and claims and
77 Periodic Payment Orders (PPO's). NHS Resolution and its predecessor the NHS Litigation
78 Authority (NHSLA) produce annual reports and accounts as well as other publications
79 analysing and detailing factors responsible for claims.

80

81 From the NHS Resolution Annual Report and Accounts 2018/19 [8 p42](#) the value of new
82 clinical claims received for the year was reported to be £4,931.9 million, of which the obstetric
83 proportion was 50%, i.e. £2,465.9 million. Data is also available by year for maternity
84 deliveries, treatment numbers and cost data for NHS activity from NHS England, which for
85 2018/19 recorded 586,126 deliveries [9 sheet2 rows 1869-1904](#). The value of claims therefore
86 amounts to an average of £4,207 per delivery. Putting this into context the entire base costs
87 of all deliveries of every sort for the year amounted to £1,968,240 million (av. £3,358
88 /delivery).

89
90 Apart from setting CNST charges to cover immediate needs NHS Resolution uses actuarial
91 methodology to make financial provision for future cash flows. This takes into account known
92 outstanding claims, provision for incidents incurred but not reported (IBNR), probability of
93 settlement, adjustments for PPO's and HM Treasury discount rates. Taking these into account
94 the 2018/19 report [8 p9](#) notes that for the year.. 'the cost of harm was approximately £9 billion
95 of which approximately 60% relates to maternity claims'. That amounts, therefore, to
96 approximately £9,213 per delivery.

97
98 Although obstetric claims accounted for 50% of the overall value for the year [8 p42](#) the
99 proportion charged to obstetric providers is currently lower. Data for the CNST funding of all
100 schemes is reported in an NHS Resolution fact-sheet from which charges to maternity
101 providers can be totalled and found to be £735,679,542 [10 sheet 7, column H](#). From the
102 same source the obstetric proportion was thus 37.36% of the total CNST charges for all

103 specialties, which corresponds with the 37% reported in a personal communication for
104 2017/18 in our previous publication [1](#). CNST income from clinical scheme members is also
105 supplemented by funding from the Department of Health and Social Care (DHSC), which in
106 2018/9 amounted to £496 million [8 p17](#). Applying the same proportion (37.36%) as the
107 contribution to maternity care the total maternity funding for clinical schemes was therefore
108 £920,981,323, amounting to an overall indemnity cost of £1,571.30 per delivery.

109

110 Utilising the above sources of information and data we proceeded to estimate and sub-
111 categorise the proportion of LCFH claim values according to planned mode of birth into three
112 categories, namely: unaffected or equally affected by planned mode of delivery; solely or
113 predominantly attributable to the choice of PVB; and, solely or mainly attributable to the
114 choice of PCB. This was done by examining the breakdown of obstetric claims by value
115 reported in the NHS Litigation Authority publication 'Ten Years of Maternity Claims: An
116 Analysis of NHS Litigation Authority Data' (October 2012) [11 p17 'Figure 6'](#) and assuming that
117 the proportions continue to hold sufficiently true as to be applicable to current costs. Figure 1.
118 reproduces this data. The resulting proportions obtained from sub-categorisation were then
119 applied to overall obstetric LCFH costs, both those currently recovered through CNST and
120 DHSC funding and anticipated true costs for which financial provision must be made i.e. the
121 'annual cost of harm' reported by NHS Resolution. 'Base costs' were obtained from published
122 NHS Reference costs, which was also the method employed by NICE in their economic
123 analysis comparing PCB and PVB costs in 2011 [3 p209](#).

124

125 **Results**

126 Our sub-categorisation and its impact on the relative risks is as follows, along with our
127 justification. Figures following claim categories in brackets below are the proportionate values
128 of the claims to the overall total. Weighted totals have been calculated assuming a PCB rate
129 of 9.5%, which was the average over the period of the NHSLA report ¹². Where deemed
130 appropriate figures have been rounded to the nearest one or two decimal places.

131

132 ***From Figure 1.***

133

134 ***Claim values from causes deemed unaffected or likely to be equally affected by***
135 ***planned mode of delivery:***

136 Accident (0.02%); Anaesthetic (0.61%); Antenatal Care (4.64%); Antenatal investigations
137 (4.81%); Bladder (0.28%); Drug error (0.28%); Maternal Death (0.64%); Nursing Care
138 (0.01%); Other (1.29%); Postpartum haemorrhage (0.1%); Psychological (0.02%); Retained
139 swabs (0.1%); Stillbirth (0.5%); Cerebral Palsy (3.24%)* **Subtotal: 16.55%... a)**

140

141 ***Sole or predominantly PVB causes:***

142 Caesarean Section (CS)** (6.12%); CTG interpretation (14.95%); Management of labour
143 (13.6%); Operative vaginal delivery (3%); Perineal trauma (1%); Shoulder dystocia (3.32%);
144 Uterine rupture (3.31%); Cerebral Palsy (CP)* (37.28%) **Subtotal: 82.58% ... b)**

145

146 ***Sole or predominantly PCB causes***

147 This figure has been calculated by excluding the 71% of claims values related to CS

148 attributed in the NHSLA report to 'delay in delivery', leaving 29% remaining as attributable to
149 CS procedures. The proportion of the overall claims value attributed to CS in Table 1. is
150 6.93%, so 29% of 6.93% i.e. 2.0097% is attributable to complications of the CS procedures
151 themselves. During the period of the report the PCB rate was 9.54% and the emergency CB
152 rate was 14%, giving a total CB rate of 23.54% of which 40.5% was due to PCB. The
153 proportion attributable to PCB was therefore $= 2.0097\% \times 40.5\% = 0.81\%$

154 **Subtotal = 0.81%.. c)**

155

156 **Calculations**

157 The subtotal 'a)' above estimates 83% (100% - 16.55%) of the values of claims to be related
158 to the planned mode of delivery. Using the same methodology as in the NICE economic
159 analysis in order to compare costs the amounts (calculated from the overall total and
160 proportions b) and c)) for PVB and PCB need to be weighted according to PCB (9.5%) and

161 PVB (90.5%) rates [12](#). **Figure 2.** Shows workings taken from a spreadsheet in which the
162 above subtotals were applied to the data in the 'Ten years of maternity claims' publication [11](#)
163 to derive the ratio of the claim values attributable to PVB and PCB over the period of the
164 study. The ratio arrived at for PVB value:PCB value was 5.91:1... **ratio = 5.91:1 ...d)**

165

166 Applying this ratio d) to 2018/19 indemnity costs (CNST+DHSC contribution) we have applied
167 the formula: *Indemnity Costs = (number of PCB deliveries x av. PCB indemnity cost) +*
168 *(number of PVB deliveries x av. PCB cost x 5.91) where Indemnity Costs = £920,981,323,*
169 *number of PCB deliveries = 75,779, and number of PVB deliveries = 510,347.*

170

171 This results in an average indemnity cost for PCB of £297/delivery and £1,760 per PVB
172 delivery, a difference of £1,464. The overall costs of delivery may now be calculated by
173 adding the costs of LCFH to the 'Base Costs' of PCB and PVB, which for 2018/19 were
174 £3,947 and £3,270 respectively – an advantage of £677 to PVB without LCFH costs. After
175 taking indemnity costs into account, however, the true costs of PCB and PVB are found to be
176 £4,245 and £5,030 respectively – an advantage of £785 in favour of PCB.

177
178 Financial provision made by NHS Resolution, reported as the 'annual cost of harm' for the
179 year is 9.8 times higher than the indemnity charges, however. If this is taken into account the
180 difference between the cost of PCB and PVB would be correspondingly higher.

181
182
183 *Although a relatively small proportion of all CP cases by far the most that lead to claims arise
184 from brain damage caused during labour. In the 2017 NHS Resolution publication 'Five years
185 of cerebral palsy claims' [13 p59](#) the author and co-author of this study analysed fifty CP
186 claims in depth. Of these four (8%) including the only one delivered by elective CS arose from
187 causes unrelated to the mode of delivery e.g. late deficiencies in neonatal care (review by the
188 author MM of the case details). 8% of the Figure 1 amount for CP claims ($8\% \times 40.53\% =$
189 3.24%) has thus been added to the 'unrelated causes' total with the remainder (37.28%)
190 being attributed to PVB

191
192 ** the explanation for the allocation of 6.12% of CS causes to PVB prior to weighting is
193 explained above under 'PCB causes' and is due to the the addition of claims due to
194 delays/emergency CS procedures less the amount (0.81%) due to PCB i.e. from Figure 1.

195 'Caesarean section', $6.93\% - .81\% = 6.12\%$ to PVB.

196

197

198 **Discussion**

199

200 It is not possible to be precise about the total overall relative costs that we have investigated,
201 but nevertheless we believe that the amounts and differences are so stark as to provide
202 sufficient indication that LCFH costs in obstetrics should not be ignored in health economic
203 models comparing PCB and PVB.

204

205 It may be argued that the values and causes of obstetric claims in Figure 1 are historic,
206 referring as they do to events occurring between 2000 and 2010. Unfortunately this NHSLA
207 study has not been repeated nor has there been any similar study so more up to date
208 information is not available. Improvements from changes to some procedures e.g. the timing
209 of PCB, changed practices regarding breech and twin births, routine use of prophylactic
210 antibiotics and steroids, labour ward staffing, education and protocols may have had some
211 effect since then in either direction but the continued dominance of obstetrics in the overall
212 cost of LCFH and its similar proportion in litigation cost reports by specialty then and now
213 suggests that significant changes in the categories and relative amounts are unlikely. Awards
214 for brain damage to babies from obstetric causes remain high as do obstetric indemnity costs
215 both in the UK and some other countries where they may pose serious problems for the
216 provision of care [14](#). Indeed if they have increased at a higher rate than other LCFH costs
217 then the PVB/PCB ratio of cost of harm may be even greater than our analysis suggests.

218

219 In calculating relative costs we have applied the proportions of claim values for PCB and PVB
220 equally to actual costs across the various sub-categories. Exact figures are not available to
221 enable a distinction to be made as to variations in the costs of settling these claims according
222 to type. NHS Resolution state in their report that although 50% of the value of claims received
223 is due to obstetrics they tend to settle high value claims more readily than lower value ones
224 such that 70% of the accumulated £83.373 billion provision reported for claims at the end of
225 the year was for maternity care [8 p60](#). Since the value of CP claims is overwhelmingly more
226 than that of other types this could have the effect of raising the relative cost of PVB to PCB
227 even higher than our calculations suggest.

228

229 Sub-categorisation of the claim types between PVB and PCB is of necessity somewhat
230 subjective and approximate. Some, e.g. 'management of labour' and 'perineal trauma' are
231 self-evident. Some e.g. anaesthetic, retained swabs, or drug errors have required
232 assumptions of equality. Where such assumptions have been made, however, it should be
233 noted that the related claim values are a tiny proportion of the overall totals and may favour
234 PCB since errors and complications are arguably more likely in an emergency rather than
235 elective setting.

236

237 We have ignored the economic impact of clinical 'adverse outcomes' from the choice of PCB
238 or PVB. In the assessment by NICE in 2011 [3 p100](#) it was concluded that these depended on
239 assumptions made about long-term effects and the application of QALY costs e.g. to urinary
240 incontinence in particular. Some, e.g. faecal incontinence, which may be more likely after PVB

241 than PCS were not included in the downstream cost estimates at that time at all. Under one
242 set of assumptions PVB had an advantage of £87 per birth but under other assumptions PCB
243 was actually found to be more cost-effective overall even without accounting for LCFH.

244

245 **CONCLUSIONS**

246

247 We do not believe it will come as much of a surprise to obstetricians, other health
248 professionals or those involved with healthcare litigation that planned vaginal birth should be
249 so much more risky with respect to LCFH than planned Caesarean birth. What may be
250 surprising to some, however, is the degree to which these risks and costs may now dominate
251 the health economics of maternity care in England and that this has not so far been taken into
252 consideration with respect to funding, improvement initiatives and other relevant policies such
253 as NHS Commissioning [15 p14](#) .

254

255 The reports and values used as the basis for our analysis are from authoritative sources.
256 They are in the public domain and may easily be accessed and checked. We believe our
257 assumptions about the applicability of the data to be reasonable and in accordance with
258 experience. There is also, however, an alternative way of approaching the issue, which is to
259 consider the number of additional PCS procedures required to prevent one case of cerebral
260 palsy (CP). In this regard any argument that intrapartum hypoxia does not cause CP is
261 irrelevant since we are dealing with litigation costs and legal opinion does not support this.

262 The figure is reported to be in the region of 3,000-5,000 [16](#) . That LCFH costs for individual
263 cases now amount to £millions (in some cases tens of £millions) provides separate

264 corroboration of our contention that obstetric LCFH costs have reached £ thousands per birth
265 and may be reduced by PCB.

266

267 In any normal business model indemnity costs would be included and insurers would adjust
268 premiums according to risk. This is not currently the case with NICE economic models, which
269 has implications for both obstetrics and the wider NHS. NHS Resolution makes some
270 adjustments to premium charges to maternity provider Trusts according to risk but without
271 professional guidance this is difficult to justify when applied to planned mode of birth. We
272 believe we have demonstrated PCB currently to be cost-effective or even more cost-effective
273 than previously thought and that maternity LCFH costs must surely be accounted for in any
274 economic analysis of maternity care since they are so high relative to the costs of service
275 provision. Until such time as these costs can be proved to be insignificant ignoring them risks
276 criticism for not being rooted in the 'real world' potentially leading to policies that are harmful,
277 unfair, costly and missing out on opportunities for improvements.

278

279 Serious adverse events in childbirth are rare. Women may truthfully be reassured that their
280 risk of experiencing one is low but risk/benefit evaluation also requires account to be taken of
281 the severity of harm when it occurs. PCB has a different profile and incidence of medical
282 complications from PVB and a woman may therefore make a rational choice to deliver by
283 PCS based on generic risks of medical complications according to her personal priorities, for
284 which she deserves to be properly counseled. Failure to do so risks continuing the pattern
285 and history of increasing claims for obstetric litigation and compensation for harm. Indeed
286 since the landmark legal case 'Montgomery v Lanarkshire' [17](#) the need to provide accurate

287 and suitably complete information to women about their childbirth choices with their attendant
288 risks and complications is even more pressing. The possibility and cost of medical error may
289 also be taken as a proxy for risk and may reasonably form part of that choice. This may seem
290 obvious in countries with variable or unpredictable standards of obstetric care but appears to
291 be a taboo subject in the UK. Against this background the promotion of 'normal birth'
292 according to the views of health professionals and others as to what constitutes an
293 'appropriate CB rate' rather than the informed choice of the woman is thus arguably
294 patronising, possibly even discriminatory to the extent that it may denigrate women and their
295 ability to make their own competent informed choices. We would consequently argue that the
296 notions of an 'appropriate CB rate' and 'Caesarean birth with no medical indication' should be
297 dropped.

298
299 Whatever attitude is taken to CB rates and maternal choice Caesarean birth in particular,
300 however, this analysis shows that there is currently no justification to deny or discourage
301 women from PCB on the grounds of cost.

302

303 **ACKNOWLEDGEMENTS**

304 Pauline Hull of the Caesarean Birth Organisation and Maria Booker of the Birthrights Charity
305 kindly helped source some references
306 NHS Resolution staff provided a helpful discussion of their published Annual Reports and
307 Accounts

308

309 **CONFLICTS OF INTERESTS**

310 The authors have no conflicts of interest to declare.

311

312 **CONTRIBUTION TO AUTHORSHIP**

313 All three authors have reviewed and contributed to the structure, final text and references as
314 well as making points that have been included in the introductory and discussion sections.
315 The initial idea for the study was by JW, who designed and carried out the analysis of the data
316 as well as coordinating suggestions and comments from the other authors.

317

318 **ETHICS APPROVAL**

319 not required

320

321 **FUNDING**

322 no funding was required or received

323

324 **REFERENCES:**

- 325 1. West J, Taylor M, Magro M. The true relative financial costs of Planned Caesarean Section
326 (PCS) versus Planned Vaginal Birth (PVB) in England taking into account litigation and
327 compensation for harm [Internet]. 2019 [cited 7 Dec 2020]. Available from:
328 <https://doi.org/10.7490/f1000research.1116508.1>
- 329 2. Sophie Borland, Health Editor for the Daily Mail.'NHS policing pregnancies to put women
330 off caesareans': Mothers-to-be 'are having to beg for the procedure as hospitals face pressure
331 to cut costs'.' Mail Online. April 13 2016. [cited 7 Dec 2020]. Available from:
332 [https://www.dailymail.co.uk/news/article-3536883/NHS-policing-pregnancies-women-](https://www.dailymail.co.uk/news/article-3536883/NHS-policing-pregnancies-women-caesareans-mothers-having-beg-procedure-hospitals-face-pressure-cut-costs.html)
333 [caesareans-mothers-having-beg-procedure-hospitals-face-pressure-cut-costs.html](https://www.dailymail.co.uk/news/article-3536883/NHS-policing-pregnancies-women-caesareans-mothers-having-beg-procedure-hospitals-face-pressure-cut-costs.html),
- 334 3. National Collaborating Centre for Women's and Children's Health, commissioned by the

335 National Institute for Health and Clinical Excellence (NICE). Caesarean Section [Internet].
336 Published by the Royal College of Obstetricians and Gynaecologists, 27 Sussex Place,
337 Regent's Park, London NW1 4RG. November 2011. [cited 7 Dec 2020]. Available from:
338 <https://www.nice.org.uk/guidance/cg132/evidence/full-guideline-184810861>

339 4. The Comptroller and Auditor General, National Audit Office. Maternity services in England
340 [Internet]. Her Majesty's Stationary Office. HC 794 November 2013. [cited 7 Dec 2020].
341 Available from:
342 [https://www.nao.org.uk/wp-content/uploads/2013/11/10259-001-Maternity-Services-Book-](https://www.nao.org.uk/wp-content/uploads/2013/11/10259-001-Maternity-Services-Book-1.pdf)
343 [1.pdf](https://www.nao.org.uk/wp-content/uploads/2013/11/10259-001-Maternity-Services-Book-1.pdf),

344 5. Gerard H A Visser et al. FIGO position paper: how to stop the caesarean section epidemic.
345 *The Lancet*, Vol. 392, No. 10155, p1286–1287: October 13, 2018

346 6. Birthrights. Maternal Request Caesarean [Internet]. 2018. [cited 7 Dec 2020]. Available
347 from: [https://birthrights.org.uk/wp-content/uploads/2018/08/Final-Birthrights-MRCS-Report-](https://birthrights.org.uk/wp-content/uploads/2018/08/Final-Birthrights-MRCS-Report-2108-1.pdf)
348 [2108-1.pdf](https://birthrights.org.uk/wp-content/uploads/2018/08/Final-Birthrights-MRCS-Report-2108-1.pdf)

349 7. NICE. Caesarean section (update): consultation table with responses [Internet]. 2011.
350 [cited 7 Dec 2020]. Available from:
351 [https://www.nice.org.uk/guidance/cg132/resources/caesarean-section-update-consultation-](https://www.nice.org.uk/guidance/cg132/resources/caesarean-section-update-consultation-table-with-responses)
352 [table-with-responses](https://www.nice.org.uk/guidance/cg132/resources/caesarean-section-update-consultation-table-with-responses)

353 8. NHS Resolution Annual report and accounts [Internet]. 2018/19. [cited 7 Dec 2020].
354 Available from:
355 [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/824330/NHS_resolution_annual_report_and_accounts_-_web_pdf.pdf)
356 [824330/NHS_resolution_annual_report_and_accounts_-_web_pdf.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/824330/NHS_resolution_annual_report_and_accounts_-_web_pdf.pdf)

357 9. NHS England. 2018/19 NHS National Cost Collection data [Internet]. [cited 7 Dec 2020].
358 Available from: <https://www.england.nhs.uk/national-cost-collection/>

359 10. NHS Resolution. Factsheet 5: Trust and Authority Claims Data [Internet]. 2020. [cited 7
 360 Dec 2020]. Available from: [https://resolution.nhs.uk/wp-content/uploads/2020/02/NHS-](https://resolution.nhs.uk/wp-content/uploads/2020/02/NHS-Resolution-Factsheet-5-trust-and-health-authority-claims-data-2018-19-1.xls)
 361 [Resolution-Factsheet-5-trust-and-health-authority-claims-data-2018-19-1.xls](https://resolution.nhs.uk/wp-content/uploads/2020/02/NHS-Resolution-Factsheet-5-trust-and-health-authority-claims-data-2018-19-1.xls)

362 11. NHS Litigation Authority. Ten Years of Maternity Claims [Internet] : NHSLA 151
 363 Buckingham Palace Road, London SW1W 9SZ. October 2012. [cited 7 Dec 2020]. Available
 364 from: [https://resolution.nhs.uk/wp-content/uploads/2018/11/Ten-years-of-Maternity-Claims-](https://resolution.nhs.uk/wp-content/uploads/2018/11/Ten-years-of-Maternity-Claims-Final-Report-final-2.pdf)
 365 [Final-Report-final-2.pdf](https://resolution.nhs.uk/wp-content/uploads/2018/11/Ten-years-of-Maternity-Claims-Final-Report-final-2.pdf)

366 12. NHS England. Hospital Episode Statistics online. Table 8: Method of delivery, 1980 to
 367 2009-10 [Internet]. 2020. [cited 7 Dec 2020]. Available from:
 368 [https://files.digital.nhs.uk/publicationimport/pub02xxx/pub02111/nhs-mate-eng-2009-2010-tab-](https://files.digital.nhs.uk/publicationimport/pub02xxx/pub02111/nhs-mate-eng-2009-2010-tab-v2.xls)
 369 [v2.xls](https://files.digital.nhs.uk/publicationimport/pub02xxx/pub02111/nhs-mate-eng-2009-2010-tab-v2.xls)

370 13. Magro M. Five years of Cerebral Palsy Claims, A thematic review of NHS Resolution data
 371 [Internet]. 2017. [cited 7 Dec 2020]. Available from:
 372 [https://resolution.nhs.uk/wp-content/uploads/2017/09/Five-years-of-cerebral-palsy-claims_A-](https://resolution.nhs.uk/wp-content/uploads/2017/09/Five-years-of-cerebral-palsy-claims_A-thematic-review-of-NHS-Resolution-data.pdf)
 373 [thematic-review-of-NHS-Resolution-data.pdf](https://resolution.nhs.uk/wp-content/uploads/2017/09/Five-years-of-cerebral-palsy-claims_A-thematic-review-of-NHS-Resolution-data.pdf)

374 14. Sunday Tribune. South Africa faces an Obstetric Crisis [Internet]. September 8 2016.
 375 [cited 7 Dec 2020]. Available from: [https://www.medicalbrief.co.za/archives/high-costs-](https://www.medicalbrief.co.za/archives/high-costs-indemnity-leaves-sas-obstetrics-crisis/)
 376 [indemnity-leaves-sas-obstetrics-crisis/](https://www.medicalbrief.co.za/archives/high-costs-indemnity-leaves-sas-obstetrics-crisis/)

377 15. NHS South of England. Commissioning Maternity Services. A Resource Pack to support
 378 Clinical Commissioning Groups [Internet]. July 2012. [cited 7 Dec 2020]. Available from [http://](http://www.esydave.com/uploads/1/4/0/9/14097905/commisioning_maternity_services__the_scope_for_doing_things_differently.pdf)
 379 [www.esydave.com/uploads/1/4/0/9/14097905/commisioning_maternity_services__the_scope](http://www.esydave.com/uploads/1/4/0/9/14097905/commisioning_maternity_services__the_scope_for_doing_things_differently.pdf)
 380 [_for_doing_things_differently.pdf](http://www.esydave.com/uploads/1/4/0/9/14097905/commisioning_maternity_services__the_scope_for_doing_things_differently.pdf) .

381 16. Signore C. et al. Neonatal Morbidity and mortality after elective Caesarean delivery. Clin
 382 Perinatol. 2008 June; 35(2): 361-vi. [cited 7 Dec 2020]. Available from:

383 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2475575/>

384 17. Chan S. et al. Montgomery and informed consent: where are we now?

385 *BMJ* 2017; 357 doi: <https://doi.org/10.1136/bmj.j2224> 12 May 2017)

386