

1 **Title: Competing Values Framework: a useful tool to define the Predominant Culture**
2 **in a Maternity Setting in Australia**

3 **Abstract**

4 **Objective:** To identify the predominant culture of an organisation which could then assess
5 readiness for change.

6 **Design:** An exploratory design using the Competing Values Framework (CVF) as a self-
7 administered survey tool.

8 **Setting:** The Maternity Unit in one Australian metropolitan tertiary referral hospital.

9 **Subjects:** All 120 clinicians (100 midwives and 20 obstetricians) employed in the maternity
10 service were invited to participate; 26% responded.

11 **Main Outcome Measure:** The identification of the predominant culture of an organisation to
12 assess readiness for change prior to the implementation of a new policy.

13 **Results:** The predominant culture of this maternity unit, as described by those who
14 responded to the survey, was one of hierarchy with a focus on rules and regulations and
15 less focus on innovation, flexibility and teamwork. These results suggest that this unit did not
16 have readiness to change.

17 **Conclusion:** There is value in undertaking preparatory work to gain a better understanding
18 of the characteristics of an organisation prior to designing and implementing change. This
19 understanding can influence additional preliminary work that may be required to increase

20 the readiness for change and therefore increase the opportunity for successful change. The
21 CVF is a useful tool to identify the predominant culture and characteristics of an
22 organisation that could influence the success of change.

23 **Key words:** organisation, culture assessment, change readiness, competing values

24

25 **Background and Context for the study**

Summary of Relevance	
Problem or Issue	Implementation of significant change in healthcare can be challenging.
What is already known	Prior to the implementation of innovations in health care settings, there is often little consideration of the cultural characteristics of the organisation that may determine their readiness to change.
What this paper adds	This paper describes a methodology to determine the predominant culture using the Competing Values Framework. The assessment process at the study site revealed characteristics that would need to be considered if change was to be effective and sustainable. This process can assist in change management strategies.

26 This paper describes the process that one maternity service undertook to gain a better
27 understanding of the predominant culture and characteristics of the organisation prior to the
28 implementation of a mandatory government policy.

29

30 The effectiveness of implementing innovations in healthcare was the focus of an important
31 systematic review in 2004¹. The review confirmed that prior to implementation of innovations
32 in health care settings there was often little consideration of the characteristics of the
33 organisation that may determine their readiness to change. Failure to recognise or
34 understand the organisational characteristics has been described as the root cause of the
35 mediocre success of programs designed for quality improvement in diverse disciplines ²⁻⁹.
36 The literature warns of the consequences of not assessing the powerful influence of
37 organisational cultural on efforts to bring about change ^{6,10,11}
38 The focus of change processes is often on the practical and material change requirements.
39 The less visible and tacit characteristics of the people who will be involved in the change are
40 often over looked ¹²⁻¹⁴. These characteristics include participants' self-efficacy, the
41 congruence between values and attitudes of the individual and the organisation, the
42 personal and organisational valence, the leadership style and support and the perception of
43 the value of the proposed change ^{2,3,15-18}.
44 The impetus for assessing the readiness for change in one maternity service was the
45 mandatory implementation of a government policy that would require significant adjustments
46 in order to meet the key deliverables? In this paper we will use this policy as an example to
47 demonstrate why examination of the organisation may be beneficial as preparatory work.

48 In 2010, the government of New South Wales (NSW), Australian, issued a public health
49 policy, “Maternity – Towards Normal Birth”¹⁹. The policy required all NSW public maternity
50 services to implement strategies to reduce a range of potentially unnecessary interventions
51 in birth. Target measures were to be achieved over a five-year period, with each health
52 service accountable for outcomes. For a majority of the services this was the first time such
53 targets had been set and it was recognised that this would require a significant
54 reorganisation of systems to achieve improvements. For example, the target for women
55 having a vaginal birth after a previous caesarean section (CS) operation was set at greater
56 than 60% and in 2010 the State average was 12% (range 2.9 – 26%)²⁰. At the research site
57 the success rate of vaginal birth after CS in 2010 was 12%. Therefore, a five-fold
58 improvement in current practices would need to occur to achieve the target outcomes.

59 In addition, outcome data in Australia demonstrates variations in intervention rates in
60 childbirth that cannot be explained by either the demographics or clinical history of the
61 women^{21,22}. This literature suggests that the context and cultural characteristics of
62 organisations may influence intervention in birth, rather than the clinical variables of the
63 woman or her baby. Possible explanations for variations that have been cited in the literature
64 are the effectiveness of collaboration between care providers and aspects of team work.²³⁻
65 ³⁰. The evidence suggests there is a direct link between teamwork and patient outcomes
66 including mortality rates³¹. Where there is effective interprofessional collaboration, based on

67 mutual trust and respect with shared decision making and engagement at all levels, the
68 quality and safety of care is improved ³²⁻³⁵.

69 In accepting this to be the case, gaining a better understanding of the characteristics of the
70 organisation and using this information to facilitate the development of strategies for change
71 may have a positive impact on the success rate overall and including the mandated
72 government policy. The policy requires a reduction in the overall intervention rates which
73 could be achieved through work focused on work place culture, rather than exclusively on
74 the development of practices and procedures.

75 **Study Location**

76 The research site for this study was an Australian, tertiary level, maternity service in a major
77 city. The service cares for around 2,500 women and babies per year; employs 120 obstetric
78 and midwifery clinicians and is a major teaching hospital, affiliated with two universities.

79 **Study Design and Methods**

80 An exploratory design using a self-administered, staff survey was used. Ethical approval for
81 the study was provided by the New South Wales Health Human Research Ethics Committee
82 (0911-313M), as part of a larger study investigating a change management process in the
83 maternity service.

84 **Competing Values Framework (CVF)**

85 The tool selected to assess the culture of the organisation and its readiness for change was
86 the CVF. This is a validated instrument that has been described in the literature in over 1000
87 studies, across disciplines, to describe the typology of organisational culture ¹⁸.

88 The results of a systematic review ³⁶ of the instruments available for cultural assessment
89 specifically suitable for healthcare services was used to select the most appropriate
90 instrument for use in this study; the Competing Values Framework. This instrument had the
91 strength of examining the values and beliefs of the participants that informed their opinions
92 about their working environment. CVF was also cited as the most frequently used to
93 measure organisational culture in health services research ³⁷

94

95 **Description of the CVF**

96 The CVF was developed empirically in the early 1980s based on Jung's model of
97 psychological archetypes and research on indicators for organisational effectiveness ¹⁸. The
98 framework has a typological design that identifies four *types* of cultures that exist within an
99 organisation: Clan, Adhocracy, Hierarchy and Market with each describing the values, basic
100 assumptions and attributes that are recognised within a team or organisation.

101 Each of the culture types are described as follows by Cameron *et al* (Table 1) with the
102 competing values in opposite quadrants of the table and hence the origin of the name of the
103 framework.

1. Dominant Characteristics		Now	Preferred
<p>Clan</p> <p>Predominant feeling of teamwork and trust amongst colleagues with an orientation towards collaboration and cohesion.</p> <p>The glue of this organisation is a sense of commitment and loyalty.</p>	<p>Adhocracy</p> <p>Emphasis on innovation and risk taking and is a dynamic and creative workplace which encourages individuality and flexibility.</p> <p>The glue of this organisation is a commitment to innovation and experimentation.</p>		
<p>Hierarchy</p> <p>A very structured place to work with success defined in terms of smooth and efficient operations.</p> <p>Adherence to rules, regulations, policies and procedures is the glue of this organisation</p>	<p>Market</p> <p>A focus on results and outputs in a controlled and stable environment where leaders are hard driving producers.</p> <p>An emphasis on winning is the glue of this organisation.</p>		

105 The predominant culture is determined by the participants' rating of six specific dimensions
 106 of the organisation: the dominant characteristics, organisational leadership, management of
 107 employees, organisational glue, strategic emphasis and the criteria of success. There are
 108 four descriptors for each of the six dimensions and the participant provides a score in rank
 109 order of preference. The options are listed as A, B, C and D and the responses provide an
 110 indication of the culture type: A=Clan, B=Adhocracy, C=Market and D=Hierarchy for each
 111 dimension as described in Table 2 for the dimension of "Dominant Organisational
 112 Characteristics.

113

A.	The Maternity Service is a very personal place. It is like an extended family. People seem to share a lot of themselves	10	40
B.	The Maternity Service is a very dynamic and entrepreneurial place. People are willing to stick their necks out and take risks	20	30
C.	The Maternity Service is very results-orientated. A major concern is with getting the job done. People are very competitive and achievement-orientated.	40	20
D.	The Maternity Service is very a controlled and structured place. Formal procedures generally govern what people do.	30	10
	Total	100	100

115 Although not explicitly described in words, the responses to the dimensions assess
116 characteristics of the organisation that include congruence of values between the individual
117 and the organisation, the perception of individual value of participants' in the organisation
118 and their self-efficacy (or how effective the individual believes they can be).

119 The participant is invited to divide 100 points between each option in rank order providing
120 the highest score to the descriptor that best fits their impression of the organisation as it is
121 today. After completing the scores relevant to "now", the participant is invited to score how
122 they would "prefer" the organisation to be in five years if there was to be successful change.

123 A summative calculation of the scores is performed using the Organisational Cultural
124 Assessment Instrument (OCAI) ¹⁸. The results are then graphically represented in a table
125 divided into four quadrants, one for each culture type. The final graph provides a visual
126 representation of the results which is intuitively appealing and has greater explanatory value
127 than written descriptors. The predominant culture can be identified at a glance. Specific

128 attention should be given to where the difference between the scores for now and the
129 preferred is greater than ten points ¹⁸.

130 The design of the tool facilitates an overall assessment of the predominant culture, as well
131 as assessment of the individual dimensions. This information is valuable if the organisation
132 wishes to scrutinise potential areas for change that will result in an overall cultural shift.

133 Identification of the current culture type and the preferred type is also essential for change
134 management. Where there is significant divergence in the desired predominant culture types
135 there can be variation in perceptions in espoused values, aspirations and direction ¹⁸. The
136 energy, motivation and engagement by members of the organisation can be affected by this
137 incongruence and risks the organisation's ability to achieve the desired change ¹⁸. The
138 degree of incongruence provides an indication of the readiness of the organisation to
139 undergo change. In addition, there is an indication of which dimensions of the organisation
140 may require the most attention for the change to be implemented successfully.

141 **Administration of the CVF Tool**

142 The tool was tested at a local university prior to implementation at the study site and minor
143 amendments made. The university students and academic staff recommended that the
144 scores should be out of 10 rather than 100 for greater ease of division for nominating a
145 score. Communication with the authors of the Competing Values Framework provided
146 reassurance that changing the scoring in the proposed manner may alter the variance in

147 scores but would not make a difference to the reliability of the sum scores. The authors were
148 supportive of customising the format for the users' preference.

149 For the purpose of the research some of the language in the descriptors was changed to
150 better fit the context of a maternity service. For example, "the organisation" was changed to
151 "the Maternity Service". The amendments were not considered to change the meaning of the
152 questions but rather described in language that would have greater face validity for the
153 participants.

154 Clinicians were informed of the proposed survey at strategic opportunities such as education
155 sessions and scheduled multidisciplinary forums. As all clinicians (100 midwives and 20
156 obstetricians) were to be invited to complete the tool, one hundred and twenty CVF tools
157 were printed on distinguishable purple paper. The majority of clinicians received this in
158 person from the researcher. Some forms were provided to the midwifery managers in each
159 of the clinical areas to reach clinicians working on evening shifts and weekends. Survey
160 boxes were placed in all clinical areas and clinicians were invited to post the completed form
161 which was conducted over a four-week period.

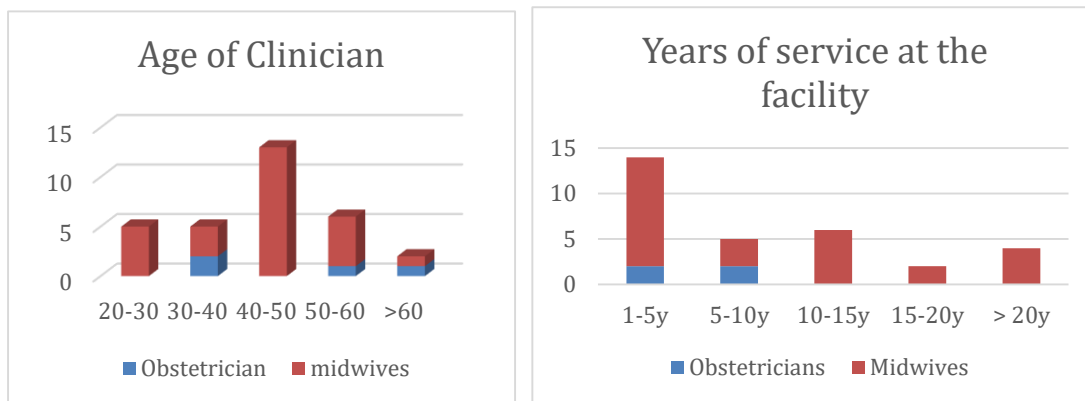
162 The front page of the tool described the purpose of the survey and instructions for
163 completion. In addition to the survey, demographic information about the participant was
164 collected that indicated the discipline (midwifery or obstetric), age, predominant area of

165 practice (antenatal, birth, postnatal) and length of time employed in the service. The survey
166 was anonymous.

167 **Results**

168 Of the 120 surveys distributed 31 were returned (25.8%). Four of the 20 Obstetricians (20%)
169 responded and 27 of the midwives (27%). The largest group of participants were clinical
170 midwives (71%). The majority of the participants had been working within the organisation
171 for 1- 5years (42%) and were aged between 40-50 years (Table 4).

172 **Table 3 Demographic Characteristics of Participants**

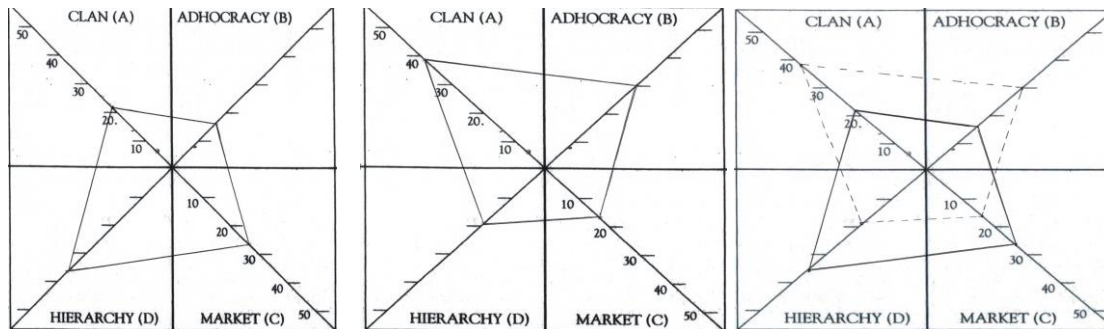


173
174 The survey respondents described the predominant culture of their organisation as one of
175 Hierarchy with a focus on Market (Figure 1). They identified that the prevalence of teamwork
176 and collaboration was low and of even less prevalence was a culture that encouraged
177 innovation and flexibility. Respondents expressed their preference for a culture that was
178 different to the current one, with a preference for a Clan culture and an increase in
179 Adhocracy with less control, regulation and less focus on outputs.

180 Combining the two results onto the same plot provides a clear indication of the incongruence

181 between the participant's assessment of the culture now and what would be preferred.

182



183

184 **Figure 1 CVF Result Now, Preferred and Combined**

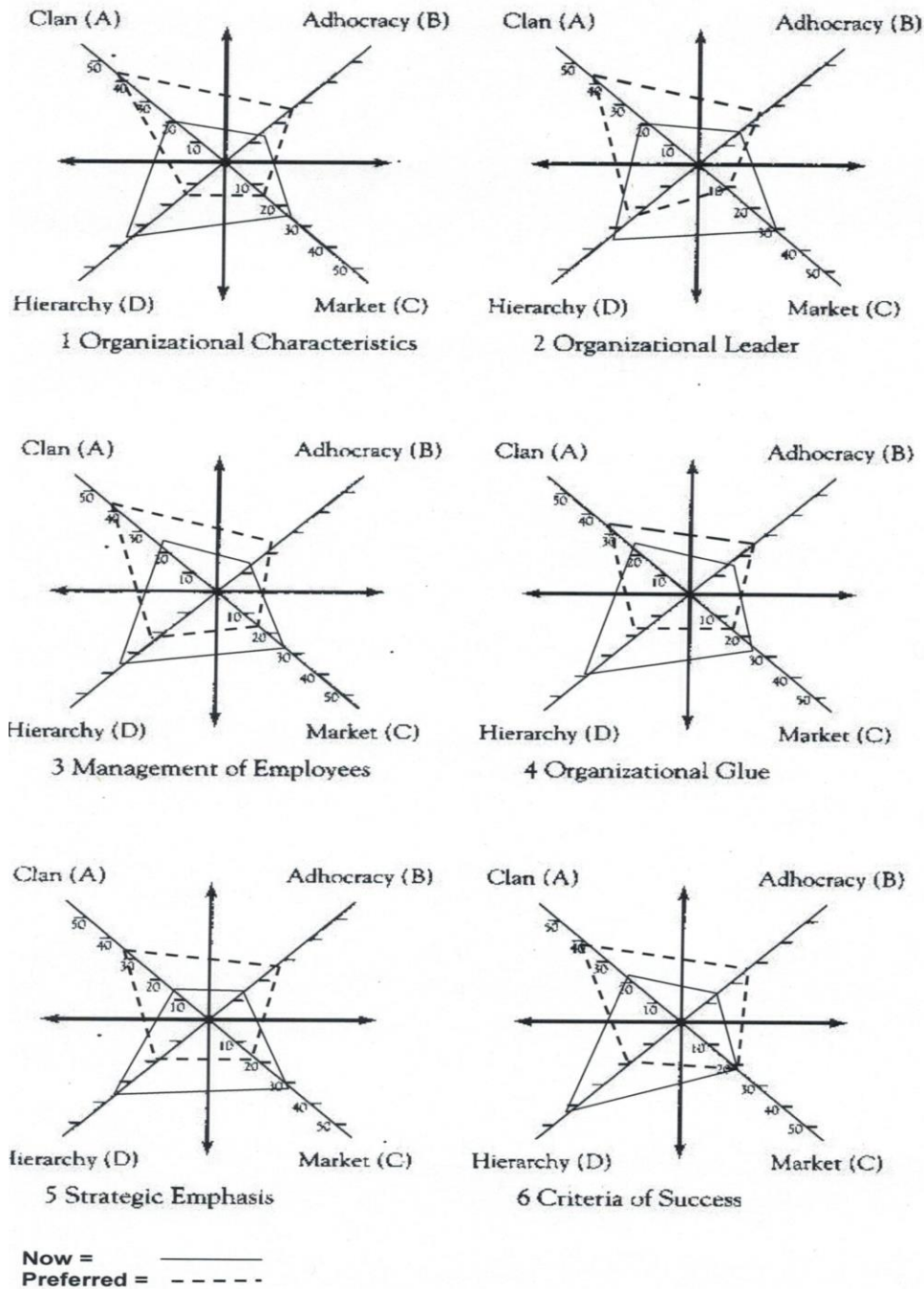
185 The results of the six dimensions are expressed in Figure 2 as a combined result of the

186 “now” and “preferred” cultures. Each demonstrates incongruence between the predominant

187 cultures “now” to what is preferred. In each dimension there is a preference for an increase

188 in both Clan and Adhocracy cultures with a decrease in both Hierarchy and Market. For a

189 majority of the dimensions there is a difference of greater than ten points.



190

191 **Figure 2 CQF Results for six Dimensions, Now and Preferred**

192 **Discussion**

193 The response rate to the survey was 26% and the results must be considered in this context.

194 The predominant culture, as expressed by the results, is the impression of the small

195 percentage of respondents which may limit the inferences that can be drawn. Coincidentally,

196 in the same year another survey was generated by the state government also exploring
197 workplace characteristics and attributes. The research site had a response rate of 18% with
198 a confidence interval of 3% which the authors describe as being a representative sample of
199 the facility population ³⁸. The low response rates may, however, suggest more about the
200 organisation by the silence and non-engagement in the process and is in itself noteworthy.

201 The majority of respondents were those aged 40-50 years (42%) and those who had worked
202 for the organisation for 1-5 years (45%). Midwives were more likely to respond with 27% of
203 the potential cohort returning a survey as opposed to 20% of the obstetricians.

204 The results demonstrated that the majority of the respondents perceived the predominant
205 culture of the organisation to be a hierarchical type with a focus on rules, regulations and
206 control. The Adhocracy culture scored the lowest value of all four culture types. There are
207 opposing values between the two cultures of Hierarchy and Adhocracy which would result in
208 less opportunity for innovation, flexibility or implementation of new ideas in the organisation.

209 Considering the requirement for this organisation to implement significant changes to meet
210 the mandated policy it is important to recognise that the respondents do not perceive there
211 to be an environment that is ready to accept innovation.

212 Market culture scored the second highest and Clan third. The suggestion here is that the
213 maternity service has a focus on meeting performance indicators and target measures, with
214 less focus on collaborative engagements with members of the team who are participating in

215 the performance. The overall result indicates that at present the characteristics of this
216 maternity unit are not consistent with that of a high performing organisation ³⁹. That is, an
217 organisation that requires interprofessional collaboration and team work in order to meet
218 performance indicators. As mentioned previously, the inferences that could be drawn from a
219 low response rate is limited, however, those who did respond have stated that there is lack
220 of team work and engagement and if this is prevalent across the service then this may
221 indicate a lack of motivation to be involved in activities including this survey.

222 The results of the hypothetical scoring for the future culture indicated that respondents would
223 prefer an organisation with characteristics that were opposite to that of today. The graph
224 depicts almost a mirror image of the results in the opposite quadrants. Respondents would
225 prefer the organisation to have a collaborative, cohesive team where innovation is
226 encouraged in an environment of flexibility and risk taking. There are greater than ten points
227 difference in each of the quadrant scores between the now and preferred cultures, which
228 according to this framework design, warrants attention. The results demonstrate that there is
229 a need for cultural change within the maternity service if the planned implementation of the
230 government policy is to be successful and sustained.

231 The results also show greater than 10 points difference for each of the six dimensions with a
232 predominance of cultures in the lower quadrants and a preference for the opposite cultures
233 in the future. In each of the dimensions respondents had a desire for the Clan culture which

234 may indicate the perception of their value to, and within, the organisation. Some of the
235 descriptors for this culture are feelings of teamwork and trust, an orientation towards
236 collaboration and cohesion; a sense of commitment and loyalty where work is done together.
237 If this is the workplace respondents would prefer, then by deduction, this is not how the
238 current environment is viewed.

239 The second preferred culture was Adhocracy with a dynamic and creative workplace where
240 individuality and flexibility is encouraged and a preference to be leaders in innovation. These
241 characteristics were not recognised in their workplace today. The majority of the dimensions
242 have greater than ten points difference between respondents' assessments of the current
243 culture and their preferred culture.

244 The overall results of this study indicate a lack of readiness to change but a strong
245 preference from respondents for the culture to be different. Acknowledging this
246 incongruence and harnessing the desire to be different may influence a change in the
247 culture to one where change is valued. According to Jones et al. in a workplace that is
248 perceived to have strong human relations values (Clan) or open systems values that
249 encourage flexibility (Adhocracy), there are more positive views towards change and a
250 greater willingness to be engaged in change processes ³⁹. These authors (2005) further
251 describe such an organisation having "reshaping capabilities" that are dynamic and
252 responsive to external need or internal desire. Reshaping capabilities include attributes such

253 as individual responsiveness, engagement, a commitment to personal and professional
254 development and a willingness to perform. These attributes can positively affect workers'
255 overall competence and thereby increase efficacy in change processes. There is therefore a
256 direct correlation between the reshaping capabilities and the rate of successful change ³⁹.

257 When reshaping capabilities are low and change is required, such as in the case of the
258 implementation of government policy, organisational tension can develop which can
259 jeopardise the change process. Respondents in this study suggest they do not have a strong
260 sense of trust, cohesion or collaboration in their team. In addition the findings show that
261 respondents believe that there is an under appreciation of their individuality and potential for
262 creative participation in an environment focused on performance. Tension may result from
263 such unmet needs and the inability to meet personal potential can lead to disengagement
264 and reduced efficacy ^{2,17,32,40-42}.

265 Tensions have also been historically evident in maternity care between obstetricians and
266 midwives where professional boundaries have become territorial and fiercely contested ^{25,43-}
267 ⁴⁵. In Foucauldian terms, the scientific knowledge of childbirth was traditionally held by
268 obstetricians and hence professional power was held by them to the exclusion of other
269 disciplines and in particular midwifery⁴⁶. Reforms in maternity care in recent times, however,
270 have resulted in changes in the roles and responsibilities for maternity carers. These
271 changes have been most evident with the development of midwifery-led models of care with

272 midwives regaining the responsibility for women of normal risk and collaborating with
273 obstetricians where risk is identified. Despite sound evidence for the effectiveness of
274 midwifery-led models of care, ^{47,48} the translation into practice and the transition to
275 collaborative models of care continues to be challenged by the inability, or reluctance, to
276 relinquish, or modify, former roles and responsibilities ^{25,45,49-51}.

277 Appreciating the existence of historical tensions between healthcare teams and the
278 difficulties with translation of evidence into practice, gaining an understanding the
279 predominant culture of an organisation and its readiness for change is critical. Such
280 knowledge will enable decision makers to design appropriate strategies so that change can
281 be effectively implemented. For this midwifery service the follow up plan is for an action
282 research project where the clinicians will be invited to contribute to the development of
283 strategies to implement the government policy. Respondents have nominated that they
284 would prefer to be included in teamwork, they would prefer to have the opportunity to be
285 creative and to develop new ideas and that they would like some direction but not to be
286 overly controlled. The cyclical nature of action research methodology may be the key to the
287 successful implementation of this government policy.

288 It is not possible to determine whether behaviours or organisational characteristics require
289 change if there has been no measurement of the current situation. The CVF provides a way
290 of measuring a baseline; the information can then be used to design interventions to

291 influence the desired changes. The CVF tool would then be used to reassess the
292 predominant and preferred culture over time. It is not possible to report on changing culture
293 in the research site here as the processes leading towards changing the culture are
294 continuing. What this paper offers is a way forward for maternity clinicians facing one of the
295 most common challenges in practice.

296 **Conclusion**

297 In healthcare systems where interprofessional collaboration is not evident and where
298 tensions continue between professional boundaries of responsibility there is a threat to the
299 delivery of safe and effective care. In order to change what may be an historical legacy of
300 hierarchical structures there first needs to be recognition of the situation; an intention to
301 change the status quo and then purposeful strategies to support change towards
302 interprofessional collaboration.

303 The CVF is a valuable tool to assess the predominant culture of an organisation as part of
304 preparatory work prior to the implementation of change to increase the opportunity for
305 success.

306 **Limitations**

307 The response rate to this process was lower than anticipated and the results may not be an
308 indication of the overall assessment of the predominant culture.

309 **Acknowledgements**

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