

UCSF

UC San Francisco Previously Published Works

Title

Do 72-Hour Waiting Periods and Two-Visit Requirements for Abortion Affect Women's Certainty? A Prospective Cohort Study.

Permalink

<https://escholarship.org/uc/item/76m8b2z0>

Journal

Women's health issues : official publication of the Jacobs Institute of Women's Health, 27(4)

ISSN

1049-3867

Authors

Roberts, Sarah CM
Belusa, Elise
Turok, David K
[et al.](#)

Publication Date

2017-07-01

DOI

10.1016/j.whi.2017.02.009

Copyright Information

This work is made available under the terms of a Creative Commons Attribution-NonCommercial-NoDerivatives License, available at <https://creativecommons.org/licenses/by-nc-nd/4.0/>

Peer reviewed

1Abstract

2**Purpose:** This paper examines how Utah’s 72-hour waiting period and two-visit requirement
3influence women’s certainty about their decision to have an abortion.

4**Procedures:** This study uses data from a prospective cohort study of 500 women who presented
5at an abortion information visit at four Utah family planning facilities. At the information visit,
6participants completed a baseline survey; three weeks later, they completed telephone interviews
7that assessed their pregnancy outcome, change in certainty, and an open-ended question about
8factors affecting changes in certainty.

9**Main findings:** Two-thirds (63%) reported no change in certainty due to the information visit
10and three-fourths (74%) reported no change in certainty due to the waiting period. Changes in
11certainty were primarily in the direction of increased certainty, with more than five times more
12women reporting an increase (29%) than a decrease (5%) in certainty due to the visit and two
13times more women reporting an increase (17%) than a decrease (8%) due to waiting. Changes in
14certainty were concentrated among the minority (8%) who were conflicted about their decision at
15baseline. Decreases in certainty due to waiting were concentrated among those who became less
16certain due to the visit. Learning about the procedure, meeting staff, and discovering that the
17facility was a safe medical environment were main contributors to increased certainty.

18**Conclusion:** As changes in certainty were concentrated among the small minority who were
19conflicted at the information visit and occurred due to the information visit, a universal waiting
20period does not appear appropriate.

21

22

23

24**Keywords:** abortion, medical decision making, policy

25Introduction

26 In May 2012, Utah became the first U.S. state to enact a 72-hour waiting period for
27abortion. Waiting period laws require women to wait a specified amount of time (typically 24
28hours) between receiving abortion information and having the procedure. Often, states mandate
29that specific information is provided during the information session (Guttmacher Institute, 2016).
30While some waiting periods allow women to receive the abortion information from the provider
31by phone, Utah’s waiting period is accompanied by a face-to-face requirement, whereby women
32must receive the state-mandated abortion information in person (Guttmacher Institute, 2016).

33 One argument for these requirements is that they will cause women to change their minds
34and decide to continue their pregnancies. Our previous research has not found support for this
35argument (Roberts, Turok, Belusa, Combellick, & Upadhyay, 2016). In fact, we found that most
36women presenting for an abortion information visit under the 72-hour waiting period and two-
37visit requirement have made their decision when they presented for the information visit and go
38on to have an abortion (Roberts et al., 2016). Among the minority no longer seeking abortion,
39most had expressed conflict about their decision when they presented at the abortion information
40visit (Roberts et al., 2016).

41 Another argument for waiting periods is that women are uninformed about abortion and
42need time to consider both the routinely provided and the state-mandated information
43(Americans United for Life, 2015). This assumes that most women are undecided when they
44present for abortion care and that they need considerable time (i.e. 1 to 3 days) to think about the
45information and consider their options. Previous research has documented that women presenting
46for abortion care generally express high levels of certainty about their decision to have an
47abortion (Cameron & Glasier, 2013; Foster, Gould, Taylor, & Weitz, 2012; Gatter, Kimport,

48Foster, Weitz, & Upadhyay, 2014). For example, in one study of women presenting for abortion
49care at a California facility, 85% reported high decisional certainty (Gatter et al., 2014). Similar
50proportions of women seeking abortion care at a private abortion facility in the Midwest reported
51being confident of their decision (Foster, Gould, Taylor, et al., 2012). However, to date, no study
52has examined whether and how mandated abortion information visits and subsequent waiting
53periods affect women's certainty about their decision and which women experience changes in
54certainty and to what they attribute these changes. Understanding this is important because if the
55vast majority experience changes in certainty, the changes are equally distributed across groups
56of women, and different women report changes in certainty as a result of waiting than of the
57information visit, this would indicate that a universal approach to ensuring women receive
58information and have time to digest it may be warranted. In contrast, if few women experience
59changes in certainty, changes in certainty are concentrated among identifiable groups of women,
60and the same women report changes in certainty as a result of both the information visit and
61waiting, this would suggest that a patient-centered approach would be more appropriate.

62 This study uses data from a prospective cohort study of women presenting at an abortion
63information visit in Utah under the State's two-visit requirement and 72-hour waiting period.
64Previously published analyses of this dataset have examined the proportion of women who
65obtained abortions after attending an information visit, the reasons women did not have abortions
66after information visits, and the emotional and tangible costs of the two-visit requirement and 72-
67hour waiting period. The analyses in this paper extend previous analyses by focusing on how
68attending the required face-to-face information visit and waiting 72-hours affect women's
69certainty about their decision to have an abortion. Specifically, the analyses in this paper seek to
70extend previous research findings by:

- 71 1) Estimating the proportion of women who report changes in certainty due to the
72 information visit and waiting period, and the direction of those changes.
- 73 2) Assessing characteristics of women associated with reporting increased or decreased
74 certainty due to the information visit and waiting period
- 75 3) Identifying aspects of the information visit that contribute to increased or decreased
76 certainty

77 **Materials and methods**

78 Study methods have been described previously (Roberts et al., 2016). We recruited
79 women who presented for an abortion information visit between October 2013 and April 2014 at
80 four family planning facilities in Utah, one of which provided abortions. Participants include
81 women who spoke English or Spanish and were older than 15. Facility staff were trained by
82 [blinded] researchers to follow a standardized recruitment protocol that emphasized approaching
83 all potentially eligible participants with information about the study and inviting them to
84 participate prior to the beginning of the information visit. Women who consented to participate
85 completed a baseline iPad survey at the beginning of their abortion information visit where they
86 then received both state-directed information and routine provider-directed counseling. Three
87 weeks later, participants completed a follow-up interview by telephone with [blinded] research
88 interviewers. This study was approved by the [blinded] Institutional Review Board.

89 Outcome measures are based on a series of questions asked at the follow-up interview
90 about how the abortion information visit and having to wait 72-hours affected their certainty.
91 Women were asked, “Did anything happen at the counseling and consent¹ visit at
92 [RECRUITMENT CLINIC] on [X DATE] that made you less sure about your decision to have

71 We refer to this visit as the abortion information visit or information visit in the body of the paper.

93the abortion?” Those who responded “yes” were asked to specify what made them less sure in an
94open-ended response. Women were then asked, “Did anything happen at the counseling and
95consent visit that made you more sure about your decision to have the abortion?” Again, those
96who responded “yes” were asked to specify what made them more sure in an open-ended
97response. Based on their responses to these two questions, we created a four category variable of
98*information visit effects* (more certain, less certain, both more and less certain, neither more nor
99less certain). Women were later asked “Did having the 72 extra hours make you more certain,
100less certain, or did not change how certain you were about your decision?” *Waiting effects* is a 3
101category variable of those who reported becoming more certain, less certain, or did not change
102how certain they were. Our intent in questionnaire design was to use the same term to capture
103women’s responses to information visit and waiting period questions, but a programming error
104resulted in use of “sure” to capture responses to the information visit and “certain” to capture
105responses to the waiting period. The potential implications of this difference are described in the
106discussion. At the follow-up interview, we also assessed whether women had had an abortion, a
107miscarriage, or were still pregnant.

108 Our main baseline predictor of interest was decisional conflict. We measured conflict
109using the Decisional Conflict Scale (DCS) (O’Connor,1993), a validated, 16 item scale that
110measures patients’ certainty surrounding health care decisions. Individual Items are assessed on a
111Likert scale and include: “I know which options are available to me,” “I feel sure about what to
112choose,” and “I expect to stick with my decision.” All items are rated on a 0-4 Likert scale; a
113mean score is calculated and then multiplied by 25 for an overall score with a possible value of
1140-100. Scores can range from 0 (no conflict) to 100 (extremely high conflict); lower scores
115indicate less conflict. Scores <25 are associated with implementing a decision and can be

116considered low conflict; scores >37.5 are associated with decision delay or feeling unsure about
117implementation (O'Connor, 1993) and can be considered highly conflicted and possibly of
118clinical concern, i.e. needing additional counseling and education to assist them in making a
119decision (Parayre, Labrecque, Rousseau, Turcotte, & Légaré, 2013). Cronbach's alpha for the
120scale was 0.93 in this sample [2, 15]. The DCS is considered the gold standard (Parayre et al.,
1212013) and has been found to be appropriate, reliable, valid, responsive, interpretable, acceptable,
122and feasible (Kryworuchko, Stacey, Bennett, & Graham, 2008). It was developed in health care
123settings where people were considering whether to have an influenza vaccination or undergo
124breast cancer screening (O'Connor, 1993) and has been used in studies of decision making
125regarding prenatal testing (Caleshu, Shiloh, Price, Sapp, & Biesecker, 2010), breast cancer
126treatment (Banegas et al., 2013; King et al., 2013), vasectomy (Labrecque, Paunescu, Plesu,
127Stacey, & Legare, 2010), and bariatric surgery (Schauer et al., 2014), among others. The DCS
128also demonstrated appropriate reliability, as well as construct and predictive validity, among
129abortion patients predicting which patients would proceed to have an abortion vs. continue the
130pregnancy (Ralph, Foster, Kimport, Turok, & Roberts, 2016; Roberts et al., 2016).

131 Other variables collected at the baseline survey included *age* (continuous), *race* (White,
132Black, Hispanic, Other), *employment* (full or part time versus not employed), *parity* (nulliparous
133vs. one or more previous births), *gestational age at discovery of pregnancy* (continuous),
134*religion* (Protestant, Catholic, Mormon, No or other religion), *receipt of public assistance* (yes
135vs. no over the past 12 months), *household income* (past 12 month household income), *risky*
136*drinking* (yes vs. no based AUDIT-C scores ≥ 3 for 12 months prior to pregnancy recognition
137(California Department of Healthcare Services, 2015)), *drug use* (yes vs. no for 12 months prior
138to pregnancy recognition), *mental health history* (a categorical variable of any prior diagnosis of

139depression, anxiety, or both as a categorical predictor; in one of the models, this was treated as a
140dichotomous variable of either depression or anxiety vs. no mental health history), and *abortion*
141*knowledge*. For this final variable, participants were asked to choose which of two statements
142were closer to the truth for five common abortion myths, and were offered a “don’t know” option
143in each case. Myths included: *childbirth is safer than abortion*, *abortion causes*
144*depression/anxiety*, *abortion causes breast cancer*, *most women experience regret after abortion*,
145and *abortion causes infertility*. For each myth, women received 0 points for endorsing the myth, .
1465 for a don’t know response, and 1 point for selecting the more accurate statement. Scores were
147summed and then divided by 5, for a range of 0 – 1, with lower scores indicating endorsing more
148myths and therefore lower knowledge.

149 We calculated the proportion of women that indicated that something at the information
150visit made them more certain, less certain, or did not affect certainty as well as the proportion
151that indicated that the waiting period made them more certain, less certain, or did not affect
152certainty. We then used chi-square tests to examine associations between becoming more versus
153less certain due to the information visit and due to having to wait. We then examined predictors
154of becoming more versus less certain using multinomial logistic regression, with no change in
155certainty as the base outcome in each case. Facility was considered as a fixed effect. A likelihood
156ratio test indicated that it improved model fit for the model assessing information visit effects
157and was retained in that model; it did not improve model fit for the model assessing waiting
158effects and was therefore not retained in that model. While we treat the DCS as continuous in our
159models, we used graphs of DCS score cut-offs (<25 as low, 25 - <=37.5 as medium, and
160scores>37.5 as high conflict) to visualize model results. Finally, using an inductive approach, the
1611st and 2nd authors coded open-ended responses to the questions about whether anything at the

162information visit made them more or less certain. Differences were resolved by consensus.

163Analyses were conducted in Stata 13.0 (Stata Corps, College Station, Texas).

164**Results**

165*Study participation*

166 Nine-hundred-thirty-seven women presented for an information visit during the study
167time period. Facility staff approached 691 of these women, representing 74% of potentially
168eligible participants. Eight who were approached were ineligible because they did not read
169English or Spanish or were too young. 500 women consented to participate and completed the
170baseline survey, for a response rate of 73%. Due to problems with Wi-Fi connectivity and
171software used for the baseline survey, baseline data for six participants were lost. Three weeks
172later (median of 23 days), 309 participants completed the three-week follow-up, for a follow-up
173rate of 63%.

174*Sample description*

175 Participant characteristics are in Table 1. Almost two-thirds of participants were White
176and one-fourth Hispanic/Latina. More than half had no religion, one-third were on public
177assistance, almost two-thirds were employed, and half had had a previous live birth. The mean
178age was 25.6 and the mean gestational age at which women discovered pregnancy was the 5th
179week. About one-fourth reported a history of depression, anxiety, or both, half reported risky
180drinking in the past 12 months, and almost one in five reported drug use in the past 12 months.
181The average abortion knowledge score was .62 (scale 0 – 1), indicating that women rejected
182more myths than they endorsed. On average, women were not conflicted about their decision
183(mean DCS score of 15 on a scale of 0 – 100); using the scale cutoffs, almost three-fourths had
184low conflict (score <25) and eight percent had high conflict (score >37.5).

185 Information visit

186 Almost two-thirds (63%) reported that the information visit did not change how certain
187 they were about their decision; another third (29%) reported that the visit made them more
188 certain only, while 5% reported the visit made them less certain only, and 4% reported the visit
189 making them both more and less certain.

190 In a multinomial logistic regression [Table 2], being more conflicted at the information
191 visit was associated with increased likelihood of reporting that something at the information visit
192 made them less certain versus no change in certainty. Also, younger age was associated with
193 reporting becoming more certain compared to no change in certainty. The decisional conflict
194 results can be visualized in Figure 1, which shows the differences in proportions reporting
195 changes in certainty by baseline decisional conflict, with 21% who reported high conflict at
196 baseline reporting becoming less certain versus 2% of those who reported low conflict at
197 baseline becoming less certain.

198 Among those who were highly conflicted at baseline who became less certain due to the
199 information visit (n=5), all but one were still pregnant at follow-up. Among those who were
200 highly conflicted at baseline who became more certain due to the information visit (n=7), only
201 one was still pregnant at follow-up. Among those who were highly conflicted at baseline who did
202 not change their certainty due to the information visit (n=10), half were still pregnant at follow-
203 up.

204 Waiting

205 Almost three-fourths (74%) reported that having to wait the extra 72-hours did not
206 change how certain they were about their decision, 17% reported that the 72-hours made them

207more certain, 8% reported that the 72-hours made them less certain, and 1% reported not
208knowing how the 72-hours affected their certainty. In a multinomial logistic regression [Table 3],
209being more conflicted at the information visit was associated with both an increased likelihood of
210reporting that waiting made them more certain and for others that waiting made them less
211certain. Also, history of depression was associated with reporting that the waiting period made
212them less certain and reporting being Mormon (versus Protestant) was associated with reporting
213that the waiting period made them less certain. The decisional conflict results can be visualized
214in Figure 2, which shows the differences in proportions reporting changes in certainty by
215baseline decisional conflict, with 33% of those who reported high conflict at baseline reporting
216becoming less certain versus 4% of those who reported low conflict at baseline becoming less
217certain.

218 Information visit and waiting period together

219 Figure 3 shows the association between reporting that something at the information visit
220affected certainty with reporting that having to wait affected certainty. A Fisher's exact test
221indicates that the association is statistically significant. The largest proportion of women
222reporting that having to wait made them less certain was among women who reported that
223something at the information visit made them less certain (50% or 7/14), versus 7% (14/195)
224among those who reported that the information visit neither made them more nor less certain, 3%
225(3/89) among those who reported that the information visit made them more certain only, and 0%
226(0/11) among those who reported that the information visit made them both more and less
227certain.

228 Experiences at the information visit that made women less or more certain

229 The minority who became less certain due to the information visit reported that learning
230 about the abortion procedure, finding out how much the abortion would cost, their own doubt
231 and guilt, (negative) interactions with staff, or something else that occurred at the visit (e.g.
232 protestors, seeing the ultrasound), contributed to them feeling less certain. One described a
233 negative interaction with staff as:

234 *“The [person] read off the script and he had no personality and it freaked me out. Like*
235 *he doesn’t care.”*

236 One described about learning more about the procedure as making them less certain in
237 this way:

238 *“They said the one where you take the pill - they said that the placenta, the embryo, and*
239 *all that coming out could be about the size of a lemon and that freaked me out.”*

240 Learning more about the procedure as well as getting more information about abortion
241 also contributed to women feeling more certain.

242 *“[My] decision was already made and when they told me about how the procedure went,*
243 *it made me more confident of my decision.”*

244 *“Hearing the risks and consequences, and assurances that I was pretty much safe.”*

245 Interactions with staff (in these cases, positive interactions) also made women more certain.
246 Learning that the facility was a safe medical environment and that staff were professional and
247 helpful also helped make women more certain.

248 *“Just going over the procedure and knowing that it was a safe medical environment; the*
249 *staff seemed very trustworthy.”*

250 *“Just how friendly they were, and they weren’t judgmental. And they left the decision to*
251 *me, there was no persuasion or judging.”*

252 Some also reported feeling “reassured” that the abortion was the right decision.

253 *“They made me feel like it was ok, I didn’t feel judged. It was a ‘I want to make sure*
254 *[you]’re doing this for you’ kind of thing.”*

255 **Discussion**

256 As we reported previously, most women presenting for an abortion information visit
257 under Utah’s 72-hour waiting period were not conflicted in their decision at the information visit
258 and had the abortion (Roberts et al., 2016). In the analyses presented in this paper, we found that
259 a minority changed their certainty due to the information visit and having to wait. Most of the
260 change was in the direction of increased certainty, with more than five times more reporting an
261 increase rather than a decrease in certainty due to the information visit and two times more
262 reporting becoming more rather than less certain due to waiting. Fewer than one out of ten
263 women in the study reported a decrease in certainty due to the information visit or to the waiting
264 period. Overall, the changes in certainty were concentrated among the small minority who were
265 conflicted at the information visit and occurred as a result of the information visit. Our findings
266 suggest that the few women who are conflicted at the information visit become less certain based
267 on something that happens at the information visit. As they wait the required 72 hours, these
268 women then stay on the path of becoming less certain.

269 Increased certainty among a minority of women does not appear to be due to women
270 having more time to think. Rather, gains in certainty are more likely to be related to the
271 information visit than due to waiting. As we reported previously and others have also found,

272many women reported finding extra waiting time to think as difficult or, at best, not helpful
273(Kumar, Baraitser, Morton, & Massil, 2004; Roberts et al., 2016). Analysis of our open-ended
274questions suggests that the gains in certainty due to the information visit were largely due to
275learning more about the procedure, meeting clinic staff, and discovering that the facility was a
276safe medical environment with professional staff. Future research should examine whether the
277small percentage who are still making their decision when they present for the information visit
278would experience the same effect on certainty from learning about the procedure and abortion,
279meeting staff, and seeing the medical facility on the day of their procedure rather than after a 72
280hour waiting period. As the required information visit increased costs of the abortion by 10% for
281this low income population and women reported multiple hardships associated with having to
282make two visits (Roberts et al., 2016), a patient-centered approach that involves assessing
283certainty among women who present for abortion care and encouraging women who are
284uncertain about their decision to take more time and, if they decide to, come back another day for
285the procedure seems more appropriate than a blunt “one-size-fits-all” policy instrument that
286appears unnecessary for the overwhelming majority of abortion patients at these facilities. Such a
287patient-centered approach is a common part of abortion care among many providers (Foster,
288Gould, Taylor, et al., 2012; Gould, Perrucci, Barar, Sinkford, & Foster, 2012).

289 We also found that women with depression history became less certain as a result of
290waiting. As we reported previously, women with a mental health history were no less likely to
291have an abortion (Roberts et al., 2016). If becoming less certain before implementing the
292decision is associated with more difficulty coping over time (Foster, Gould, & Kimport, 2012;
293Rocca et al., 2015), the waiting period may actually contribute to harm for this vulnerable
294population of women with a history of depression.

295 This study has a number of limitations. First, despite an acceptable response rate (74%),
296the proportion completing follow-up was lower than we had hoped (63%). Still, the loss-to-
297follow-up is in the range of other longitudinal abortion studies (Weitz et al., 2013). In previously
298published attrition analyses, only gestational age at which pregnancy was discovered was
299associated with loss-to-follow up (5.3 vs. 5.9 weeks) (Roberts et al., 2016). Second, due to a
300survey programming error, our questions assessing how the information visit and how the
301waiting period affected women's certainty used two different terms (sure and certain) to assess
302certainty. While sure, certainty, and decisional conflict are all used to describe what appears to be
303the same latent construct in the literature around health care decision-making (Parayre et al.,
3042013) and sure and certain are synonyms ("Sure", 2016), it is possible that the different terms
305affected women's answers to the questions. Third, while our data suggest that changes in
306certainty are occurring primarily due to the information visit and not due to waiting, we actually
307assessed women's self-reported changes due to each of these requirements at the same time. To
308be fully confident that the change in certainty for the small proportion reporting a change
309occurred during or soon after the information visit, we ideally would have assessed certainty at
310three time points – at presentation for the abortion information visit (as we did), at the end of the
311information visit (before leaving the facility), and at the end of the waiting period. We also would
312have used the same decisional-conflict measure at each of these time points, rather than relying
313on women's retrospective self-reports. Fourth, this study was conducted at four family planning
314facilities in Utah, a state with less racial/ethnic diversity and a higher proportion of Mormons
315than other states. The racial and religious composition of our study population may limit the
316generalizability of our findings to other settings. We note, though, that the fact that Mormon
317religion was associated with becoming less certain as a result of the waiting period in our sample

318 suggests that samples with fewer Mormon women may perhaps have even fewer women who
319 become less certain as a result of waiting than we found in this study. This should be explored in
320 future research.

321 **Implications for Practice and/or Policy**

322 As decreasing certainty was concentrated among the small minority who were conflicted
323 about their decision at the information visit, a universal waiting period does not appear
324 appropriate.

325 **Conclusions**

326 The majority of women in this study were certain of their decision to have an abortion
327 when they presented for their abortion information visit and their certainty remained unchanged
328 despite the information visit and a 72 hour waiting period.

329

330

331

332

333

334

335

336

337

338

339

340

341 Figure 1. Information visit effects on certainty by baseline decisional conflict

342

343 Figure 2. Waiting effects on certainty by baseline decisional conflict

344

345 Figure 3. Relationship between information visit's effect on certainty and waiting's effect on certainty

Table 1. Demographic description of women presenting for information visit prior to abortion (n=500)^a

Variable	n (%) or mean
Age	25.6 (mean)
Race	
White	323 (65)
Black	14 (3)
Hispanic/Latina	118 (24)
Other/mixed race	39 (8)
Nulliparous	249 (51)
Gestational age discovered pregnancy	5.5 weeks (mean)
Religion	
Protestant	51 (10)
Catholic	58 (12)
Mormon	94 (19)
No or other religion	289 (59)
Public assistance	159 (32)
Employed	342 (69)
Mental health history	
No mental health history	364 (74)
Depression history	37 (7)
Anxiety history	42 (9)
Depression or anxiety history	51 (10)
Risky drinking	235 (48)
Drug use	81 (17)
Abortion knowledge	.62 (mean)
Decisional conflict	15 (mean)
Decisional conflict categories	
Low conflict	349 (71)
Medium conflict	102 (21)
High conflict	41 (8)

^a Age is not missing, as it was collected as part of eligibility screening. All other variables are missing for at least 6 participants whose baseline data were lost due to Wi-Fi connectivity problems and problems with the iPad survey software. Parity was missing for an additional 8 participants; gestational age discovered pregnancy for 19; religion, public assistance, and decisional conflict for 2; risky drinking and drug use for 4, and abortion knowledge for 1.

346

347

348

349

350

351

352

353

38

39

Table 2. Multivariate multinomial logistic regression predicting a reported change in certainty due to something at the information visit among women followed after attending an information session prior to abortion (n=286)

Variables (those in *bold italics* are the comparisons in that section of the table)

	RRR	P	95% CI	
<i>Less certain versus neither more nor less certain</i>				
Abortion knowledge	1.95	0.695	0.07	55.09
Age	0.97	0.600	0.86	1.09
Risky drinking	1.25	0.736	0.34	4.53
Drug use	0.29	0.268	0.03	2.62
Public assistance	0.89	0.871	0.23	3.47
Decisional conflict	1.06	0.008	1.02	1.11
Employment	0.77	0.695	0.21	2.82
Gestational age discovered pregnancy	1.01	0.921	0.78	1.33
Mental health history	3.61	0.057	0.96	13.59
Protestant	Ref			
Catholic	1.49	0.732	0.15	14.61
Mormon	0.39	0.435	0.04	4.10
Other and no religion	0.81	0.813	0.13	4.84
<i>More certain versus neither more nor less certain</i>				
Abortion knowledge	3.65	0.104	0.77	17.42
Age	0.94	0.020	0.89	0.99
Risky drinking	0.77	0.413	0.42	1.43
Drug use	1.52	0.289	0.70	3.28
Public assistance	0.85	0.635	0.44	1.65
Decisional conflict	1.00	0.940	0.98	1.02
Employment	1.43	0.293	0.73	2.81
Gestational age discovered pregnancy	0.98	0.813	0.86	1.12
Mental health history	0.75	0.417	0.38	1.49
Protestant	Ref			
Catholic	1.18	0.787	0.36	3.83
Mormon	2.16	0.154	0.75	6.24
Other and no religion	0.87	0.776	0.34	2.25
<i>Both more and less certain versus neither more nor less certain</i>				
Abortion knowledge	3.19	0.547	0.07	140.06
Age	0.85	0.090	0.71	1.02
Risky drinking	1.17	0.854	0.22	6.15
Drug use	1.51	0.656	0.24	9.34
Public assistance	1.34	0.695	0.31	5.86
Decisional conflict	1.04	0.156	0.99	1.09
Employment	4.47	0.101	0.75	26.68
Gestational age discovered pregnancy	0.85	0.426	0.58	1.26
Mental health history	2.09	0.338	0.46	9.42
Protestant	Ref			

Catholic	1.00	1.000	0.06	17.92
Mormon	1.00	0.999	0.06	16.82
Other and no religion	1.03	0.977	0.14	7.60

Note: includes only complete data; most of the 23 missing are due to the 6 whose baseline data were lost and the 11 who were missing gestational age discovered pregnancy. Models that excluded gestational age discovered pregnancy (n=297) did not have substantively different findings, although the p-value for age and becoming more certain only becomes $p=.050$.

354

355

356

357

358

359

360

361

362

363

364

365

366

367

368

369

370

371

372

373

374

42

43

Table 3. Multivariate multinomial logistic regression predicting a reported change in certainty due to waiting 72-hours (n=287)

Variables (those in <i>bold italics</i> are the comparisons in that section of the table)	RRR	p	95% CI	
<i>Less certain versus no change in certainty</i>				
Abortion myth scale	0.66	0.776	0.04	11.33
Age	0.94	0.231	0.84	1.04
Risky drinking	1.04	0.940	0.34	3.22
Drug use	0.29	0.152	0.05	1.58
Public assistance	0.55	0.341	0.16	1.87
Decisional conflict	1.07	0.000	1.03	1.11
Employment	0.82	0.752	0.25	2.73
Gestational age discovered pregnancy	0.81	0.112	0.62	1.05
no mental health	Ref			
depression only	5.09	0.047	1.02	25.32
anxiety only	2.63	0.247	0.51	13.57
depression and anxiety	8.96	0.005	1.96	41.04
Protestant	Ref			
Catholic	1.05	0.957	0.16	7.00
Mormon	0.61	0.585	0.10	3.68
Other and no religion	0.59	0.493	0.13	2.68
<i>More certain vs. no change in certainty</i>				
Abortion myth scale	0.68	0.678	0.11	4.17
Age	0.95	0.103	0.89	1.01
Risky drinking	1.43	0.324	0.70	2.91
Drug use	1.85	0.154	0.79	4.31
Public assistance	1.01	0.975	0.47	2.20
Decisional conflict	1.03	0.037	1.00	1.05
Employment	0.83	0.638	0.39	1.78
Gestational age discovered pregnancy	0.89	0.174	0.75	1.05
no mental health	Ref			
depression only	0.56	0.388	0.15	2.10
anxiety only	0.38	0.183	0.09	1.57
depression and anxiety	0.67	0.522	0.20	2.28
Protestant	Ref			
Catholic	1.96	0.460	0.33	11.76
Mormon	6.80	0.020	1.36	34.04
Other and no religion	2.77	0.197	0.59	12.99

Note: includes only complete data; most of the missingness is due to the 6 whose baseline data were lost and the 11 of those completing follow-up missing gestational age discovered pregnancy, Models that excluded gestational age discovered pregnancy and (n=298) did not substantively change the findings.

375

376

377

378

379References

46

47

380 Americans United for Life. Women's Right to Know Act, Model Legislation & Policy Guide for
381 the 2015 Legislative Year. www.aul.org. (2015).

382 Banegas, M. P., McClure, J. B., Barlow, W. E., Ubel, P. A., Smith, D. M., Zikmund-Fisher, B. J.,
383 . . Fagerlin, A. (2013). Results from a randomized trial of a web-based, tailored decision
384 aid for women at high risk for breast cancer. *Patient Educ Couns*, 91(3), 364-371. doi:
385 10.1016/j.pec.2012.12.014

386 Caleshu, C., Shiloh, S., Price, C., Sapp, J., & Biesecker, B. (2010). Invasive prenatal testing
387 decisions in pregnancy after infertility. *Prenat Diagn*, 30(6), 575-581. doi:
388 10.1002/pd.2529

389 California Department of Health Care Services, *Stable Resource Toolkit: AUDIT-C-Overview*.
390 http://www.dhcs.ca.gov/services/medi-cal/Documents/tool_auditc.pdf. (2015)

391 Cameron, S. T., & Glasier, A. (2013). Identifying women in need of further discussion about the
392 decision to have an abortion and eventual outcome. *Contraception*, 88(1), 128-132. doi:
393 10.1016/j.contraception.2012.10.032

394 Foster, D. G., Gould, H., & Kimport, K. (2012). How women anticipate coping after an abortion.
395 *Contraception*, 86(1), 84-90.

396 Foster, D. G., Gould, H., Taylor, J., & Weitz, T. A. (2012). Attitudes and decision making among
397 women seeking abortions at one US clinic. *Perspect Sex Reprod Health*, 44(2), 117-124.

398 Gatter, M., Kimport, K., Foster, D. G., Weitz, T. A., & Upadhyay, U. D. (2014). Relationship
399 between ultrasound viewing and proceeding to abortion. *Obstet Gynecol*, 123(1), 81-87.

400 Gould, H., Perrucci, A., Barar, R., Sinkford, D., & Foster, D. G. (2012). Patient education and
401 emotional support practices in abortion care facilities in the United States. *Womens*
402 *Health Issues*, 22(4), e359-e364.

403 Guttmacher Institute. (2016). *Counseling and Waiting Periods for Abortion State Policies in*
404 *Brief*. February 1, 2016.

405 King, L., O'Neill, S. C., Spellman, E., Peshkin, B. N., Valdimarsdottir, H., Willey, S., . . .
406 Schwartz, M. D. (2013). Intentions for bilateral mastectomy among newly diagnosed
407 breast cancer patients. *J Surg Oncol*, 107(7), 772-776.

408 Kryworuchko, J., Stacey, D., Bennett, C., & Graham, I. D. (2008). Appraisal of primary outcome
409 measures used in trials of patient decision support. *Patient Ed Couns*, 73(3), 497-503.

410 Kumar, U., Baraitser, P., Morton, S., & Massil, H. (2004). Decision making and referral prior to
411 abortion: a qualitative study of women's experiences. *J Fam Plann Reprod Health Care*,
412 30(1), 51-54.

413 Labrecque, M., Paunescu, C., Plesu, I., Stacey, D., & Legare, F. (2010). Evaluation of the effect
414 of a patient decision aid about vasectomy on the decision-making process: a randomized
415 trial. *Contraception*, 82(6), 556-562.

416 O'Connor A.M. (1993). User Manual - Decisional Conflict Scale (16 item statement format).
417 http://decisionaid.ohri.ca/docs/develop/User_Manuals/UM_Decisional_Conflict.pdf

418 Parayre, A. F., Labrecque, M., Rousseau, M., Turcotte, S., & Légaré, F. (2013). Validation of
419 SURE, a four-item clinical checklist for detecting decisional conflict in patients. *Med*
420 *Decis Making*, 34(1), 54-62.

421 Ralph, L., Foster, D. G., Kimport K, Turok, D., & Roberts, S. (2016). Measuring decisional
422 certainty among women seeking abortion. *Contraception*, Epub ahead of print

423 Roberts, S. C. M., Turok, D. K., Belusa, E., Combellick, S., & Upadhyay, U. D. (2016). Utah's
424 72-Hour Waiting Period for Abortion: Experiences Among a Clinic-Based Sample of
425 Women. *Perspect Sex Reprod Health*.

426 Rocca, C. H., Kimport, K., Roberts, S. C., Gould, H., Neuhaus, J., & Foster, D. G. (2015).
427 Decision rightness and emotional responses to abortion in the United States: A
428 longitudinal study. *PloS one*, *10*(7), e0128832.

429 Schauer, D. P., Arterburn, D. E., Wise, R., Boone, W., Fischer, D., & Eckman, M. H. (2014).
430 Predictors of bariatric surgery among an interested population. *Surg Obes Relat Dis*,
431 *10*(3), 547-552.

432 "Sure". Merriam-Webster.com, Retrieved Feb 29, 2016.

433 Weitz, T. A., Taylor, D., Desai, S., Upadhyay, U. D., Waldman, J., Battistelli, M. F., & Drey, E. A.
434 (2013). Safety of aspiration abortion performed by nurse practitioners, certified nurse
435 midwives, and physician assistants under a California legal waiver. *Am J Public Health*,
436 *103*(3), 454-461.

437

438

439