

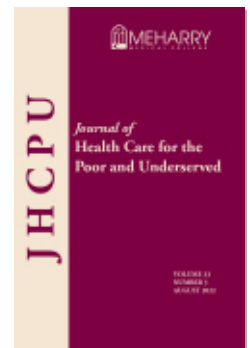


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# Access to Preferred Contraceptive Strategies in Iowa: A Longitudinal Qualitative Study of Effects of Shifts in Policy and Healthcare Contexts

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*Abstract:* People's ability to use their desired contraception is necessary for reproductive autonomy. We conducted longitudinal in-depth interviews over two years with 34 women in Iowa who sought contraceptive and related care at publicly supported sites in 2018/2019 to understand how state-level shifts in funding for these services affected their access to contraception. Twenty-seven of 34 respondents faced cost, access, and quality barriers relevant to policy and health care contexts, and we assessed the overall level of impact of these on access to preferred contraception over the study period. Cost barriers such as high fees for visits and methods as well as restrictive or inadequate insurance coverage, and access barriers such as long appointment wait times were most common; barriers compounded one another. Policies that support funding for contraceptive care, and that limit the need to interact with health systems for routine care, can decrease vulnerability to barriers and increase reproductive autonomy.

*Key words:* Contraception, delivery of health care, United States, policy, qualitative research.

**C**ontraceptive care: A path to autonomy beset by barriers. Accessing and using desired contraception is one important avenue for individuals to realize reproductive autonomy, or the ability to be fully empowered agents in their reproductive lives.<sup>1</sup> Contraception has myriad other health benefits beyond pregnancy protection<sup>2</sup> and plays a role in helping people to realize social and economic life milestones;<sup>3</sup> it is basic preventive health care.<sup>4</sup> In order to realize these benefits of contraception, and as endorsed by the American Congress of Obstetricians and Gynecologists (ACOG), people need contraception to be broadly available and accessible.<sup>2,5</sup> However, inequities in access to contraception due to geography, cost, and other factors exist,<sup>6</sup> highlighting the important role that publicly supported health centers play in ensuring that indi-

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viduals with minimal resources can access this care. In 2016, more than nine million women\* obtained publicly supported contraceptive services, either by visiting a health facility that received public funds for this purpose or by using Medicaid at a private health care provider.<sup>7</sup>

However, several factors across the United States keep individuals from obtaining desired contraception. Payment-related barriers, including insurance coverage, are significant in determining access to care.<sup>8</sup> In Alabama and South Carolina, nonuse of contraception was more common among women with no health insurance than among insured women.<sup>9</sup> In Mississippi, changes in health insurance among patients having abortions and subsequent shuffling from private to public providers led to inconsistent care and disrupted contraceptive use.<sup>10</sup> Among reproductive-aged women in Ohio, affordability and low satisfaction with a contraceptive provider were reasons for not using a preferred contraceptive method.<sup>11</sup> Across many states, women with health insurance have higher levels of both overall contraceptive use and use of most effective and moderately effective methods, including female sterilization, intra-uterine devices (IUDs), implants, pills, the patch, the ring, and injectables.<sup>8</sup> However, even insured women face barriers to obtaining contraception, including high copays, high cost-sharing, and limitations on refill timing.<sup>12–14</sup>

Barriers related to access to, and quality of, contraceptive care also limit individuals' ability to initiate or sustain preferred contraception. On-site method distribution can facilitate patients' access to contraceptive methods but varies based on the site of sexual and reproductive health (SRH) care.<sup>15</sup> Despite clinical guidance to the contrary,<sup>5</sup> some clinicians require a pelvic exam before prescribing or refilling hormonal contraception prescriptions; patients may have trouble securing transportation to the appointment or may be uncomfortable with the exam.<sup>16</sup> Patients may also feel pressured to use a method that is not their first choice via provider bias for certain methods such as long-acting reversible contraception (LARC) like the IUD and implant.<sup>17,18</sup> Specialized reproductive health clinics are more likely to provide services that make initiating and continuing contraception easier for patients, including providing oral contraceptive pill (OCP) prescriptions and refills on-site, delaying pelvic exams, and offering same-day LARC insertions.<sup>15</sup> Patients who rate their interpersonal interactions with their family planning provider more favorably are more likely to still be using their contraceptive method after six months and to use more effective methods.<sup>19</sup> All of this evidence highlighting differing experiences of access and quality among SRH patients underscores the importance of individuals not just being able to seek contraceptive care, but being able to do so from a provider whom they like and trust.

**Political resistance to subsidized contraceptive care: the case of Iowa.** Despite the importance of publicly supported family planning care, politicians at the state

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\*In this manuscript, we use the word "women" to reflect the terminology used in the studies we cite. However, we recognize that data collection processes do not always accurately or comprehensively capture participants' gender, and eligible participants may miss an opportunity to participate in surveys because of their gender expression. We encourage readers to consider that contraceptive users' gender identities are diverse; to reflect this, we use the word "people" when speaking generally about individuals who seek and use contraceptive methods and care.

and federal levels have targeted such care for funding cuts, with observably negative consequences. In 2012, for example, Texas legislators drastically cut family planning funding and passed legislation to exclude clinics that provided abortion care or referrals from participating in the state Medicaid program.<sup>20</sup> As a result, about a quarter of family planning clinics in Texas closed, significantly fewer patients were served, and fewer clinics provided LARCs;<sup>21</sup> among Texas women using injectable contraception, contraceptive continuation rates decreased and rates of childbirth covered by Medicaid increased.<sup>22</sup>

In 2017, Iowa discontinued its participation in the federal Medicaid family planning program, forfeiting \$3 million in federal funding, and replaced it with its own state-level family planning program,<sup>23</sup> one that excluded funding for any clinics providing abortion care or referrals for abortion care.<sup>24</sup> Consequently, patients enrolled in the state family planning program could no longer access subsidized care at publicly funded clinics affiliated with abortion provision. Several large health care entities in Iowa lost funding, leading to the closure of four specialized SRH care centers and driving more than 15,000 patients to find a new family planning provider.<sup>24–26</sup> These policies reduced the number of clients in the state-funded family planning program by 75%.<sup>27</sup>

**The present study.** In this context, we designed the Reproductive Health Impact Study to broadly track and measure the impact of this and other policy-related changes on the publicly supported family planning network and on the people who rely on it in Iowa and three other states.<sup>28</sup> As part of this effort, we conducted a longitudinal qualitative study across two years with people in Iowa who had initially sought SRH care at a publicly supported health care site. Our objective was to examine whether women's ability to enact their preferred contraceptive strategies—and thus achieve this critical piece of reproductive autonomy—was affected by disruptions in access to SRH care related to the 2017 change in Iowa Medicaid coverage. We draw on women's narratives describing their experiences of attempting to obtain desired contraceptive methods and care to identify barriers they faced over the course of two years, and we describe how they attempted to overcome these barriers.

## Methods

**Sample and data collection.** A previous research initiative surveyed patients aged 15 or older seeking family planning services at publicly supported health centers in Iowa from April 2018 to February 2019.<sup>29</sup> We drew our qualitative sample from among 147 respondents who had completed baseline surveys, provided contact information, and indicated that they had experienced disruptions or barriers to their contraceptive access over the past year. Our goal was to recruit about 40 people, anticipating that attrition would result in a final sample of at least 20.

Using the telephone and/or email contact information provided, we reached out to each person who met the recruitment criteria until the goal was met. We concentrated first on respondents located in the Des Moines metropolitan area and the eastern part of the state to facilitate in-person interviews, and then expanded recruitment throughout the state. We informed potential participants of the study's purpose, its longitudinal nature, and the remuneration offered. We attempted to re-contact all 41 initial

respondents for each subsequent wave of in-depth interviews (IDIs), which occurred at intervals of five to nine months.\* In total, 34 completed the study.\*\*

Respondents could elect to conduct their interviews in person or via videoconference. At Wave 1, half chose in person and half chose video. Participants generally chose the same interview mode for Wave 2. All Wave 3 interviews were conducted via video because of COVID-19 restrictions. In-person interviews were conducted in private, reserved rooms at a local university or hotel conference space, both easily accessible by car and public transit. Video interviews were conducted over Zoom (zoom.us, a free, secure video platform), with guidance to participants to choose a private space for their interview.

All IDIs were conducted using a semi-structured interview guide, which included questions about respondents' life contexts, their sexual and romantic relationships, pregnancy, contraceptive strategies (a concept that expands the idea of "method use" by acknowledging that people use contraceptive methods in sometimes complex concurrent or sequential combinations<sup>30,31</sup>), health care settings, barriers to using contraception and getting contraceptive care, and policy awareness. We piloted the guide with respondents local to the researchers who were recruited via Craigslist (a popular classified advertisement website); it was revised slightly both after piloting and between interview waves.

In-depth interviews lasted between 39 and 120 minutes, and respondents received \$50 (in cash or via a digital gift card). We gave people who traveled over 30 miles or more than 30 minutes to the interview site an extra \$20 to cover transportation expenses. Each respondent and interviewer pair remained the same for all study waves. All participants provided spoken (for video interviews) or written (for in-person interviews) consent. The researchers' organizational institutional review board approved all data collection materials and protocols.

**Data processing and analysis.** All IDIs were audio-recorded, and the interviews were transcribed from recorded audio files. Transcripts were then edited for accuracy and anonymized by removing non-relevant personally identifiable information.

After each IDI, interviewers wrote short memos using a standard template, which summarized key domains. After the final IDI, interviewers wrote trajectory memos describing changes that each respondent experienced over the study period.\*\*\* Memos were used as aids in preparing for subsequent IDIs and as secondary references for fact-checking in the analytic phase.

Our coding scheme included both deductive nodes based on the interview guide and others that emerged inductively from the data. It enabled us to highlight changes

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\*Each wave encompassed both the current time of interview as well as the immediate prior months (approximately 12 months for Wave 1, and six months for Waves 2 and 3). Therefore, the total time covered in each respondent's life was two years.

\*\*Thirty-three people completed interviews at Waves 1, 2, and 3. One person completed interviews at Waves 1 and 3. Seven people were considered lost to follow-up because they completed only one of the three interviews, or interviews at Waves 1 and 2.

\*\*\*All researchers bring biases to their work, rooted in their own identities, ideologies, and experiences. To examine these biases and reflect on how they might affect data analysis and interpretation, members of our research team wrote and periodically revised subjectivity statements that named and explored these issues.

in respondents' experiences over time. Transcripts were divided among the research team to be coded independently in NVivo12 (QSR International). To maintain inter-coder reliability, coding discrepancies were periodically assessed and resolved through discussion.

At each wave, we assessed the barriers our respondents encountered as they chose, obtained, and used contraceptive methods and sought and received health care related to their contraceptive use. Given our interest in understanding how the 2017 Iowa Medicaid coverage changes may have affected individuals' ability to achieve their contraceptive preferences, we focused on barriers occurring at the policy and health system levels, drawing on the access and quality domains of the overall continuum of care within Holt et al.'s recent framework for advancing person-centered and equitable contraceptive care.<sup>32</sup> For our respondents, cost issues were so prevalent and salient that we considered them apart from access issues, even though Holt et al. consolidate these in their overall continuum of care. At each wave, we evaluated whether respondents encountered barriers related to cost, access, or quality when seeking contraceptive methods and care and whether respondents ultimately got the methods and care they preferred. Twenty-seven respondents described a barrier within one of these domains during at least one point over the study period; they constitute our analytic sample.\*

We grouped respondents with others who appeared to have similar levels of accumulated impact on their ability to enact their preferred contraceptive strategies; we looked for meaningful similarities or differences in their experiences and patterns of barriers, particularly in their insurance coverage, as this was a key factor in their narratives (Figure 1). Below, we discuss respondents' experiences of cost, access, and quality barriers to contraceptive care and use over the study timeframe; show how the impact of these barriers varied across respondents; and identify ways in which some respondents overcame existing barriers to mitigate this impact. We include case studies to demonstrate how individuals tried to enact their preferred strategies and what effect these experiences had on them. Finally, we describe how these barriers manifested in ways that were specific to the context in Iowa at the time of the study. Quotations in this manuscript are presented verbatim and identified by a randomized number<sup>33</sup> with the interview wave indicated for each quotation (W1, 2, or 3).

## Results

**Respondent characteristics.** While this was not a criterion for participation, all 27 respondents in our analytic sample self-identified as women and used she/her pronouns. When they took our baseline survey (between two weeks and 11 months prior to their first interview), they ranged in age from their late teens to over 40; most were White, non-Hispanic, and had at least some post-high school education (Table 1). Most lived

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\*Respondents also faced numerous barriers to care that were more related to individual or inter-personal issues, such as side effects from methods, logistical difficulties stemming from moving or other disruptions, and coercion or resistance from partners; this analysis acknowledges the presence of those barriers and the fact that they may have interacted with or exacerbated the barriers related to policy and health care context that are the focus of this analysis.

**Table 1.****SAMPLE CHARACTERISTICS<sup>a</sup>**

	Percentage	Number (n=27)
Recruitment facility type		
Planned Parenthood	81.5	22
Other	18.5	5
Age		
18–19	18.5	5
20–24	40.7	11
25–29	14.8	5
30+	25.9	7
Race/Ethnicity		
Non-Hispanic White	66.7	18
Non-Hispanic Black	7.4	2
Non-Hispanic Other	7.4	2
Hispanic	14.8	4
Employment		
Employed for wages	48.1	13
Student	29.6	8
Not employed	22.2	6
Education		
Less than some college	18.5	5
Some college or Associate degree	55.6	15
College graduate or more	25.9	7
Poverty status		
<100%	29.6	8
100–299%	40.7	11
300%+	18.5	5
Relationship status		
Married	11.1	3
Cohabiting	33.3	9
Unmarried	51.9	14
Type of insurance coverage		
Private	33.3	9
Public	51.9	14
Mixed	7.4	2
None or Unsure	7.4	2
Region of Iowa		
Central	37.0	10
Eastern	55.6	15
Western	3.7	1
Overall, thinking about the next year, do you want to become pregnant		
No	81.5	22
Yes	3.7	1
Unsure	14.8	4

*Note*

<sup>a</sup>Data come from responses to baseline questionnaire completed at time of recruitment into study. Not all variables add to a total of 27 due to item nonresponse.

in households at or above federal poverty level (FPL); nearly half were employed; and most had either public health insurance or a mix of public and private insurance. Less than 10% were uninsured. Most were from either central or eastern Iowa, and most had been recruited into the study at a Planned Parenthood clinic. At baseline, 22 of the 27 respondents reported not wanting to become pregnant in the upcoming year (four were unsure). Respondents described high levels of provider-dependent contraceptive use over the timeframe (sterilizations, IUDs, implants, injectables, oral contraceptive pills (OCPs), patches, or rings).

**Overall impact of barriers.** We classified seven respondents as having experienced high levels of accumulated impact of barriers to their preferred contraceptive methods and care within the cost, access, and quality domains (Figure 1). They encountered barriers in each category over all three waves and were largely unable to enact their preferred contraceptive strategies. All seven reported being unable to use the contraceptive strategies they wanted during at least one point, and only two reported any period in which they did *not* encounter such barriers. This combination of barriers also had significant implications for these respondents; five of seven described facing frequent gaps in their use of any method, and three were exposed to unwanted pregnancy during these gaps.

We categorized 10 respondents as having been moderately affected by cost, access, and quality barriers in that they eventually got their preferred methods and care, often after expending much time and labor. Six in this group also were able to avoid barriers during at least one time period. Similar to the highly affected group, five experienced

Respondent ID	Cost			Access			Quality			Insurance status	Key
	wave 1	wave 2	wave 3	wave 1	wave 2	wave 3	wave 1	wave 2	wave 3		
Highly impacted group											
22										Consistent coverage	Barrier encountered, contraceptive preferences NOT realized
21										Consistent coverage	
25										Gap in coverage	
8										Gap in coverage	
24										Consistent coverage	Barrier encountered, contraceptive preferences still achieved
14										Consistent coverage	
23										Consistent coverage	
Moderately impacted group											
19										Consistent coverage	Barrier not encountered
11										Consistent coverage	
5										Gap in coverage	
17										Consistent coverage	
12										Consistent coverage	
13										Gap in coverage	
1										Gap in coverage	
15										Gap in coverage	
7										Consistent coverage	
4										Consistent coverage	
Least impacted group											
6										Gap in coverage	
27										Gap in coverage	
18										Consistent coverage	
9										Consistent coverage	
26										Consistent coverage	
3										Consistent coverage	
10										Gap in coverage	
20										Gap in coverage	
2										Consistent coverage	
16										Consistent coverage	

Figure 1. Respondents' experiences of barriers to realizing contraceptive preferences, by domain, over study time frame.



a gap in their contraceptive use, and four were exposed to unwanted pregnancy during these gaps.

The remaining 10 respondents were classified as least affected by policy and health systems-level barriers, and they all reported facing no barriers to their preferred contraceptive strategies during at least one period. All reported encountering some systemic hindrances, but only two in this group were *unable* to overcome such barriers at any time. None experienced a gap in contraceptive use.

**Cost-related barriers.** Of all policy and systems-level barriers encountered by our respondents, those related to cost were most common; 23 of 27 faced such barriers. Table 2 shows the specific obstacles respondents faced, according to their level of accumulated impact. Cost-related barriers included both method- and visit-related costs that were burdensome and that often fluctuated or were charged unexpectedly. These were sometimes exacerbated by inadequate, shifting, or overly regimented health insurance coverage policies.

Respondents in each group faced the same kinds of issues with costs and payment, although highly affected respondents faced them more frequently and had more difficulty surmounting them. Cost-related barriers were also the most persistent category of obstacles, with most respondents reporting having encountered them repeatedly (or encountering new barriers in this category) at more than one interview (Figure 1).

Although respondents' insurance status was often linked to their experiences of cost-related barriers, this relationship was complex. Notably, simply being uninsured was not the most common driver of cost-related barriers for our respondents. Some respondents (10 of 27) lost their insurance coverage at some point during the study, often rendering them unable to afford methods and care and subsequently exposing them to unwanted pregnancy. However, even steadily insured respondents faced cost-related barriers to getting and using their methods, including unpredictable costs and confusing regulations. Many insured respondents also reported that their policies limited their numbers of refills or dictated when required annual visits could be scheduled; these rules often conflicted with their needs and schedules and caused gaps in their contraceptive use.

The experiences of respondents most affected by the accumulation of barriers illustrate this complex relationship. Every respondent in the most-affected group faced persistent, often insurmountable cost-related barriers to her contraceptive strategy, even though five of the seven were steadily covered by public or private insurance throughout the timeframe. Despite this steady insurance coverage, respondents in this deeply affected group described experiencing gaps in use and exposure to pregnancy driven by cost-related barriers.

In contrast, moderately affected respondents experienced significant churn in their insurance coverage throughout the study. Only three of 10 in this group were covered by the same insurance plan throughout the study, with the others either being uninsured for a period (four) or covered continuously but by different plans (three). This inconsistency in insurance coverage created barriers to contraceptive methods and care, yet only five described being unable to get what they needed due to a cost-related barrier at any interview.

Respondents who experienced low overall impacts of any barriers also experienced

Table 2

POLICY-RELEVANT BARRIERS TO RESPONDENTS’ PREFERRED CONTRACEPTIVE STRATEGIES<sup>a</sup>

Level of impact	Cost-related barriers	Access-related barriers	Quality-related barriers
High (N=7)	<ul style="list-style-type: none"><li>• High cost of preferred methods or method-related visits</li><li>• Inadequate insurance coverage</li><li>• Rising/high insurance rates/copays</li><li>• Insurance policies limiting # of visits or refills</li><li>• Loss of insurance coverage/fear of loss of coverage</li><li>• Uncertainty about where to find covered or low-cost contraceptive care</li></ul>	<ul style="list-style-type: none"><li>• Long wait times/lack of availability for contraceptive appointments</li><li>• Inconvenient clinic or pharmacy hours</li><li>• Pharmacy and clinic errors (such as forgetting to send promised reminders for appointments, and not having prescriptions available when promised)</li></ul>	<ul style="list-style-type: none"><li>• Provider denials of the methods people desired</li><li>• Religiously-based restrictions on methods available at sites</li><li>• Clinical protocols requiring visits to initiate or continue methods</li><li>• Judgmental or unfriendly care</li><li>• Facing protesters or stigma at contraceptive care sites</li><li>• Methods not available at site of care</li><li>• <b>Lack of places to obtain integrated contraceptive and general healthcare</b></li><li>• <b>Lack of communication between clinical sites</b></li><li>• <b>Clinic unsupportive of method switching or side effect management</b></li></ul>
Moderate (n=10)	<ul style="list-style-type: none"><li>• High cost of preferred methods/method-related visits</li><li>• Inadequate insurance coverage</li><li>• Loss of insurance coverage/fear of loss of coverage</li></ul>	<ul style="list-style-type: none"><li>• Long wait times/lack of availability for contraceptive appointments, overcrowding</li><li>• Inconvenient clinic or pharmacy hours</li></ul>	<ul style="list-style-type: none"><li>• Provider denials of the methods people desired</li><li>• Judgmental or unfriendly care</li><li>• Clinical protocols requiring visits to initiate or continue methods</li></ul>

(continued on p. 1503)

**Table 2. (continued)**

<b>Level of impact</b>	<b>Cost-related barriers</b>	<b>Access-related barriers</b>	<b>Quality-related barriers</b>
Moderate (n=10)	<ul style="list-style-type: none"> <li>• Rising/high insurance copays</li> <li>• Insurance policies limiting # of visits or refills</li> <li>• Uncertainty about where to find covered or low-cost contraceptive care</li> </ul>	<ul style="list-style-type: none"> <li>• Pharmacy and clinic errors (such as forgetting to send promised reminders for appointments, and not having prescriptions available when promised)</li> </ul>	<ul style="list-style-type: none"> <li>• Religiously-based restrictions on methods available at sites</li> <li>• Methods not available at site of care</li> </ul>
Least (N=10)	<ul style="list-style-type: none"> <li>• High cost of preferred methods/method-related visits</li> <li>• Loss of insurance coverage/fear of loss of coverage</li> </ul>	<ul style="list-style-type: none"> <li>• Long wait times/lack of availability for contraceptive appointments, overcrowding</li> <li>• Inconvenient clinic or pharmacy hours</li> <li>• Clinic errors (such as forgetting to send promised reminders for appointments)</li> </ul>	<ul style="list-style-type: none"> <li>• Provider denials of the methods people desired</li> <li>• Judgmental or unfriendly care</li> <li>• Facing protesters or stigma at contraceptive care sites</li> <li>• Clinical protocols requiring visits to initiate or continue methods</li> </ul>

*Note:*

<sup>a</sup>Barriers that were unique to a group are presented in bold.

some churn in insurance coverage (with four in 10 reporting any periods of being uninsured throughout the study), yet no one in this group reported insurance-related restrictions that limited their access to methods or care.

Respondents expended much effort to overcome cost-related barriers, with varying success. They worked to gain, restore, and maintain their insurance coverage because, despite the complexities noted above, they viewed this coverage as necessary to enacting their preferred contraceptive strategies. Respondents also surmounted cost-related barriers by accessing subsidies and discounts on methods and care available—to varying degrees—at publicly supported sites. Most people in the lowest-impact group (seven of 10) described accessing subsidized care for their contraceptive needs, compared with half in the moderately-affected group (five of 10) and fewer in the highest-impact group (three of seven).

Several respondents in the moderate- and low-impact groups also described how clinical sites helped them avoid cost-related gaps in use by writing “bridge prescriptions” when they had exceeded their insurance-mandated number of visits or method refills, and by intervening with insurance entities to extend or reinstate coverage for contraceptive methods and care. All groups of respondents reported researching alternative sources of care when faced with cost-related barriers, and many reported switching sources to save money; however, this tactic was more commonly noted by respondents in the less-affected groups.

When respondents were unable to enact their preferred contraceptive strategies due to persistent, cost-related barriers, they often avoided gaps in contraceptive protection by substituting other, less-preferred methods. As with switching sites of care, changing methods because of cost-related barriers was more common among moderately or least affected respondents than by those most deeply affected. Alternately, they described paying out-of-pocket—sometimes more than they felt they could afford—when methods were not covered, and by rationing methods such as condoms or emergency contraception to use only if they perceived that the risk of pregnancy from a particular sexual encounter justified the costs of using the method.

Several respondents said that they endured low-quality contraceptive care because they did not know anywhere else that would accept their insurance or provide affordable services. However, respondents (particularly from the highly affected group) often described responding to financial pressures to meet other costs by taking “breaks” from and discontinuing method use.

In the period before her first interview, Respondent 5’s Medicaid coverage had been revoked after she did not file paperwork promptly:

I remember I was in school and I was supposed to renew my insurance or re-apply and whatnot, and I didn’t know, they didn’t send me any packets of information or anything. I had no idea until . . . I had the three-month [re]fill and then three months later, I was trying to get my birth control and they said, “You don’t have health insurance.” So, I called them. Automatically, you go through 10 people . . . So, I went two weeks without birth control . . . I was like, I am not going to have any sexual intercourse. So, I waited a month and when I got a refill, I waited a month until I was sexually active again, because it was just that I didn’t have it for two weeks, and I was, like, super-nervous. (W1)

She not been able to stock up on extra OCPs to guard against unwanted pregnancy because of the limits Medicaid placed on how many OCP packs she could pick up at one time.

Respondent 5 eventually regained her coverage and scheduled a medical visit to renew her prescription for OCPs and filled it, but the experience of trying to secure and clarify Medicaid coverage was so frustrating that she considered discontinuing OCPs altogether. At her second interview, while Respondent 5 had not experienced another gap in contraceptive use, she was fearful that she would. She was switching to employer-based private insurance, but she did not know if the plan would cover her OCPs and she could not afford to pay for them herself:

So now I am debating, do I get off birth control or do I stay? . . . I've gone through a couple of different ones trying them out, but now, I don't know if I can necessarily afford it, because I don't make that much . . . I would need to take my health insurance, because I can't go uninsured, but as far as paying \$40 for birth control, I'm not sure . . . I just feel like that's very expensive. (W2)

At her final interview, however, Respondent 5 had discontinued OCP use in favor of withdrawal to "give her body a reset" (W3). Nevertheless, persistent cost-related barriers such as insurance disruptions, insurance-related limits on method acquisition, and high insurance co-pays for methods had rendered OCPs nearly impossible for her to use effectively.

**Access barriers.** Respondents reported facing non-cost-related barriers to care (such as long wait times for appointments or within the clinic, lack of available appointments, lack of walk-in hours, inconvenient hours or locations, and errors at the clinic or the pharmacy) nearly as frequently as cost-related barriers. Nineteen of the 27 respondents encountered such obstacles at least once during the study, although respondents reported them less frequently at later interviews than at earlier ones. The same types of access-related barriers were encountered across all impact groups.

Use of shorter-acting, provider-dependent methods (OCPs, patches, rings, and injectables) at some point over the study was nearly universal among highly affected (all seven) and moderately affected (nine of 10) respondents, while somewhat less common among the least affected group (six of 10). Access barriers may have been less salient for the latter group because their contraceptive strategies required less contact with clinical sites. For example, LARC use at any time during the study was more common in the moderate- (six of 10) and low- (four of 10) impact groups than in the highest-impact group (one of seven). Long-acting reversible contraceptives can help people avoid some access barriers because of less need for frequent clinical care, maintenance, and resupply. However, such methods do require insertion, removal, and side effects management in clinical settings, which may mitigate this benefit.

Some respondents overcame access-related barriers by switching clinical sites to avoid long waits for appointments and to make visits at hours that better suited their schedules. However, switching care sites was rare among highly affected respondents, who more often described simply delaying or forgoing care because they felt they had no other options; contraceptive care switching was more frequent among moderately affected respondents.

Only five of the 10 respondents classified as least affected by barriers at the policy and health systems levels described facing an access-related obstacle to their contraceptive methods or care, all of which occurred before their first interview. Therefore, a primary feature of this low-impact group's experience of access-related barriers to fulfilling their contraceptive strategies was not overcoming them, but avoiding them.

Respondent 25's experiences provide an example of how access-related barriers affected respondents' ability to get the contraceptive methods and services they needed, and an example of how cost and access barriers can amplify each other. Yet while Respondent 25's overall impact of barriers was classified as high, she faced no obstacles to her contraceptive care by Wave 3, illustrating that some barriers' effects may abate over time.

At her first interview, Respondent 25 described facing both cost- and access-related barriers that had introduced a gap in her contraceptive use and exposed her to the possibility of an unwanted pregnancy. An OCP user, Respondent 25 lost her job in the period before her first interview, and with it the ability to afford her preferred provider, a private family doctor. Having run out of OCPs, she attempted to abstain from sex, explaining:

After I lost my job, my insurance ended . . . I couldn't afford to take over insurance because it was almost \$500 a month . . . I didn't realize that my [OCP] prescription was going to run out as quickly as it did. So, there was about a month before I could get the Health Department to get [my] prescription renewed . . . Like, it was kind of stressful because I knew I was out of pills and I needed them. But I mean, at that point what do you do? I was just thankful there was somewhere I could go and get discounted services or affordable services for someone that didn't have a job at the time. (W1)

By the time of her first interview, Respondent 25 had found a new job and regained employer-based health insurance, allowing her to resume getting contraceptive and general health care in her preferred setting. However, at her second interview, she reported a different access-related barrier: she had gone to her pharmacy to pick up a refill, but the OCPs were not available when promised. She was worried about her risk of pregnancy, so she and her partner used condoms as a backup.

At her final interview, Respondent 25 did not report any barriers to enacting her contraceptive strategy, since she and her partner had recently begun planning a pregnancy and she had stopped using OCPs in anticipation of this event. This respondent's ability to avoid access-related barriers to her contraceptive strategy (as well as cost-related barriers, which in her previous experience drove and compounded access-related barriers) increased when her employment and insurance situation stabilized, and when her contraceptive preferences changed to no longer include provider-dependent methods.

**Quality barriers.** Eighteen of the 27 respondents encountered quality-related barriers, such as clinicians failing to provide person-centered contraceptive care (providing counseling that was coercive or otherwise unresponsive to respondents' desires and needs) and sites failing to offer a full range of methods or failing to provide them in accordance with clinical guidelines (not providing methods on the same day or requiring visits before prescribing methods). As with access-related barriers, these were less

persistent over the course of the study than those related to cost, in that respondents were often able to avoid them by their second or third interviews. As with access-related barriers, quality-related barriers were associated with the contraceptive care that respondents received at clinical sites; those using provider-dependent methods more commonly faced such obstacles.

Respondents highly affected by barriers not only encountered quality-related barriers more frequently and persistently than those in other groups, but they also mentioned barriers not described by other respondents, such as an inability to get contraceptive care that is integrated with general care, a lack of communication between care sites, lack of support for method switching, and clinicians who were not helpful when they experienced side effects and/or wanted to switch methods. As with access-related barriers, being unable to easily switch care sites may have contributed to five of the 7 people in this group facing quality-related barriers at multiple interviews. Respondents classified as moderately and least affected faced quality-related barriers less frequently. Their ability to expend the labor necessary to switch sites enabled them to avoid coercive or judgmental providers who blocked them from enacting their preferred contraceptive strategies.

As with cost and access-related barriers, quality-related barriers had a cumulative impact on respondents and impeded their ability to overcome each barrier individually. Respondent 14's experiences illustrate how cost, access, and quality barriers amplified one another, as well as how immense and time-consuming the effort required to surmount these barriers can be. This respondent, whose experience of multiple barriers at her first two interviews resulted in a classification of highly affected, had one young child and was sure that she and her husband did not want any more. She wanted a tubal ligation but had been denied this request under Medicaid policy because she was young and had only one child. Multiple providers had told her that they could not sterilize her unless she was at least 25 and had two children.

At her first interview, she described recently switching from the ring to an IUD because she had difficulty inserting and removing the ring. However, her usual provider did not offer IUDs—or the sterilization that she really wanted—and she thought that this was due to their being in a health system with a religious affiliation. The next barrier she encountered was access-related:

I tried to do a walk-in with [a specialized clinic], and they said, "We can't do IUDs on walk-ins." Then I was like, okay, that's frustrating, you probably should have told me that when I called on the phone or when I inquired online, or looked it up. (W1)

She eventually scheduled an appointment and had her IUD inserted, but the hours in which it could be done were limited and inconvenient:

I didn't have childcare at the time. So, my four-year-old daughter went with me to get my IUD in. The nurse kept her busy. (W1)

Despite having finally obtained a LARC, Respondent 14 had not given up her desire for a permanent method, and by her second interview, she had obtained it, though she had to navigate multiple systems to do so. She first tried two sites she had visited

previously, but neither provided sterilizations. Another site had unacceptably long waits for appointments. A fourth site again denied her due to her age, parity, and Medicaid status. A fifth site accepted her appointment request, but tried to change her mind during that appointment and required her to book a second appointment 30 days later to ensure that she was certain about the decision. At her second appointment, this provider did not accept her decision and made her schedule another appointment one week later. At that appointment, her third at this fifth provider and her seventh appointment in total, she obtained a tubal ligation paid for by Medicaid. The scrutiny of her ability to know her own desires continued even at her follow-up appointment after her surgery: “the first question they ask me is if I regretted doing it. I’m like no, I don’t regret doing it.” (W2)

At her second and third interviews, she expressed relief that her contraceptive desires were finally fulfilled despite significant barriers in all three categories, as well as frustration about how long and difficult the process was. When asked if she planned to return to the clinic where she had finally obtained her sterilization, Respondent 14 said:

Probably not . . . I didn’t like how they made me feel like I was making the wrong choice, even though I knew I was making the right one. I just didn’t like having my decision questioned about eight billion times. (W2)

Respondent 14 used the word “frustrated” 16 times when discussing contraceptive care in her three interviews. The barriers she faced to getting what she needed abated when she finally obtained a permanent method, but her experiences in the earlier part of the study illustrate both how barriers across categories amplify each other, and how much labor can be required to overcome them.

**Experiences of barriers specific to policy changes in Iowa.** Many of the policy and health systems barriers and their impacts described above could have affected people seeking contraceptive methods and care in any U.S. state, although they all occurred against the backdrop of shifts in Medicaid coverage with implications for where and how low-income people could access SRH care in Iowa. Iowa’s funding changes had specific consequences for our respondents, spread across impact groupings, causing gaps and discontinuations of methods and care and exposing some people to the risk of unwanted pregnancies. Twenty-two respondents reported getting care at these specialized sites, and 15 of them reported relying on sliding scales or the Iowa Family Planning Program to pay for their contraceptive methods or care. Iowa-specific barriers were mostly cost-related; they involved changes in the cost for contraceptive methods and of care at specialized SRH care sites.

Some respondents described being unable to schedule contraceptive visits in time to obtain or renew their methods without experiencing gaps and reported having been told that this was due to service reductions resulting from funding cuts. Ten respondents explicitly described facing a barrier that they knew or were told was a result of Iowa Medicaid policy changes.

Respondent 27 was an uninsured OCP user who initially reported getting OCPs at a specialized SRH care site without any difficulty:



I thought that even if I was charged, I knew I would be charged a lot lower, because at [the site], they try to make them a little more affordable and a little more acceptable, but when I reported my income, they told me it was free. I was like, yay! (W1)

At Wave 2, this respondent said staff at the site told her they would soon have to stop providing free OCPs on-site due to changes to their funding:

I knew that things have been covered on the media about the potential for defunding for [the site] and the birth control. I never knew that it had actually officially been passed that when I called, they told me that it had been passed and that people are just no longer eligible for the free birth control at all . . . So, that's no longer an option for me . . . our funds are quite tight. (W2)

She planned to get her OCPs through a pharmacy or a mail-order system instead of directly from the clinic:

Since all the funds have been cut, not all but most, but definitely for birth control, it's cheaper for me to go back to a regular pharmacy. I get at least a \$10 discount going through the pharmacy instead of going through [the site]. (W3)

At her last interview, she was delaying her annual SRH visit until she was sure that she could pay for it:

I asked about the coverage and if it was changed or what had changed, and they said yeah, all of our funding got cut and birth control is like this much. I asked if the appointment itself would end up costing me money and then she said, yes it would end up costing me money, and I canceled my appointment. (W3)

She did not know exactly when she might reschedule her visit, which was required to renew her prescription. The overall impact of health policy and systems-level barriers on Respondent 27 was categorized as low, likely because most of the barriers were confined to cost rather than over all three domains, as well as because she did not experience the impacts of the policy change immediately. She entered the study being able to enact her preferred contraceptive strategy despite having a lower income, being unemployed, and lacking insurance by using state-sponsored subsidies. The discontinuation of this policy eventually triggered cost-related barriers that left her unsure of how she was going to reliably protect herself from unwanted pregnancy.

## Discussion

People's ability to access the contraceptive methods and care they need is central to achieving reproductive autonomy, but numerous barriers linked to cost, access, and quality of care stand in the way. Holt et al. identify key components for a continuum of care that advances person-centered and equitable contraception;<sup>32</sup> we interpret our findings through the lens of this framework. Our findings have implications for understanding how policy changes affect people's ability to achieve reproductive autonomy.

When we examined respondents grouped together by the overall level of accumulated barriers to their preferred contraception they faced, we found patterns suggesting strategies through which health care facilities can support their patients, and policymakers can shore up the family planning network on which these patients rely.

Free or affordable services are a critical component of person-centered contraceptive care, and many of our respondents' difficulties in enacting their preferred contraceptive strategies were caused by cost-related barriers. Previous research has documented cost barriers for contraceptive and other SRH care,<sup>11</sup> and considerations of the role of insurance have mainly focused on examining payment barriers for uninsured people<sup>8</sup> or have demonstrated that reductions in cost-sharing affect LARC use, other contraceptive uptake, and SRH service utilization.<sup>12,13,34,35</sup>

Most respondents were insured at the start of the study and many remained so throughout, but, echoing Dennis and Grossman<sup>14</sup> and Williams et. al.,<sup>10</sup> we found significant, pervasive barriers to contraceptive care for people covered by health insurance. Though respondents did not articulate why they were paying for contraception despite contraceptive mandates by the Affordable Care Act (ACA), this may have occurred because insurance companies did not cover specific methods or brands or because "grandfathered" plans were excused from such coverage.<sup>36,37</sup> Legislators, insurance companies, and clinics are best positioned to address payment barriers, by working to close existing loopholes in the ACA that result in out-of-pocket costs for contraceptives.<sup>36-38</sup>

Additionally, respondents frequently reported negative impacts from limitations on the number of contraceptive refills they could obtain at one time. Evidence highlights the benefits to individuals and insurers of providing a year's worth of contraceptive supplies at once.<sup>39,40</sup> Iowa ostensibly had a regulation in place to allow for a three-month supply of OCPs during our study,<sup>41</sup> yet our respondents were unable to get what they needed when they were covered by both Medicaid and private insurers. This suggests that even when such protective policies are in place, implementation problems may create barriers, causing gaps in contraceptive use and exposing people to unwanted pregnancy.

Convenient scheduling and hours are necessary components of access for person-centered care. Long waits for appointments presented an onerous barrier for our respondents, either on their own or when compounded by other barriers, and these resulted in gaps in contraceptive use and exposure to unwanted pregnancy. Difficulty in traveling to access methods and care has been identified as a barrier to both contraceptive<sup>16</sup> and abortion care,<sup>42</sup> and our findings echo this concern.

Patient-centered, noncoercive, evidence-based counseling is a primary trait defining care quality, and our respondents' experiences with contraceptive counseling that failed to center their needs and desires provide evidence of the consequences when care falls short of this goal. Clinical policies that reduce the need for constant contact (quick start, same-day insertions, over-the-counter OCPs/injectables, and others) are supported by research on safety<sup>5</sup> and would have facilitated respondents' ability to enact their preferred contraceptive strategies. Reducing barriers to obtaining short-acting methods is critical because, as highlighted by Holt et al. and others,<sup>32,43</sup> if people have trouble accessing their preferred methods, the solution is not to recommend methods with less clinical exposure, such as LARCs, but to facilitate access to the contraceptive

strategies that best suit their needs and preferences. Additionally, although LARC use helped many of our respondents avoid barriers in all three categories, these methods are not preferred by all people seeking contraceptive care.<sup>17,43</sup>

Our findings bear out Holt et al.'s characterization of "support for navigating barriers to services" as a crucial component of access.<sup>32</sup> Some respondents described clinics helping to mitigate negative impacts by intervening to reinstate insurance coverage and circumventing policies by requesting immediate refills and writing bridge prescriptions. Individuals often must spend copious time and effort to surmount obstacles that they did not create and have little ability to change; research demonstrates that strategies such as frequent churn in providers may disrupt contraceptive consistency.<sup>10</sup> Our respondents demonstrated the resilience and resourcefulness that research frequently finds among people attempting to navigate barriers to their reproductive autonomy.<sup>42,44,45</sup>

Much of the effort our respondents described may be better performed by paid professionals such as patient navigators—lay health workers who help patients navigate barriers to access in an increasingly complex health care environment by scheduling appointments and follow-up, advocating for patients in settings where the provider is coercive or disrespectful, finding transportation or care for dependents, and finding and enrolling patients in insurance.<sup>46,47</sup> This role was developed to assist patients diagnosed with cancer, but patient navigators are now used within a broad range of health services, including in SRH care such as obstetrics and gynecology.<sup>48,49</sup> Our respondents were less able to navigate cost-related barriers than access or quality-related barriers, and research shows that the former are the exact barriers that paid patient navigators spend the most time resolving.<sup>50</sup>

Health policy and systems-level barriers were not experienced in isolation from one another; the presence of any one barrier domain often exacerbated the effects of experiencing barriers in the other domains (Figure 2). Respondents classified as least-affected by health policy and systems-level barriers were often able to enact their preferred contraceptive strategies not by navigating barriers, but by avoiding them altogether. It is not entirely clear how they did this, but it is possible that encountering fewer total barriers helps make each individual barrier more navigable. Thus, legislative, policy, or regulatory attempts to ameliorate one barrier may amplify effects and alleviate barriers in other categories.

Although cost, access, and quality barriers can affect people seeking contraceptive care in any context, respondents reported that the policies Iowa enacted lessened hours and provider availability at clinics, as well as reduced subsidies used to help offset the costs of care and methods. As a result, people described delaying or forgoing care, sometimes exposing themselves to unwanted pregnancy in the process. Some of the impacts of these changes can be seen at the population level as well as in the experiences of our respondents. The state-run family planning program may not have adequately replaced closed clinics. A 2018 investigation found that \$2.5 million of its funds had gone unspent one year into the program, that it was paying for less than one-third as many contraceptives as the old program, and that half as many patients were enrolled in the program as had been in previous years.<sup>51</sup> Fewer people used subsidized family planning services in the state after the changes were enacted,<sup>27</sup> and the number of abortions rose.<sup>52</sup>

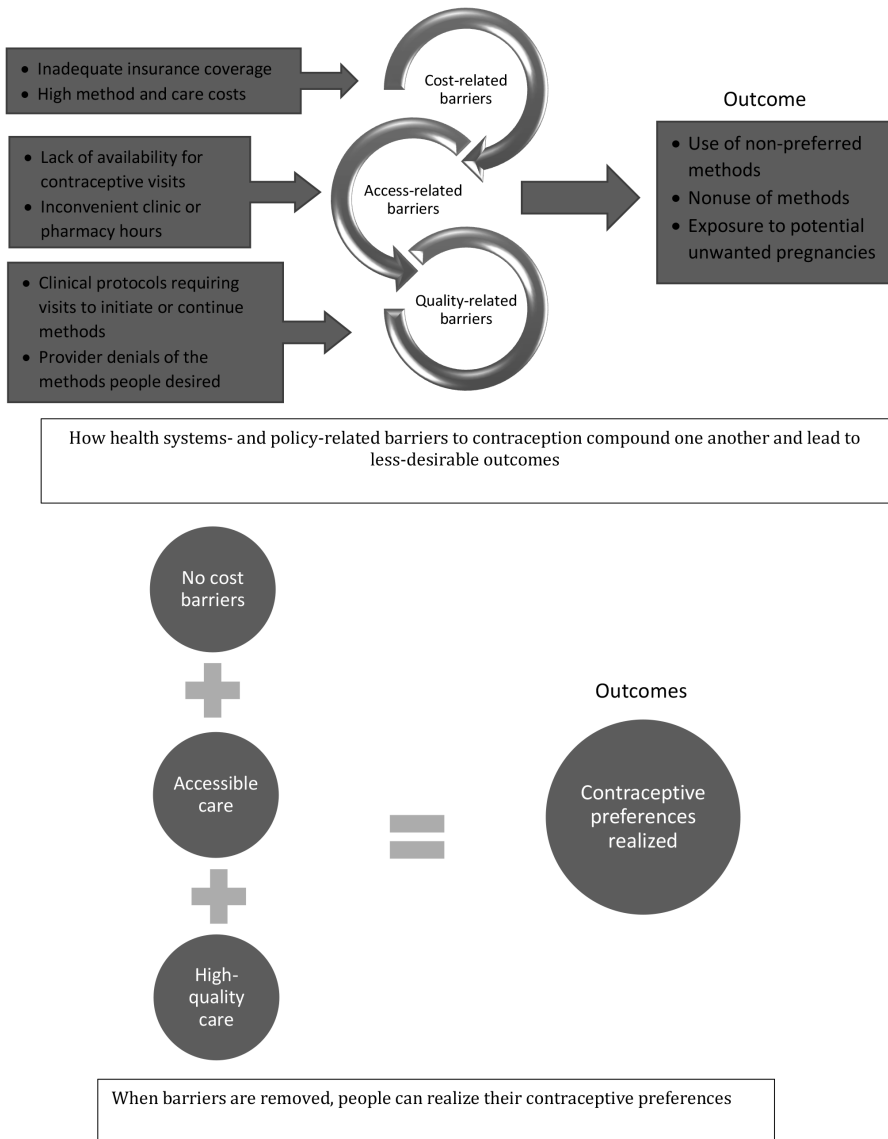


Figure 2. Example highlighting the difference in outcomes between scenario in which barriers to contraception are compounding one another versus scenario in which these barriers do not exist.

Our study has both strengths and limitations. Given study recruitment occurring at the point of SRH care, primarily at Planned Parenthood health centers, our sample largely reflects contraceptive users employing provider-involved methods and those who did have some access to care despite the barriers they faced. Our findings cannot be interpreted as demonstrating a causal link between the Iowa policy changes and respondents' experiences of barriers, but the longitudinal design is a strength that

allowed us to observe changes in these experiences over a key timeframe following this policy change,<sup>53</sup> and we were very successful in our retention efforts. Participation in this study may have influenced some respondents' thinking or decision-making about contraception over the trajectory of the study, an effect that has been found in other studies.<sup>54,55</sup> Our ability to interview respondents via videoconference allowed us to reach people in remote parts of the state and to complete the study during the pandemic, without sacrificing most of the quality and intimacy afforded by IDIs.<sup>56</sup> However, we only spoke to people whose lives were stable enough to facilitate continued contact with researchers.

## Conclusion

Patients' desires and perspectives on contraception should guide how contraceptive care is delivered, but persistent barriers in how this care is provided at the policy and health systems levels can inhibit patients from realizing their contraceptive preferences. This Iowa-specific research points to clear policy actions that can help to bridge these barriers and patients' contraceptive preferences, with implications to consider in settings beyond Iowa. Ensuring that a broad mix of contraceptive methods is available at no cost to the user is an important strategy to support people in realizing reproductive autonomy through contraceptive method choice. Moving contraceptive service delivery towards more patient-centered practices includes making methods available without a pelvic exam or even an in-person visit and having easy-to-schedule appointments available at a variety of times and locations. As all of these pathways towards high-quality contraceptive care can be costly, health centers providing this care should be supported through steady public funding that is not subject to fluctuating legislative support and/or operational restrictions.

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## References

1. Senderowicz L, Higgins J. Reproductive autonomy is nonnegotiable, even in the time of COVID-19. *Int Perspect Sex Reprod Health*. 2020;46:147–51. <https://doi.org/10.1363/intsexrephea.46.2020.0147> PMID:32790638
2. Kavanaugh ML, Anderson RM. Contraception and beyond: the health benefits of

- services provided at family planning centers. New York, NY: Guttmacher Institute, 2013.
3. Kavanaugh ML, Anderson RM. Contraception and beyond: the health benefits of services provided at family planning centers. New York, NY: Guttmacher Institute, 2013.
  4. Sonfield A. Contraception: an integral component of preventive care for women. *Guttmacher Policy Rev.* 2010 Spring;12(3):2–7.
  5. Committee opinion no. 615: Access to contraception. *Obstet Gynecol.* 2015 Jan;125:250–5.  
<https://doi.org/10.1097/01.AOG.0000459866.14114.33>  
PMid:25560140
  6. Kreitzer RJ, Smith CW, Kane KA, et al. Affordable but inaccessible? Contraception deserts in the U.S. states. *J Health Polit Policy Law.* 2021 Apr 1;46(2):277–304.  
<https://doi.org/10.1215/03616878-8802186>  
PMid:32955562
  7. Frost JJ, Zolna MR, Frohwirth LF, et al. Publicly supported family planning services in the United States: likely need, availability and impact, 2016 [Internet]. New York: Guttmacher Institute, 2019 Oct. Available at: <https://doi.org/10.1363/2019.30830>.
  8. Kavanaugh ML, Douglas-Hall A, Finn SM. Health insurance coverage and contraceptive use at the state level: findings from the 2017 Behavioral Risk Factor Surveillance System. *Contracept X.* 2020;2:100014.  
<https://doi.org/10.1016/j.conx.2019.100014>  
PMid:32550529 PMCID:PMC7286150
  9. Hale N, Smith M, Baker K, et al. Contraceptive use patterns among women of reproductive age in two Southeastern states. *Womens Health Issues.* 2020 Nov;30(6):436–45.  
<https://doi.org/10.1016/j.whi.2020.08.005>  
PMid:32958369
  10. Williams M, Nathan S, White K. Inconsistent access to reproductive healthcare among abortion patients in Mississippi. Presented at: Population Association of America Annual Meeting, 2021 May 5–8 (Online).
  11. Chakraborty P, Gallo MF, Nawaz S, et al. Use of nonpreferred contraceptive methods among women in Ohio. *Contraception.* 2021 May;103(5):328–35.  
<https://doi.org/10.1016/j.contraception.2021.02.006>  
PMid:33607120
  12. Dalton VK, Carlos RC, Kolenic GE, et al. The impact of cost sharing on women's use of annual examinations and effective contraception. *Am J Obstet Gynecol.* 2018 Jul;219(1):93.e1–93.e13.  
<https://doi.org/10.1016/j.ajog.2018.04.051>  
PMid:29752935
  13. Pace LE, Dusetzina SB, Fendrick AM, et al. The impact of out-of-pocket costs on the use of intrauterine contraception among women with employer-sponsored insurance. *Med Care.* 2013 Nov;51(11):959–63.  
<https://doi.org/10.1097/MLR.0b013e3182a97b5d>  
PMid:24036995 PMCID:PMC6702955
  14. Dennis A, Grossman D. Barriers to contraception and interest in over-the-counter access among low-income women: a qualitative study. *Perspect Sex Reprod Health.* 2012 Jun;44(2):84–91.  
<https://doi.org/10.1363/4408412>  
PMid:22681423

15. Zolna MR, Frost JJ. Publicly funded family planning clinics in 2015: patterns and trends in service delivery practices and protocols [Internet]. New York, NY: Guttmacher Institute, 2016 Nov. Available at: <https://www.guttmacher.org/report/publicly-funded-family-planning-clinic-survey-2015>.
16. Grindlay K, Grossman D. Prescription birth control access among U.S. women at risk of unintended pregnancy. *J Womens Health*. 2016 Mar;25(3):249–54. <https://doi.org/10.1089/jwh.2015.5312> PMID:26666711
17. Brandi K, Fuentes L. The history of tiered-effectiveness contraceptive counseling and the importance of patient-centered family planning care. *Am J Obstet Gynecol*. 2020;222(4S):S873–7. <https://doi.org/10.1016/j.ajog.2019.11.1271> PMID:31794724
18. Yee LM, Simon MA. Perceptions of coercion, discrimination and other negative experiences in postpartum contraceptive counseling for low-income minority women. *J Health Care Poor Underserved*. 2011 Nov;22(4):1387–400. <https://doi.org/10.1353/hpu.2011.0144> PMID:22080717
19. Dehlendorf C, Henderson JT, Vittinghoff E, et al. Association of the quality of interpersonal care during family planning counseling with contraceptive use. *Am J Obstet Gynecol*. 2016 Jul 1;215(1):78.e1–78.e9. <https://doi.org/10.1016/j.ajog.2016.01.173> PMID:26827879
20. White K, Grossman D, Hopkins K, et al. Cutting family planning in Texas. *N Engl J Med*. 2012 Sep 27;367(13):1179–81. <https://doi.org/10.1056/NEJMp1207920> PMID:23013071 PMCID:PMC4418511
21. White K, Hopkins K, Aiken ARA, et al. The impact of reproductive health legislation on family planning clinic services in Texas. *Am J Public Health*. 2015 May;105(5):851–8. <https://doi.org/10.2105/AJPH.2014.302515> PMID:25790404 PMCID:PMC4386528
22. Stevenson AJ, Flores-Vazquez IM, Allgeyer RL, et al. Effect of removal of Planned Parenthood from the Texas Women's Health Program. *N Engl J Med*. 2016 Mar 3;374(9):853–60. <https://doi.org/10.1056/NEJMsa1511902> PMID:26836435 PMCID:PMC5129844
23. Gold RB, Hasstedt K. Publicly funded family planning under unprecedented attack. *AJPH Perspect*. 2017 Dec;107(12):1895–7. <https://doi.org/10.2105/AJPH.2017.304124> PMID:29048961 PMCID:PMC5678404
24. Rodriguez B, Sanders L. Planned Parenthood to close 4 Iowa clinics after funding cut [Internet]. AP NEWS. 2017 Available at: <https://apnews.com/article/f79dc0d0d10f45bca7e19b89dd9b49f1>.
25. Butz DA. Enrollment down for Iowa family planning program [Internet]. AP NEWS. 2018 Available at: <https://apnews.com/article/c9aada1fbaa445a7b2ac286c6620b893>.
26. Levintova H. Iowa just gutted Planned Parenthood and the results for women are brutal [Internet]. Mother Jones. 2017 Available at: <https://www.motherjones.com/politics/2017/07/iowa-just-gutted-planned-parenthood-and-the-results-for-women-are-brutal/>.
27. Rodriguez B. Family planning program that excludes Planned Parenthood has

- nearly 75% drop in people using services. Des Moines Register [Internet]. 2019 Dec 11. Available at: <https://www.desmoinesregister.com/story/news/health/2019/12/10/iowa-family-planning-program-significant-drop-excludes-planned-parenthood/4383891002/>.
28. Reproductive Health Impact Study [Internet]. New York, NY: Guttmacher Institute, 2021. Available at: <https://www.guttmacher.org/reproductive-health-impact-study>.
  29. Kavanaugh ML, Pleasure ZH, Pliskin E, et al. Financial instability and delays in access to sexual and reproductive health care due to COVID-19. *J Women's Health*. 2022; 31(4):469–79.  
<https://doi.org/10.1089/jwh.2021.0493>  
PMid:35180352 PMCID:PMC9063155
  30. Frohwirth L, Blades N, Moore AM, et al. The complexity of multiple contraceptive method use and the anxiety that informs it: implications for theory and practice. *Arch Sex Behav*. 2016 Nov;45(8):2123–35.  
<https://doi.org/10.1007/s10508-016-0706-6>  
PMid:26940968 PMCID:PMC5050243
  31. Gray A, Chowdhury JH, Caldwell B, et al. Coitus-dependent family planning methods: observations from Bangladesh. *Stud Fam Plann*. 1999 Mar;30(1):43–53.  
<https://doi.org/10.1111/j.1728-4465.1999.00043.x>  
PMid:10216895
  32. Holt K, Reed R, Crear-Perry J, et al. Beyond same-day long-acting reversible contraceptive access: a person-centered framework for advancing high-quality, equitable contraceptive care. *Am J Obstet Gynecol*. 2020 Apr;222(Suppl 4):S878.e1–S878.e6.  
<https://doi.org/10.1016/j.ajog.2019.11.1279>  
PMid:31809706
  33. Allen RES, Wiles JL. A rose by any other name: participants choosing research pseudonyms. *Qual Res Psychol*. 2016 Apr 2;13(2):149–65.  
<https://doi.org/10.1080/14780887.2015.1133746>
  34. Snyder AH, Weisman CS, Liu G, et al. The impact of the Affordable Care Act on contraceptive use and costs among privately insured women. *Womens Health Issues*. 2018 May;28(3):219–23.  
<https://doi.org/10.1016/j.whi.2018.01.005>  
PMid:29544988
  35. Kim NH, Look KA. Effects of the Affordable Care Act's contraceptive coverage requirement on the utilization and out-of-pocket costs of prescribed oral contraceptives. *Res Soc Adm Pharm*. 2018 May;14(5):479–87.  
<https://doi.org/10.1016/j.sapharm.2017.06.005>  
PMid:28655491
  36. Frederiksen B, Ranji U, Salganicoff A, et al. Women's sexual and reproductive health services: key findings from the 2020 KFF Women's Health Survey [Internet]. San Francisco, CA: Kaiser Family Foundation, 2021 Apr. Available at: <https://www.kff.org/womens-health-policy/issue-brief/womens-sexual-and-reproductive-health-services-key-findings-from-the-2020-kff-womens-health-survey/>.
  37. Sonfield A. A fragmented system: ensuring comprehensive contraceptive coverage in all U.S. health insurance plan. *Guttmacher Policy Rev*. 2021 Feb 2;24:7.
  38. Keller L, Sonfield A. The first 10 years of the ACA: we must protect and build on major gains in sexual and reproductive health [Internet]. New York, NY: Guttmacher Institute, 2020. Available at: <https://www.guttmacher.org/article/2020/03/first-10-years-aca-we-must-protect-and-build-major-gains-sexual-and-reproductive>.



39. Foster DG, Hulett D, Bradsberry M, et al. Number of oral contraceptive pill packages dispensed and subsequent unintended pregnancies. *Obstet Gynecol*. 2011 Mar;117(3):566–72.  
<https://doi.org/10.1097/AOG.0b013e3182056309>  
PMid:21343759
40. Gavin L, Moskosky S, Carter M, et al. Providing quality family planning services: recommendations of CDC and the U.S. Office of Population Affairs. *MMWR*. 2014;63(No. RR-4):1–51.
41. Iowa Department of Human Services. Iowa Administrative Code (chapter 78): amount, duration and scope of medical and remedial services. Des Moines, IA: Iowa Department of Human Services, 2018 Jul 4. Available at: <https://www.legis.iowa.gov/docs/iac/agency/01-16-2019.441.pdf>.
42. Jerman J, Frohwirth L, Kavanaugh ML, et al. Barriers to abortion care and their consequences for patients traveling for services: qualitative findings from two states. *Perspect Sex Reprod Health*. 2017 Jun;49(2):95–102.  
<https://doi.org/10.1363/psrh.12024>  
PMid:28394463 PMCID:PMC5953191
43. Gubrium AC, Mann ES, Borrero S, et al. Realizing reproductive health equity needs more than long-acting reversible contraception (LARC). *Am J Public Health*. 2016 Jan;106(1):18–9.  
<https://doi.org/10.2105/AJPH.2015.302900>  
PMid:26562116 PMCID:PMC4695938
44. Kavanaugh ML, Kost K, Frohwirth L, et al. Parents' experience of unintended child-bearing: a qualitative study of factors that mitigate or exacerbate effects. *Soc Sci Med*. 2017 Feb;174:133–41.  
<https://doi.org/10.1016/j.socscimed.2016.12.024>  
PMid:28038432 PMCID:PMC5258712
45. Kavanaugh ML, Jerman J, Frohwirth L. "It's not something you talk about really": information barriers encountered by women who travel long distances for abortion care. *Contraception*. 2019 Jul;100(1):79–84.  
<https://doi.org/10.1016/j.contraception.2019.03.048>  
PMid:30980828 PMCID:PMC6589392
46. Wells KJ, Battaglia TA, Dudley DJ, et al. Patient navigation: state of the art or is it science? *Cancer*. 2008;113(8):1999–2010.  
<https://doi.org/10.1002/cncr.23815>  
PMid:18780320 PMCID:PMC2679696
47. Natale-Pereira A, Enard KR, Nevarez L, et al. The role of patient navigators in eliminating health disparities. *Cancer*. 2011 Aug 1;117(S15):3541–50.  
<https://doi.org/10.1002/cncr.26264>  
PMid:21780089 PMCID:PMC4121958
48. McKenney KM, Martinez NG, Yee LM. Patient navigation across the spectrum of women's health care in the United States. *Am J Obstet Gynecol*. 2018 Mar 1;218(3):280–6.  
<https://doi.org/10.1016/j.ajog.2017.08.009>  
PMid:28844825 PMCID:PMC5826769
49. Yee LM, Martinez NG, Nguyen AT, et al. Using a patient navigator to improve postpartum care in an urban women's health clinic. *Obstet Gynecol*. 2017 May;129(5):925–33.  
<https://doi.org/10.1097/AOG.0000000000001977>  
PMid:28383374 PMCID:PMC5400713
50. Lin CJ, Schwaderer KA, Morgenlander KH, et al. Factors associated with patient

- navigators' time spent on reducing barriers to cancer treatment. *J Natl Med Assoc.* 2008 Nov;100(11):1290–7.  
[https://doi.org/10.1016/S0027-9684\(15\)31507-8](https://doi.org/10.1016/S0027-9684(15)31507-8)
51. Leys T, Rodriguez B. State family planning services decline 73 percent in fiscal year as \$2.5M goes unspent. Des Moines, IA: Des Moines Register [Internet], 2018. Available at: <https://www.desmoinesregister.com/story/news/health/2018/10/18/iowa-health-care-family-planning-contraception-services-planned-parenthood-abortion-medicare/1660873002/>.
  52. Leys T. Iowa abortions climbed 14% in 2020, after jumping 25% the previous year, new state data show. Des Moines, IA: Des Moines Register [Internet], 2021 Jul 15. Available at: <https://www.desmoinesregister.com/story/news/health/2021/07/15/iowa-abortion-increase-2020-rising-2019-state-data-show/7982870002/>.
  53. Hermanowicz JC. The longitudinal qualitative interview. *Qual Sociol.* 2013 Jun 1;36(2):189–208.  
<https://doi.org/10.1007/s11133-013-9247-7>
  54. MacMillan HL, Wathen CN, Jamieson E, et al. Screening for intimate partner violence in health care settings: a randomized trial. *JAMA.* 2009 Aug 5;302(5):493–501.  
<https://doi.org/10.1001/jama.2009.1089>  
PMid:19654384
  55. Hamberger LK, Ambuel B, Guse CE, et al. Effects of a systems change model to respond to patients experiencing partner violence in primary care medical settings. *J Fam Violence.* 2014 Aug;29(6):581–94.  
<https://doi.org/10.1007/s10896-014-9616-3>
  56. Krouwel M, Jolly K, Greenfield S. Comparing Skype (video calling) and in-person qualitative interview modes in a study of people with irritable bowel syndrome—an exploratory comparative analysis. *BMC Med Res Methodol.* 2019 Nov 29;19(1):219.  
<https://doi.org/10.1186/s12874-019-0867-9>  
PMid:31783797 PMCID:PMC6883529