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Inclusivity of In Vitro Fertilization Clinic Websites

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Abstract

In the world, many people cannot naturally conceive children. They may be infertile, lack an intimate partner, or be in a same-sex relationship. Artificial reproductive technologies (ARTs) are catered to the aforementioned population. ARTs are fertility treatments that assist people with the fertilization of gametes and/or implantation of embryos. One of the most popular ARTs is in-vitro fertilization (IVF). IVF is a medical procedure in which an egg is fertilized by sperm in a lab so it can develop into an embryo. That embryo can then be implanted directly into the uterus. This quality improvement project aims to determine the inclusivity of IVF clinics in the Northeastern Region of the United States based on their digital space. The population of the study is fertility clinics in the states of Maine, Vermont, New Hampshire, Massachusetts, Connecticut, Rhode Island, New York, New Jersey, and Pennsylvania that offer IVF fertility treatment and have a website for patients. Each IVF clinic’s website will be evaluated to measure how inclusive it is of LGBT patients.
Background

To determine if there is current research on this topic, a brief literature review was conducted. The key search terms were as follows: “inclusivity” “LGBT” “IVF” “family planning” “website” and “accessibility.” Based on this search, I found seven relevant articles. Four of these articles discussed methods to design an LGBT-inclusive website. The top two recommendations in three of these articles were to use gender-neutral terms and to include images of LGBT couples (Hernandez, 2021; Repasky, 2023; Romano, 2023). The fourth article, by The National LBGTQIA+ Health Education Center, similarly recommends that websites should include images with LGBT symbols, diverse gender expressions, same-sex couples, and LGBT families. They also recommend that the site should offer health education materials and local resources specifically for LGBT individuals (Fenway Institution, 2021).

Three articles discussed whether IVF is a good option for people in the LGBT community. One article found that couples composed of two gay men are successful at achieving live birth through IVF when using egg donation and a gestational carrier (Monseur et al., 2022). One article found that reciprocal IVF in lesbian couples results in a positive shared experience and preserves the desire for dual-partner participation in the gestational process (Yeshua et al., 2015). Another article found that it may be possible for an egg to be received from a transgender man who is still on testosterone to then be used for reciprocal IVF with a cisgender female partner (Greenwald et al., 2022). Based on these findings, IVF is a successful and pleasant option for people in the LGBT community.

In addition, I spoke with an expert in this field, Kristen Clark, PhD, RN, who sent me two relevant research articles. Both articles discussed the inclusivity of digital spaces. A study out of The European Journal of Contraception and Reproductive Health researched the quality and
inclusivity of family-building websites for the LGBT population. To evaluate the quality of the websites, the study used the 2016 Website Information Reliability Evaluation Instrument developed by the DOHHS. To evaluate the inclusivity of the websites, they determined if the websites mentioned the following topics: surrogacy/gestational carriers, intrauterine or artificial insemination, IVF, different types of sperm donors, reciprocal IVF, options for transgender individuals, LGBT-specific legal information, adoption/foster parenting, and LGBT-specific financial information. Notably, the study found that only half of the qualifying websites mentioned options for people who are transgender (Kreines et al., 2018). Overall, they found that there is a lack of reliable web-based information for LGBT populations regarding family-building advice in the U.S. (Kreines et al., 2018). The second article focused on the variability of diversity, equity, and inclusion (DEI) initiatives in medical residency websites. They found that 6.2% of programs had a diversity webpage, and 13.3% included a commitment to DEI (Wei et al., 2022). Currently, no literature shows information on the inclusivity of LGBT people in IVF clinic websites specifically in the Northeast.

While there is some research regarding the inclusivity of websites and IVF as a means of reproduction in LGBT couples, there is a significant lack of research related to the LGBT inclusivity of IVF clinics. In addition, many of the articles found are not peer-reviewed sources. Overall, the inclusivity of IVF clinics based on digital spaces is a topic that has minimal research.

**Methodology**

Given the fact that data used in this study was gathered from publicly available websites, this is not considered to be human subjects research. Because of this, the study did not require approval by the Institutional Review Board. In addition, it was unnecessary to receive informed
consent from participants. In addition, the names of the individual websites will not be included in this project.

This project was designed as a quality improvement study. The framework of the Plan Do Study Act (PDSA) Cycle was followed throughout this project. Since many IVF clinics have already begun the process of making their websites more inclusive to LGBT individuals, this project started in the Study section of the PDSA cycle, where the inclusivity of the websites was studied.

To determine the sample size and population for the study, Google was used to find IVF clinics in the nine Northeastern states. To find the clinics, these key phrases were entered into Google: “IVF clinics in Maine” “IVF clinics in New Hampshire” “IVF clinics in Vermont” “IVF clinics in Massachusetts” “IVF clinics in Connecticut” “IVF clinics in Rhode Island” “IVF clinics in New York” “IVF clinics in New Jersey” and “IVF clinics in Pennsylvania.” Each clinic’s website then needed to meet the criteria to be eligible for this study. The criteria that all clinics met to be included are as follows: they must be currently open, they must offer in-clinic IVF treatment, they must have a website catered to patients, and they must be located in New England. After this search, a total of 74 IVF clinics met the criteria and were therefore included in this project.

To collect data on the inclusivity of the IVF clinics, each clinic was scored based on its patient-catered website. As a theoretical framework, the guidance of the reviewed article from The European Journal of Contraception and Reproductive Health Care was followed; data was gathered on whether the websites mention surrogacy/gestational carriers, intrauterine or artificial insemination, IVF, different types of sperm donors, reciprocal IVF, options for transgender individuals, LGBT-specific legal information, adoption/foster parenting, and LGBT-specific
financial information. Based on the recommendations from the National LBGTQIA+ Health Education Center, the data also includes whether websites have images of same-sex couples and health education materials specifically for LGBT individuals. To gather this data, each website was individually analyzed to determine which topics were mentioned and if they included images of same-sex couples and health education materials for LGBT individuals.

To analyze the data, many graphs were created. First, a bar graph was created that shows the percentage of websites that mention the topics listed above from *The European Journal of Contraception and Reproductive Health Care*. This graph was created to show the topics that are mentioned more or less than others. In addition, a bar graph was created that shows the number of topics mentioned per website. This graph was created to show how many inclusive topics are mentioned on the websites. A pie chart was also created that shows the percentage of IVF clinic websites that have at least one image of a same-sex couple. Finally, a pie chart was created that shows the percentage of IVF clinic websites that include health education for LGBT individuals.

**Results**

Traditional IVF was mentioned in every website. This was an expected finding due to the criteria of this study. Intrauterine or artificial insemination was mentioned in 99% of the websites. Surrogacy was mentioned in 93% of the websites. Types of sperm donors were mentioned in 80% of the websites. Reciprocal IVF was mentioned in 65% of the websites. Transgender options were mentioned in 65% of the websites. LGBT legal information was mentioned in 55% of the websites. Adoption was mentioned in 39% of the websites. And finally, LGBT financial information was mentioned in 27% of the websites. This data can be visualized in Appendix B.
All nine topics were mentioned in 3% of the websites. Eight topics were mentioned in 34% of the websites. Seven topics were mentioned in 16% of the websites. Six topics were mentioned in 5% of the websites. Five topics were mentioned in 29% of the websites. Four topics were mentioned in 4% of the websites. Three topics were mentioned in 5% of the websites. Two topics were mentioned in 4% of the websites. Finally, no websites mentioned only one or zero topics. On average, IVF clinic websites mentioned 6.23 topics, or 69.2%, of the relevant topics listed in *The European Journal of Contraception and Reproductive Health Care*. This data can be visualized in Appendix C.

Images of same-sex couples were shown in 82% of the websites. Finally, 77% of the websites included LGBT health education. This data can be visualized in Appendix D and Appendix E.

**Discussion**

At this stage, this project will transition into the Act section of the PDSA cycle, and discuss what can be concluded from the study and how the inclusivity of IVF clinic websites could be improved.

While adoption was included in this study’s theoretical framework from *The European Journal of Contraception and Reproductive Health*, it is not particularly relevant to this project. In the original article, researchers were determining the inclusivity of web-based family-building information for LGBT individuals. While adoption should certainly be included in a study about family-building information, it is not as relevant for IVF clinic websites alone. Since IVF clinics want customers to use and pay for their service, adoption is not expected to be included in these websites. Because of this, the topic of adoption will not be included in the following discussion.
Reciprocal IVF was mentioned in 65% of the websites. Given the fact that reciprocal IVF is a great option for lesbian couples and some transgender couples, this percentage should certainly be higher. In reciprocal IVF, one partner undergoes ovarian stimulation and egg retrieval. That egg is then fertilized with sperm in a lab to become an embryo. The embryo is then implanted directly into the second partner’s uterus. This method allows one partner to provide genetic material and one partner to grow the fetus in their uterus, making it so that each parent has a “profound impact on the development of the fetus and child” (Reciprocal IVF, 2024). To be inclusive of LGBT individuals, this information and option should be included in IVF clinic websites.

Transgender options were also only mentioned in 65% of the websites. Since the treatment of transgender individuals can be different from the treatment of cisgender individuals, this percentage should be higher. Websites should specifically say which reproductive methods would work for individuals who are transgender. For example, websites should say that reciprocal IVF can work for couples with two transgender men or couples with a transgender male and a cisgender female. In addition, websites should share that gestational carriers can be used in couples with two transgender females or couples with a transgender female and cisgender male. In addition, transgender couples that have at least one partner with a uterus can undergo artificial insemination and traditional IVF. Having this information readily available on IVF clinic websites would be very helpful to transgender individuals and increase the inclusivity of the websites.

LGBT-specific legal information was only mentioned in 55% of the IVF clinic websites. Many legal considerations are important to be aware of before starting the IVF process. Because of this, more websites should include LGBT-specific legal information. An example of legal
information that should be included is state-specific laws regarding the rights of known donors. If a couple chooses to use the sperm or egg of a known donor, that donor can have certain parental rights to that child depending on what state they are in. In addition, many states will rule in favor of a surrogate if the surrogate changes their mind and wants parental rights over the child. Finally, laws vary regarding whether a nonpregnant partner can participate in prenatal visits and birth.

The topic that was mentioned in the least amount of websites was LGBT-specific financial information. This topic was only mentioned in 27% of the IVF clinic websites. Since the financial burden of IVF is one of the largest barriers to care for LGBTQ individuals, IVF clinic websites should include information on the cost of an IVF cycle, as well as LGBT-specific information on insurance. In 2024, the cost of a single IVF cycle ranged from $15,000 - $30,000 (Conrad, 2023). Because of the price, many individuals are unable to afford IVF without coverage from insurance. Unfortunately, insurance does not cover all IVF cycles. The laws surrounding this issue vary greatly by state, so New Hampshire will be used as an example. RSA 417-G states that health carriers must provide coverage for “medically necessary” fertility treatments (Younger, 2020). This includes infertility diagnostic tests, treatment to get an individual pregnant, and preservation of sperm or egg. However, the law defines medically necessary treatment as “health care services or products provided for the purpose of preventing, stabilizing, diagnosing, or treating an illness, injury, disease, or the accompanying symptoms” (Younger, 2020). Because of this definition, the law excludes many LGBT couples and they therefore do not get mandated insurance coverage for IVF. State-specific insurance information such as this law should be included in IVF clinic websites to make them inclusive to LGBT individuals.
Something interesting about this project is the fact that the lowest-scoring six topics in this study are the same as the study done in the theoretical framework. In order, the lowest-scoring topics for both studies are types of sperm donors, reciprocal IVF, transgender options, LGBT legal information, adoption, and LGBT financial information (Kreines et al., 2018). In addition, LGBT legal information, adoption, and LGBT financial information were mentioned in far fewer websites than the other topics in both studies. This shows that these topics are likely areas for improvement for other types of reproductive healthcare.

For further studies, this project could be repeated in other regions of the United States and in other countries to compare data and gain further insight. In addition, this specific quality improvement project could be continued through the PDSA cycle. For example, the Plan section of the continuation of this project would discuss a plan for an intervention that would improve the inclusivity of IVF clinic websites based on our previous findings. In the Do section, the project would implement the intervention. Then, the project would end up back in the Study section and would continue in that cycle.

LGBT individuals face many barriers to receiving adequate and fair healthcare in the world. In a survey conducted by the Center for American Progress, 29% of transgender individuals said that a “doctor or other health care provider refused to see them because of their actual or perceived gender identity” (Ahmed Mirza & Rooney, 2018). They also found that, among lesbian, gay, bisexual, and queer individuals, 9% said that a “doctor or other health care provider used harsh or abusive language when treating them” (Ahmed Mirza & Rooney, 2018). One of the major responsibilities of a nurse is to advocate for vulnerable populations. Given the fact that LGBT individuals face disparities and discrimination from healthcare workers, nurses must be strong advocates for this population. This does not only include advocating for
individual LGBT people in practice, but also ensuring that healthcare as a whole is inclusive to this population.

**Limitations**

One limitation of this study is that not all of the relevant topics included in the theoretical framework are specific to LGBT individuals. For example, traditional IVF, IUI/artificial insemination, surrogacy/gestational carriers, and types of sperm donors are also all relevant to infertile heterosexual couples and single individuals. In addition, all of the topics that are relevant to heterosexual couples were scored higher than the topics that are specific to LGBT individuals, such as reciprocal IVF, transgender options, LGBT legal information, and LGBT financial information. Since four of the topics are not LGBT-specific, this limitation could have made it appear that IVF clinic websites are more inclusive of LGBT individuals than they really are.

Another limitation of this study is the fact that some IVF clinics may have not been included in the Google search. If an IVF clinic was not found through Google, they would not be included in the study. Because of this, the population may not have included all IVF clinics in the Northeastern Region of the United States.

**Conclusion**

While there is room for improvement, the overall inclusiveness of IVF clinic websites towards LGBT individuals is impressive. In particular, it was pleasantly surprising to see that 82% of the IVF clinic websites included images of same-sex couples. This was a higher percentage than expected. It was not surprising that traditional IVF, intrauterine insemination, surrogacy, and types of sperm donors were the highest-scoring topics since these topics are also relevant to heterosexual couples. Since adding LGBT-focused information requires time, money,
and cultural acceptance, it is not surprising that these topics are not mentioned on more websites.
While there is certainly room for improvement, IVF clinics are on the right track to having websites that are inclusive to LGBT individuals.
References


### Appendix A

**Definition of terms**

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lesbian</td>
<td>A woman who is attracted to other women</td>
</tr>
<tr>
<td>Gay</td>
<td>A person who is attracted to people of their own gender</td>
</tr>
<tr>
<td>Heterosexual</td>
<td>A person who is attracted to people of the opposite gender</td>
</tr>
<tr>
<td>Transgender</td>
<td>A person whose gender identity does not align with sex assigned at birth</td>
</tr>
<tr>
<td>Cisgender</td>
<td>A person whose gender identity aligns with the sex assigned at birth</td>
</tr>
<tr>
<td>Reciprocal IVF</td>
<td>One person’s egg is fertilized, then implanted into a partner’s uterus</td>
</tr>
</tbody>
</table>
Appendix B

Percent of Websites That Mention Relevant Topics, by Topic

<table>
<thead>
<tr>
<th>Topic</th>
<th>Percentage of Clinic Websites</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional IVF</td>
<td>100%</td>
</tr>
<tr>
<td>IU/Artificial Insemination</td>
<td>99%</td>
</tr>
<tr>
<td>Surgery/operative</td>
<td>93%</td>
</tr>
<tr>
<td>Types of sperm donors</td>
<td>80%</td>
</tr>
<tr>
<td>Reciprocal IVF</td>
<td>65%</td>
</tr>
<tr>
<td>Transgender options</td>
<td>65%</td>
</tr>
<tr>
<td>Legal information</td>
<td>55%</td>
</tr>
<tr>
<td>Assisted生育</td>
<td>39%</td>
</tr>
<tr>
<td>Financial Information</td>
<td>27%</td>
</tr>
</tbody>
</table>
Appendix C

Percent of Websites That Mention Relevant Topics, by Amount of Topics Mentioned
Appendix D

Percent of Websites That Contain Images of Same-sex Couples

- Contains images of same-sex couples: 82%
- Does not contain images of same-sex couples: 18%
Appendix E

Percent of Websites That Include LGBT Health Education

- Includes LGBTQ health education: 77%
- No LGBTQ health education: 23%