

## Research Article

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# Effect of Clinical Clerkships on Medical Student Attitudes toward Abortion and Contraception

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## Article Info

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## Abstract

**Objective:** The aim of this study was to investigate medical students' perceptions and individual attitudes toward abortion and contraception before and after their clinical clerkships, as well as to assess overall trends in attitude change toward specific abortion and contraception topics.

**Methods:** As part of their required curriculum, second-year medical students at the University of Iowa complete an anonymous survey that presents eight questions involving specific contraception and abortion topics. Members of the Class of 2014 were invited to re-take this survey in their fourth year. Students were also asked specifically if they felt that clinical clerkships had changed their perspectives on contraception and abortion in general.

**Results:** Of the 173 members of the Class of 2014, 124 chose to participate, for a response rate of 71.7%. Twenty-six students (21.0%) felt that clinical clerkships had changed their perspectives on abortion and thirty-five students (28.2%) felt that clinical clerkships had changed their perspectives on contraception. The percentage of students who would recommend against abortion for an ambivalent patient decreased from 63.9% to 50.8% ( $p=0.012$ ). The percentage of students who would refer a patient for a surgical abortion increased from 76.0% to 85.8% ( $p=0.018$ ). The percentage of students who would offer a medical abortion increased from 61.2% to 70.8% ( $p=0.042$ ). Responses to the other five questions included in the survey did not differ significantly pre and post-clerkship.

**Conclusions:** Clinical clerkships have the ability to affect medical students' attitudes toward abortion and contraception in general, as well as toward specific abortion topics.

**Keywords:** Medical student attitudes; Abortion; Contraception; Clinical clerkships.

## Background

Prior to medical school, students' perspectives on issues of human sexuality are predominantly influenced by religious beliefs, political affiliation, family culture and social exposures. In 1996, the American Medical Association released a council report stating: "The physician's non-judgmental recognition of sexual orientation and behavior enhances his or her ability to render optimal patient care in health as well as in illness." [1] Since then, increasing focus has been placed on the ability for medical school education to impact medical students' perspectives on issues of human sexuality.

Research has shown that various teaching modalities, including lecture presentations, small group discussions and clinical clerkships effect medical students' attitudes toward lesbian, gay, bisexual and transgender (LGBT) issues [2-4]. Similar research, aimed at

investigating how these teaching modalities affect medical students' attitudes toward other human sexuality issues—such as abortion and contraception—is lacking. Only one published study to date has investigated how clinical clerkships affect medical students' attitudes toward abortion. In that study, 38% of medical students who were exposed to abortion care during their Obstetrics and Gynecology (OB/GYN) clerkship reported a change in their attitudes toward abortion in general [5]. However, attitudes toward specific abortion and contraception topics were not assessed.

A pilot study done at the University of Iowa in 2013 demonstrated that clinical clerkships may have the ability to affect medical students' attitudes toward abortion and contraception in general, as well as toward specific abortion topics [6]. In this pilot study, 40.0% of students felt that clinical clerkships had changed their attitudes toward abortion and 47.6% of students felt that clinical clerkships had changed their attitudes toward contraception. Additionally, the percentage of students who felt comfortable referring a patient to a colleague for a surgical abortion increased from 71.3% to 90.5% ( $p=0.024$ ). This pilot study, however, was limited by a low response rate of 26.4%.

The aim of this study was to further investigate medical students' perceptions of individual attitude change toward abortion and contraception as a result of clinical clerkships, as well as to assess overall trends in attitude change toward specific abortion and contraception topics.

## Methods

Members of the University of Iowa Carver College of Medicine Class of 2014 completed an anonymous survey as part of their required second-year curriculum, prior to clinical clerkships. The survey included the following eight questions involving specific abortion and contraception topics (Table 1 and Figure 1).

Table 1. Survey questions	
1.	Would you prescribe oral contraception to a 16 years-old female for management of irregular menstrual bleeding and dysmenorrhea, who is not currently sexually active, but plans to have sex with her boyfriend soon?
2.	Would you prescribe the "morning after pill" to a woman who just had intercourse and did not use any contraception?
3.	Would you prescribe the "abortion pill" to a woman who is 8 weeks pregnant with a normal pregnancy and is certain that she wants to end the pregnancy?
4.	Would you refer a patient, who is 16 weeks pregnant with a normal pregnancy and is certain that she wants to end the pregnancy, to a colleague for a surgical abortion?
5.	Would you recommend against abortion for a patient who is 16 weeks pregnant with a normal pregnancy and initially thought that she desired an abortion, but is now ambivalent about continuing versus ending the pregnancy?
6.	Would you reveal your personal beliefs about abortion to a patient who is pregnant, considering abortion and requesting that you share your personal beliefs?
7.	Do you agree with the statement: "Since abortion is legally protected in our society, medical professionals should always try to maintain a neutral status when counseling patients who did not intend to become pregnant."?
8.	Do you think that you are capable of counseling a patient with an unintended pregnancy in a genuinely neutral manner?

Institutional Review Board approval (IRB #201304742) was obtained to re-administer this survey to the members of the Class of 2014 at the end of their fourth-year, following clinical clerkships. In March 2014, at a pre-Match Day meeting, members of the Class of 2014 were invited to re-take this survey and to answer two additional questions regarding whether or not they felt that clinical clerkships had changed their perspectives on abortion, as defined as the termination of an otherwise viable pregnancy, and contraception, as defined as any action taken to avoid conception. Post-clerkships responses were anonymous. Data was maintained using REDCap electronic data capture tools hosted University of Iowa. (7) REDCap (Research Electronic Data Capture) is a secure, web-based application designed to support data capture for research studies. SAS statistical software was then used to compare pre and post-clerkship responses with two-population proportion tests to yield 1-tailed Z-scores.

## Results

Of the 173 members of the Class of 2014, 124 chose to participate in our pilot study, for a response rate of 71.7%. Twenty-six students (21.0%) reported that clinical clerkships had changed their perspectives on abortion and thirty-five students (28.2%) felt that clinical clerkships had changed their perspectives on contraception.

The percentage of students who would offer a medical abortion significantly increased from 61.2% to 70.8% ( $p=0.043$ ). The percentage of students who would refer a patient for a surgical abortion significantly increased from 76.0% to 85.8% ( $p=0.018$ ). The percentage of students who would recommend against abortion for an ambivalent patient significantly decreased from 63.9% to 50.8% ( $p=0.012$ ). Responses to the other five questions included in the survey did not differ significantly pre and post-clerkship (Figure 1).

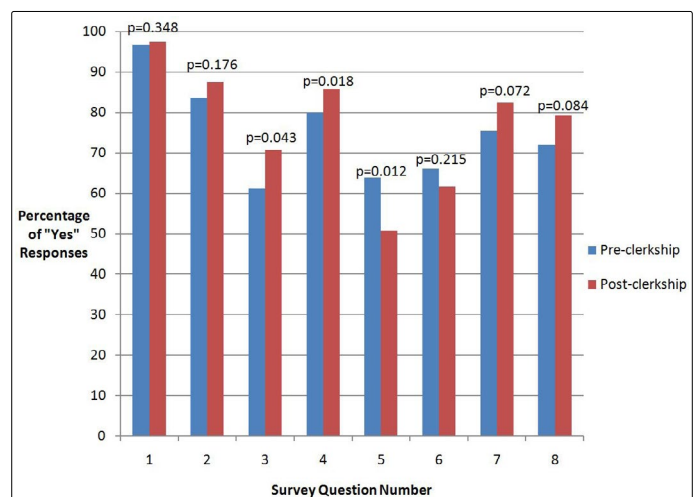


Figure 1. Comparison of attitudes toward abortion and contraception pre- and post-clinical clerkship.

## Discussion

This study confirms that a significant percentage of medical students perceive that their individual attitudes toward abortion and contraception change as a result of clinical clerkships. Perhaps more importantly, our study

expanded upon the existing literature by demonstrating that overall trends in attitudes toward specific abortion topics also change during the clinical years.

Our study did not ask medical students to report whether their individual attitudes had changed to be more in favor or less in favor regarding abortion and contraception. Additionally, our study did not control for whether overall trends in attitude changed toward specific abortion and contraception topics were due to the OB/GYN clinical clerkship itself versus life or other experiences during the clinical years. It is also important to note that the medical student experience on the OB/GYN clinical clerkship at the University of Iowa is variable, as students can opt in or out of exposure to abortion care. Exposure to contraception is part of all training for medical students, but can be variable based on individual patient scenarios and provider practices. Furthermore, our survey may not have included all of the unique scenarios involving abortion and contraception that the medical students were exposed to during their clinical clerkships and therefore may not have completely evaluated for overall trends in attitude change.

Many students enter medical school with preconceived attitudes toward controversial issues of human sexuality, such as abortion and contraception. Exposing medical students to patients who desire these interventions during their clinical clerkships is important in helping them to develop their respect and tolerance of patient choices. It is also important in helping them to develop a non-judgmental and evidenced-based approach when interacting with patients who desire these interventions. As an example of this importance, although not statistically significant, the percentage of medical students in our study who felt capable of neutral counseling in the setting of an undesired pregnancy increased from 72.1% to 79.2% ( $p=0.084$ ) following clinical clerkships.

**Conflicts of interest:** The author reported the conflict of interest statement.

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