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Communication about Contraception with Adolescent Females with Asthma in Pediatric Visits

Rachel A. Parry, PharmD[*], **Robyn Sayner, PharmD**, **Scott A. Davis, PhD**, **Bethany Y. Beznos**, **Delesha M. Carpenter, PhD, MSPH**

Division of Pharmaceutical Outcomes and Policy, UNC Eshelman School of Pharmacy, University of North Carolina at Chapel Hill, Chapel Hill, NC 27599-7355

Betsy L. Sleath, PhD

Division of Pharmaceutical Outcomes and Policy, UNC Eshelman School of Pharmacy, University of North Carolina at Chapel Hill, Chapel Hill, NC 27599-7355

Cecil G. Sheps Center for Health Services Research, University of North Carolina at Chapel Hill, Chapel Hill, NC 27599-7355

Abstract

Study Objective—Occurrence and characteristics of contraception discussions with adolescents are unexplored. Our study sought to address this gap using transcripts of audiotaped healthcare visits.

Design, Setting, and Participants—This study was a secondary analysis of 153 transcripts of medical visits with female adolescents with asthma. Medical visits took place among four outpatient clinics in North Carolina.

Main Outcome Measure(s)—Transcripts were reviewed for occurrence and characteristics of contraception discussions. Demographics were collected from adolescent interviews, caregiver questionnaires, and provider questionnaires.

Results—Contraception was mentioned in 3% (n=5) of office visits. Conversations about contraception included the topics of contraception efficacy (20%), contraception side effects (60%), contraception adherence (20%) and adolescent sexual health (20%). No conversations included the topics of contraception indication or alternative methods.

Conclusions—Conversations about contraception occurred infrequently. When conversations did occur, the topics they covered lacked alignment with guideline recommendations.

[*]Corresponding Author: rparry@unc.edu, Phone: (919) 966-9429, Fax: (919) 966-8486, Address: University of North Carolina at Chapel Hill, UNC Eshelman School of Pharmacy, Division of Pharmaceutical Outcomes and Policy, 2200 Kerr Hall, CB#7573, Chapel Hill, NC 27599-7355.

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Keywords

contraceptive discussion; pediatric visits; adolescent; contraception/methods; female; communication; counseling

1. Introduction

Adolescents lack general knowledge about contraception and awareness of side effects, which can lead to incorrect or inconsistent contraception use, including discontinuation.[1,2] The American Academy of Pediatrics and American College of Obstetricians and Gynecologists recommend that providers encourage consistent condom use to prevent sexually transmitted infections (STIs), address contraceptive care in a context appropriate for the adolescent's age and level of social development, and allow the adolescent to control disclosure of contraceptive care with caregivers.[3,4] For adolescents, preferences in how providers approach conversations about contraception are influenced by their previous sexual experiences and level of maturity, which can be difficult for providers to assess and respond to during a short office visit.[5] Discussions about contraception are sensitive for adolescents because their minor status leads to concerns about confidentiality.[6]

Conversations about contraception between adolescents and their providers during visits have not been studied using transcripts until recently. Craig et al. found that providers often did not discuss important information on side effects, logistics of use, and alternative methods when counseling about combination hormonal contraceptive methods.[7] However, this study was not focused on adolescents: their sample included women ages 16 years and older with a mean age of 27 years.[7]

Discussing contraception with adolescents is important at every visit, as up to one-third of adolescents lack a preventative care visit between the ages of 13 and 17 years.[8] Adolescents with chronic disease experience more frequent healthcare visits, yet their contraceptive needs may still be overlooked.[9] In this analysis, we seek to expand upon this research by analyzing audiotaped transcripts of medical visits to understand the occurrence and characteristics of contraception discussion with adolescent females with asthma.

2. Material and Methods

This study is a secondary analysis of transcripts (n=153) of audiotaped healthcare visits between female adolescents aged 11 to 17 years with persistent asthma and their providers from four practices in North Carolina. The study was approved by the University of North Carolina Institutional Review Board and has been further described elsewhere.[10] Patient demographic characteristics were collected through an interview between the research assistant and adolescent. Questionnaires were used to collect caregiver and provider demographics.

To capture contraception conversations, a coding tool was developed using guideline recommendations.[7,8] The coding structure was refined through researchers' independent reviews of transcripts and group meetings. After the final coding structure was developed,

one researcher coded all transcripts. Twenty-five transcripts were double-coded by two coders. The interclass correlation coefficient was 1.0 for all variables where it could be calculated, and there was 100% agreement when reliability could not be calculated due to lack of variability.

Transcripts that included discussions about contraception or a medication that could be used as contraception were coded for who initiated the contraception discussion, which was defined as the first mention of a contraceptive method or medication that can be used as contraception. The initiator of this conversation was recorded as the adolescent, caregiver, or provider. Participation in the contraception conversation was coded and included any parties who took part in the conversation. Whether the following six topics occurred in the contraception conversation were coded and recorded verbatim: contraception indication (e.g., treat hormonal acne or to prevent pregnancy); contraception efficacy (i.e., how well the method was working); contraception side effects (e.g., menstrual or mood changes); adherence or barriers to adherence (e.g., like forgetting the method while traveling); alternative methods (e.g., contraception options other than what the adolescent is currently using); and sexual health (e.g., STI prevention). The initiator of each of these six topics was recorded categorically as adolescent, caregiver, or provider. All analyses were conducted using IBM SPSS v25 (Armonk, NY). Descriptive statistics were calculated for all variables. Pearson or Fisher Exact chi-square and independent t-tests were used to examine bivariate relationships between the independent variables and whether contraception was discussed. P-values < 0.0004 were considered statistically significant at =0.05 to adjust for multiple comparisons.

3. Results

One hundred fifty-four visits between primary care providers and female adolescents were included in this study (Table 1). Analysis was conducted using transcripts from 153 adolescent visits, because one recording could not be transcribed. Patients in this analysis saw 34 providers. The five visits that included contraception discussion were executed by four distinct primary care providers (one provider discussed conctraception in two visits). Reasons for a visit that was not for asthma only included wellness exam, well visit with asthma follow-up, check-up, and sports physicals.

Five (3%) of the 153 transcripts mentioned contraception. No independent variables were significantly associated with contraception discussion (Table 1). In one instance, the provider included contraception when listing current medications, but no further discussion about contraception ensued. In the other four instances, the contraception discussion was initiated by the caregiver, and the discussion that followed included participation from the adolescent, caregiver, and provider. The contraception conversation was participated in most often by the adolescent during two visits, by the caregiver during two visits, and by neither the adolescent nor caregiver during one visit.

Examples of contraception discussion content are in Table 2. Two of the six conversation topics, contraception indication and alternative methods, were not discussed in any of the visits. In one visit, discussion of efficacy was initiated by the provider, during which the

provider clarified with the adolescent that their intrauterine device (IUD) would not protect against STIs. Contraception efficacy for pregnancy prevention was not discussed.

Discussions of contraception side effects (n=3) included nausea, headaches, and changes in menstrual cycle. Side effect discussion was initiated by the provider in two instances and the adolescent in one instance. In the instance that the adolescent brought up concerns about contraception side effects, the provider engaged momentarily before abruptly changing the subject. A previous change of medication to alleviate side effects, headaches, was discussed once.

Discussion of sexual health (n=1), which was initiated by the provider, covered the adolescent's history of sexual activity and both past and future condom use to reduce risk of STI transmission. It was precluded by the caregiver requesting that the provider discuss sexual health and voluntarily leaving the room. During no other contraception discussion did the caregiver excuse themselves, nor were they asked to leave the room, to allow the adolescent and provider to talk privately.

4. Discussion

Fewer transcripts (3%) included discussion of contraception than expected from reports in prior literature. Previous studies relied on adolescent recall of physician-adolescent contraception discussion and found that adolescents recalled its occurrence ranging from 13% to 79% of visits.[11] Our study notably differed methodologically, as it is one of the first to use audiotapes to analyze occurrence and characteristics of contraception discussions with adolescents. Nevertheless, the wide range of contraception discussions recalled in previous literature paired with the even lower occurrence found in our study make a generalizable estimation unclear.

Caregiver presence may have influenced the low occurrence of contraception conversations observed in our data. In the four instances that contraception was discussed beyond confirmation as a current medication, the conversation was initiated by the adolescent's mother. Additionally, we found only one instance where the caregiver left the room to give the adolescent and provider privacy to discuss sensitive topics. Mothers underestimate the sexual activity of their child,[12] and previous studies found that adolescents and healthcare providers are less likely to engage in discussion of contraception if a parent is in the room.[13] In order to meet adolescent needs, providers should ask the caregiver to leave the room for a portion of the visit so that they can engage in conversations about sensitive topics, such as contraception, during routine healthcare visits. Two key elements for successfully asking caregivers to leave that have been identified include: providing assurance that it is a normal occurrence and explaining the purpose of the alone time.[14]

The low occurrence of the six discussion topics aligns with previous literature.[7] Discussion of the indication, or intended purpose, of their contraceptive method was not discussed during any of the visits. Side effects were discussed during three visits. In one instance headaches were discussed as a reason for changing to the adolescent's current contraception, but the provider did not ask if the change in medication was alleviating the side effect.

Increases in menstrual bleeding or duration of menstrual cycle have been found to be associated with an increased likelihood of discontinuation of contraceptive method,[1] yet asking about this side effect occurred only once in this study. Follow-up is essential to evaluate efficacy and appropriateness of continued therapy, and providers should ask about how a new medication is going when they see that it was recently started or changed. For example, a provider could state “I see that we changed your birth control because of headaches. Have the headaches gotten better since switching?”

In the one instance that the adolescent brought up concerns about contraception side effects, the provider momentarily engaged before changing the subject. The provider failed to address her concerns in the duration of the visit. Alternative contraceptive methods may be appropriate to alleviate side effects such as changes in mood or acne. Guidelines recommend that the discussion of contraception begin with discussion of one of the most efficacious forms, such as an IUD or a subcutaneous implant.[3,4] However, because contraception can be used for indications other than pregnancy prevention, an individualized decision must be made to choose the most appropriate medication – balancing its benefits with its side effect profile. Ongoing evaluation and discussion of alternatives is essential to ensuring that the patient is getting what she needs. No visits in this study contained the recommended review of methods alternative to what the patient was currently using. Providers can set the expectation of revisiting contraception discussions in the future by saying something like, “Birth control can be used for a lot of things, but I want to make sure it’s working best for what you’re using it for. If you start needing it for something else, like to prevent pregnancy rather than helping your acne, we should have this discussion again to make sure that you’re getting what you need.”

Finally, review of the adolescent’s sexual history happened infrequently The provider asked one or more questions about the adolescent’s sexual history in addition to contraception during only one visit. Providers should try to ask about these during visits to better align with guideline recommendations.[3,4]

Generalizability of this study is limited. All visits occurred among four clinics in North Carolina, and the audiotapes of visits were initially transcribed to study an intervention in adolescents with asthma. However, adolescent females reach menarche at various ages, with a range as wide as between the ages of 8 and 19 years,[15] which it may not align perfectly with a yearly well-child visit. Additionally, up to one-third of adolescents between the ages of 13 and 17 years lack a preventative care visit.[8] Among adolescent females who do have a preventive care visit, less than one-half report discussing STIs, human immunodeficiency virus (HIV), or pregnancy prevention.[16] For these reasons, regardless of current contraception use or reason for the visit, discussion of contraception and sexual health must be discussed on an ongoing basis to meet changing adolescent needs.

Consent was given for the entire visit to be audiotaped, but it could be turned off if it was requested by the adolescent or provider, when non-asthma, sensitive topics were being discussed. No other studies have used audiotape transcripts to examine contraception discussion during pediatric visits, and despite these limitations, this study adds valuable information to the literature.

Additionally, transcripts were only coded if they mentioned contraception or a medication that could be used for contraception. This could have led to an underestimation of discussion of other topics such gender identity, sexual identity, and current sexually activity if the discussion of these did not include mention of contraception. Finally, the bivariate analyses (Table 1) should be interpreted with care because of the small sample size and low occurrence of contraception discussions. Future studies using audiotapes to observe occurrence of contraception and related topic (e.g. gender identity) discussion during routine visits are needed to further assess occurrence in adolescents across a larger population with more diverse medical history.

Conclusions

We found a low occurrence of contraception discussion. When contraception was discussed it lacked alignment with guideline recommendations. Providers should regularly engage in conversations about contraception with adolescents in order to ensure safe medication use and prevent unintended pregnancies. Future studies with are needed to improve communication with adolescent females about contraception during pediatric visits.

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Table 1:

Adolescent, Caregiver and Provider Characteristics

	All Visits N=154	Visits Where Contraception Discussion Occurred N=5	p-value*
	% (N)	% (N)	
Adolescent Characteristics			
Age, mean ± SD (range)	13.2 ± 1.9 (11, 17)	15.4 ± 1.8 (13, 17)	0.006
Race			0.309
American Indian or Alaskan Native	12.3 (19)	40.0 (2)	
Asian	1.3 (2)	0.0 (0)	
Black or African American	35.1 (54)	20.0 (1)	
White	35.7 (55)	20.0 (1)	
Hispanic or Latino(a)	14.9 (23)	20.0 (1)	
Other	0.6 (1)	0.0 (0)	
Number of Prior Visits Adolescent Has Had with This Provider, mean ± SD (range)	14.6 ± 20.1 (0, 100)	19.8 ± 17.8 (5, 50)	0.558
Reason for visit			1.000
Asthma only	53.1 (80)	60.0 (3)	
Not asthma only	47.0 (71)	40.0 (2)	
Caregiver Characteristics			
Age, mean ± SD (range)	42.5 ± 8.6 (19, 70)	42.2 ± 11.1 (28, 55)	0.947
Years Education, mean ± SD (range)	13.4 ± 3.4 (4, 25)	12.6 ± 2.6 (9, 16)	0.603
Race			0.196
American Indian or Alaskan Native	9.1 (14)	40.0 (2)	
Asian	0.6 (1)	0.0 (0)	
Black or African American	33.1 (51)	40.0 (2)	
White	43.5 (67)	20.0 (1)	
Hispanic or Latino(a)	12.3 (19)	0.0 (0)	
Other	1.3 (2)	0.0 (0)	
Relationship to Child			1.000
Mother/Stepmother	80.5 (124)	100 (5)	
Father/Stepfather	11.7 (18)	0 (0)	
Grandparent	5.8 (9)	0 (0)	
Aunt or Uncle	0.6 (1)	0 (0)	
Other	1.3 (2)	0 (0)	
Provider Characteristics			
Age, mean ± SD (range)	44.3 ± 11.8 (28, 62)	54.8 ± 8.1 (41, 62)	0.038
Gender			0.198
Male	16.8 (26)	40.0 (2)	
Female	83.1 (128)	60.0 (3)	
Race			0.029
American Indian or Alaskan Native	9.1 (14)	40.0 (2)	

	All Visits N=154	**Visits Where Contraception Discussion Occurred N=5**	**p-value***
	% (N)	**% (N)**	
Asian	2.6 (4)	0.0 (0)	
Black or African American	12.3 (19)	40.0 (2)	
White	72.7 (112)	20.0 (1)	
Hispanic or Latino(a)	2.6 (4)	0.0 (0)	
Other	0.0 (0)	0.0 (0)	
Type of Provider			0.683
Physician	58.4 (90)	60.0 (3)	
Physician's Assistant	16.2 (25)	0.0 (0)	
Nurse Practitioner	25.3 (39)	40.0 (2)	
Other	0.0 (0)	0.0 (0)	

Abbreviations: SD, standard deviation

*p-values are calculated for differences between visits where contraception was discussed versus visits were contraception was not discussed using Pearson's χ^2 and Fisher's Exact tests, as appropriate; to adjust for multiple comparisons at α=0.05, p-values <0.0004 are considered statistically significant

Table 2:

Contraception Discussion Content (N=5)

Discussion Topic	% (N)	Excerpt Example Excerpt
Efficacy (i.e., how well the method was working)	20 (1)	Provider: “Even though you have an IUD, that’s not gonna [sic] prevent STDs”
		Adolescent: “Yeah”
Side Effects (e.g., menstrual or mood changes)	60 (3)	Provider: “Um, have you been feeling nauseous at all?”
		Adolescent: “Umm, actually, this past weekend I was feeling a little bit nauseous, -“
		Provider: “Uh huh.”
		Adolescent: “Um, but I was like, in wa ((starts word)), at (location) -“
		Provider: “Okay”
		Adolescent: “Visiting so I don’t know exactly what it was.”
		Provider: “Uh huh”
		Adolescent: “Like, when I’ve been home, I haven’t been nauseous”
		Provider: “Okay”
		Adolescent: “It was just this past weekend”
Sexual Health (e.g., STI prevention)	20 (1)	Provider: “Have you, but you’ve had sex before?”
		Adolescent: “Yeah”
		Provider: “And you use a condom?”
		Adolescent: “Yeah”
		Provider: “Um, are you using condoms every single time?”
		Adolescent: “Yeah, I’m not, like, that sexually active.”
		Provider: “Okay”
		Adolescent: “Yeah”
Adherence/barriers to adherence (e.g., forgetting the method while traveling)	20 (1)	Caregiver: “Her dad don’t give it to her right.”
Indication (e.g., to treat hormonal acne or prevent pregnancy)	0 (0)	-
Alternative methods (i.e., methods other than what the adolescent currently uses)	0 (0)	-

Abbreviations: STD, sexually transmitted disease