Published in final edited form as:

J Allergy Clin Immunol Pract. 2019 ; 7(6): 2062–2064. doi:10.1016/j.jaip.2019.02.005.

Do youth ask asthma providers the questions they want to ask?

Scott A. Davis, PhD,

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

Richard F. Brown, PhD,

Department of Health Behavior and Policy, Virginia Commonwealth University School of Medicine

Robyn Sayner, PharmD,

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

Delesha Carpenter, PhD,

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

Charles Lee, MD,

Alexor LLC

Nacire Garcia, MS,

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

Daniel S. Reuland, MD,

Division of General Internal Medicine and Clinical Epidemiology, School of Medicine, University of North Carolina at Chapel Hill

Gail Tudor, PhD,

Department of Science and Mathematics, Husson University

Ceila E. Loughlin, MD, and

Division of Pediatric Pulmonology, School of Medicine, University of North Carolina at Chapel Hill

Betsy Sleath, PhD

Division of Pharmaceutical Outcomes and Policy, UNC Eshelman School of Pharmacy, University of North Carolina at Chapel Hill; Cecil G. Sheps Center for Health Services Research, University of North Carolina at Chapel Hill

Correspondence to: Scott A. Davis, PhD, CB #7573, Division of Pharmaceutical Outcomes and Policy, University of North Carolina Eshelman School of Pharmacy, Chapel Hill, NC 27599. Phone: 919-966-9158; Fax: 919-966-8486; sdavis81@email.unc.edu.

Publisher's Disclaimer: This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final citable form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

The authors have no conflict of interest.

To the editor:

Adolescence is an important transitional period when youth gradually shift toward managing their chronic disease on their own.¹ Adolescents often show limited involvement in medical visits, especially when parents are reluctant to relinquish control of the visit and allow the adolescent to participate more in the discussion.² However, adolescents may learn self-management of their disease more effectively if they can have higher-quality conversations with their providers that result in their concerns being addressed.^{1,3} For diseases such as asthma, in which patients must often manage multiple medications, improving patient-physician interactions is key to achieving better adherence, better outcomes, and fewer exacerbations.⁴

One method that has improved physician-patient interactions is question prompt lists (QPLs). QPLs allow patients to check the questions they may want to ask the provider during their visit and also write in additional questions of their own.¹ Prompting patients to reflect on their upcoming treatment decisions using QPLs can encourage patients to actively communicate during the consultation, leading to more question-asking and increased knowledge.⁵

Based on these findings we developed a 14-item asthma QPL designed to empower adolescents to be more engaged in communication about their own asthma regimens.⁶ The objectives of this manuscript are to (a) present the types of questions that youth checked as wanting to ask their providers on an asthma QPL, and (b) compare what they checked on the QPL to what they asked their providers during their medical visits.

Clinic staff referred potentially eligible patients who were interested in learning more about the study to a research assistant. Youth were eligible if they were: ages 11 to 17 years; spoke and read English or Spanish; had persistent asthma; were present for an acute or follow-up asthma visit or a well-child visit; and had previously visited the clinic at least once for asthma. Eligible families were randomized to the experimental group which received the QPL and a short educational video, or the usual care control group which received usual care. This publication only considers the experimental group since the control group was not given the QPL.

The final one-page asthma QPL consisted of 14 questions about asthma medications, eight questions about triggers and asthma in general, and an area where adolescents could write in additional questions (Table 1).⁶ Adolescents were asked to check questions from the paper list and copies of the lists were retained for future analysis.

All of the medical visit audio-tapes were transcribed verbatim. Three research assistants were trained to code the transcripts using a detailed tool used in prior asthma communication work and wrote onto a coding sheet every question that adolescents asked about asthma.⁷ Two other research assistants then compared the questions actually asked during the visit to the questions they had checked on the QPL earlier and coded which questions were asked. Discrepancies were resolved by discussion among the two research assistants and the principal investigator.

Three hundred and fifty-nine youth (mean age 13.2 years and 9.2 years diagnosed with asthma; 58.9% male; 38.4% African American) and their caregivers were enrolled. More demographic information has been reported in ref. 6.⁶ Of the 359 eligible families, 185 were randomly allocated to the experimental intervention group and 174 were allocated to the control group.

Youth checked an average of 4.36 questions (SD: 3.51; range: 0–16). Only ten participants (5.4%) did not check any questions. Eleven percent of youth wrote in questions (range: 0–2). Of the patients who checked at least one question, 33% asked their provider at least one of the questions they checked during the visit. The mean number of prompt list questions asked was 1.02 (SD: 1.86; range: 0–9).

Table 1 presents the frequency with which adolescents checked each prompt list question. The most frequently checked questions were “How severe is my asthma?” (50.8%), “What causes my asthma?” (35.1%), and “How can I make my asthma better?” (35.1%). The most frequently checked medication questions were “How long do I hold my breath after I inhale my medicine?” (32.4%), and “Should I use my asthma medicine before I play or exercise?” (27.6%).

Table 2 describes the extent to which youth asked the questions that they checked on the prompt list. The question with the greatest concordance between checking and asking was “What causes my asthma?” (30.8%); whereas, “How do I prevent breathing problems?” (10.5%) had the least concordance between checking and asking.

For asthma medication questions, up to 41% of adolescents actually asked the question they checked. Adolescents who checked “Should I always carry my asthma medicine with me?” (40.7%) and “Is it okay to take my asthma medicine with my other medicines?” (37.5%) were most likely to actually ask their providers these questions. None of the adolescents who checked “Can you show me how to use my medicine?” and “Can I show or tell you how I use my medicine, so you tell me if I am doing it right?” actually asked their providers these questions.

This study demonstrated that most adolescents with asthma have several questions that they want to ask their providers. Even adolescents with longer disease duration would still like to ask their provider about what causes their asthma and when and how to use their medications correctly, especially in the context of complex medication regimens. For this reason, providers should not make assumptions about what their adolescent patients know, and be prepared to encourage youth to ask the questions they have. Our results suggest that providers should be trained to answer questions from the prompt list, perhaps by providing them with model answers to these common questions.

The results of this study also suggest that adolescents ask relatively few of the questions they have during medical visits. Adolescents were least likely to ask inhaler technique questions. This finding was similar to our previous study that found that despite guidelines stating that providers need to educate patients about inhaler technique,⁸ most providers did not provide education about inhaler technique.⁷ Our findings are also consistent with a qualitative study by Edgcombe et al., which showed that many adolescents reported that they had become

reliant on their parents to ask questions, report symptoms, and understand the provider's recommendations rather than believing they should take responsibility for their treatment themselves.⁹

In summary, the results from this study show that even though adolescents with asthma have questions that they want to ask about asthma and medications, relatively few actually asked these questions during their visit.

Acknowledgments

Funding: This work was supported through a Patient-Centered Outcomes Research Institute (PCORI) Program Award (1402–09777). Drs. Sleath and Reuland are also supported by the National Center for Advancing Translational Sciences (NCATS), National Institutes of Health, through Grant Award Number 1UL1TR001111.

References

1. Sleath B, Carpenter DM, Davis SA, Watson CH, Lee C, Loughlin CE, et al. Improving youth question-asking and provider education during pediatric asthma visits. *Patient education and counseling* 2018;101(6):1051–7. [PubMed: 29402570]
2. Beresford BA, Sloper P. Chronically ill adolescents' experiences of communicating with doctors: a qualitative study. *The Journal of adolescent health : official publication of the Society for Adolescent Medicine* 2003;33(3):172–9. [PubMed: 12944007]
3. Holley S, Morris R, Knibb R, Latter S, Lioffi C, Mitchell F, et al. Barriers and facilitators to asthma self-management in adolescents: A systematic review of qualitative and quantitative studies. *Pediatr Pulmonol* 2017;52(4):430–42. [PubMed: 27717193]
4. Klok T, Kaptein AA, Brand PLP. Non-adherence in children with asthma reviewed: The need for improvement of asthma care and medical education. *Pediatric allergy and immunology : official publication of the European Society of Pediatric Allergy and Immunology* 2015;26(3):197–205. [PubMed: 25704083]
5. Clayton J, Butow P, Tattersall M, Chye R, Noel M, Davis JM, et al. Asking questions can help: development and preliminary evaluation of a question prompt list for palliative care patients. *British journal of cancer* 2003;89(11):2069–77. [PubMed: 14647140]
6. Sleath B, Carpenter DM, Davis SA, Watson CH, Lee C, Loughlin CE, et al. Acceptance of a pre-visit intervention to engage teens in pediatric asthma visits. *Patient education and counseling* 2017;100(11):2005–11. [PubMed: 28550963]
7. Sleath B, Carpenter DM, Ayala GX, Williams D, Davis S, Tudor G, et al. Communication during pediatric asthma visits and child asthma medication device technique 1 month later. *The Journal of asthma : official journal of the Association for the Care of Asthma* 2012;49(9):918–25. [PubMed: 22974226]
8. National Asthma Education and Prevention Program. Expert Panel Report: Guidelines for the Diagnosis and Management of Asthma, Update on Specific Topics Washington, DC: National Institutes of Health; 2002.
9. Edgecombe K, Latter S, Peters S, Roberts G. Health experiences of adolescents with uncontrolled severe asthma. *Archives of disease in childhood* 2010;95(12):985–91. [PubMed: 20675501]

Clinical implications

- Adolescents show limited participation in asthma visits and have questions that are often not addressed during visits. Providers should be prepared to answer common questions that adolescents have and adopt new interventions to increase adolescents' involvement during visits.

Table 1:

Questions that Youth Checked on the Prompt List (N=185)

Question	Percent (N)
<u>Questions about asthma:</u>	
How severe is my asthma?	50.8 (94)
What causes my asthma?	35.1 (65)
How can I make my asthma better?	35.1 (65)
When should I stay indoors?	27.6 (51)
Can you tell me what asthma triggers are?	21.1 (39)
How do I prevent breathing problems?	20.5 (38)
Can I be around my pet?	20.0 (37)
What can I do if someone is smoking around me?	17.3 (32)
<u>Questions about asthma medications:</u>	
How long do I hold my breath after I inhale my medicine?	32.4 (60)
Should I use my asthma medicine before I play or exercise?	27.6 (51)
Why do I hold my breath after I inhale my medicine?	23.8 (44)
What medicine do I use when my chest is tight or when I wheeze or cough?	23.8 (44)
Should I always carry my asthma medicine with me?	14.6 (27)
When should I use my medicine?	13.5 (25)
Is it okay to take my asthma medicine with my other medicines?	13.0 (24)
How much medicine should I take each time I use it?	12.4 (23)
What do you call my asthma medicine?	12.4 (23)
Which asthma medicine do I take every day and why?	9.7 (18)
How many times a day do I take it?	9.2(17)
How do I use a spacer?	8.6 (16)
Can I show or tell you how I use my medicine, so you tell me if I am doing it right?	4.9 (9)
Can you show me how to use my medicine?	1.6 (3)

Table 2:

Percentage of Youth Who Asked the Specific Questions They Checked on the Prompt List (N=184)

Question	Percentage of youth who asked the question that they checked
<u>Questions about asthma:</u>	
What causes my asthma?	30.8 (20/65)
Can you tell me what asthma triggers are?	23.1 (9/39)
Can I be around my pet?	22.2 (8/36)
What can I do if someone is smoking around me?	21.9 (7/32)
When should I stay indoors?	21.6 (11/51)
How severe is my asthma?	19.4 (18/93)
How can I make my asthma better?	13.8 (9/65)
How do I prevent breathing problems?	10.5 (4/38)
<u>Questions about asthma medications:</u>	
Should I always carry my asthma medicine with me?	40.7 (11/27)
Is it okay to take my asthma medicine with my other medicines?	37.5 (9/24)
Should I use my asthma medicine before I play or exercise?	33.3 (17/51)
Why do I hold my breath after I inhale my medicine?	22.7 (10/44)
How long do I hold my breath after I inhale my medicine?	20.0 (12/60)
What medicine do I use when my chest is tight or when I wheeze or cough?	18.2 (8/44)
How much medicine should I take each time I use it?	17.4 (4/23)
How many times a day do I take it?	11.8 (2/17)
When should I use my medicine?	8.0 (2/25)
How do I use a spacer?	6.3 (1/16)
Which asthma medicine do I take every day and why?	5.6 (1/18)
What do you call my asthma medicine?	4.3 (1/23)
Can I show or tell you how I use my medicine, so you tell me if I am doing it right?	None (0/9)
Can you show me how to use my medicine?	None (0/3)