



Informed Consent – Current Challenges and Lessons Learned from the American Lung Association Asthma/Airways Clinical Research Centers Network (ALA-ACRC)

Jason E Lang & Anusha Vadlamudi

To cite this article: Jason E Lang & Anusha Vadlamudi (2018): Informed Consent – Current Challenges and Lessons Learned from the American Lung Association Asthma/Airways Clinical Research Centers Network (ALA-ACRC), Journal of Asthma, DOI: [10.1080/02770903.2018.1474924](https://doi.org/10.1080/02770903.2018.1474924)

To link to this article: <https://doi.org/10.1080/02770903.2018.1474924>



Accepted author version posted online: 10 May 2018.



Submit your article to this journal [↗](#)



Article views: 4



View related articles [↗](#)



View Crossmark data [↗](#)

Publisher: Taylor & Francis

Journal: *Journal of Asthma*

DOI: <https://doi.org/10.1080/02770903.2018.1474924>

Cover Letter

To The Editor:

We are writing you to consider publishing the following as a Letter to the Editor, titled, “Informed Consent - Current Challenges and Lessons Learned from the American Lung Association Asthma/Airways Clinical Research Centers Network (ALA-ACRC)” in the *Journal*.

Informed consent is a vital yet challenging component of human subject research. In order to comply with regulatory requirements, information required in the consenting process has grown substantially, which may pose near irreconcilable tensions between logistics and convenience on the one hand and meaningful understanding and true informed decision-making on the other. Over recent decades, potential volunteers are given more and more details about possible risks and benefits, and consent documents have grown in length and complexity, with resulting reduced comprehension by the participant. We have conducted quantitative and qualitative analyses of consent forms within the ALA-ACRC network taking place over nearly two decades. Our analysis adds to the previously documented shortcomings to the informed consent process. We explore possible solutions and future directions in human subject research. We believe this would be of interest to the audience of the *Journal* as well as the wider scientific community.

The manuscript is original. No part of the manuscript has been published before, nor is any part of it under consideration for publication at another journal. There are no conflicts of interest to disclose

Title:

Informed Consent - Current Challenges and Lessons Learned from the American Lung Association Asthma/Airways Clinical Research Centers Network (ALA-ACRC)

Jason E Lang, MD and Anusha Vadlamudi

Duke University School of Medicine, Pediatrics, Durham, 27710 United States

Duke University Hospital, Pediatrics, Durham, 27710 United States

Abstract

True informed consent is a vital component of clinical research. Obtaining informed consent involves informing the subject about the study purpose, any tests and procedures that may be involved, his or her rights, and potential risks and benefits of participation. Over the past few decades, informed consent documents have gotten longer and more complicated in order to comply with regulatory standards. This jeopardizes participant understanding and the intended purpose of the document. We analyzed the complexity of informed consent documents in 8 American Lung Association Asthma Clinical Research Center (ALA-ACRC) clinical trials taking place between 2000 and 2015. The number of pages has increased over time and the readability was at a high school level, both of which exceed current best-practice recommendations. Focusing on shorter consent forms and using technological innovations (i.e. audio-visual) show promise.

Letter to the Editor:

Valid informed consent (IC) is a vital component of asthma research, yet research participants are frequently confused during the consenting process [1] [2], and often are uninformed about study objectives, risk and benefits of the research [1]. Information required in the consenting process has grown substantially which may pose challenges for researchers to balance convenience, full disclosure, and understanding [2] [3]. Over recent decades, informed consent documents have increased in length and complexity for transparency's sake [4] [5], however this may threaten both feasibility and understanding [3]. We write to describe our asthma networks recent evaluation of the length and complexity of consent documentation.

IC is a necessary component of clinical research, and requires more than simply a disclosure of information to prospective volunteers. Optimal IC should emphasize the *quality* of subject's understanding of the information, as well as the right to authorize or decline [6]. Participation should occur only when research is consistent with a participant's values, interests, and preferences [7]. The Code of Federal Regulations (21CFR50.20) [8] state that investigators "shall seek such consent only under circumstances that provide... sufficient opportunity to consider whether or not to participate... The information that is given to the subject or the representative shall be in language understandable to the subject or the representative..." Unfortunately, Widespread reports suggest that many participants entering clinical trials may not have the intended understanding of all facets of the research process [9] [10].

To understand changes in IC documents over 15 years, we measured the length and complexity among 8 American Lung Association Asthma Clinical Research Center (ALA-ACRC) clinical trials initiated between 2000 and 2012 [11][12] [13][14][15][16][17][18]. We hypothesized that both the length and complexity have increased.

The word count and page length of IRB approved consent forms increased gradually (Fig 1). Without substantive changes in study complexity, there was a doubling of the total length, with the most recent consents approaching 15 pages. This increase in length may undermine true informed consent for many participants since recent research suggests consent forms longer than four pages [4] [9] are unlikely to be read completely. We speculate that accumulation of mandated consent language mandated by ethics and review boards in the name of subject

protection has contributed to the large increase consent length. Sharp recommends the length of the consent form be limited to no more than five pages, which would take an average high school graduate five to seven minutes to read [4]. Another significant finding was that between 2000 and 2012, the grade level at which consent documents were written was found to be at a high school reading level (9th – 12th grade) (Fig 2). Recommendations exist for consent forms to be written at no higher than an 6-7th grade reading level [3].

A recent review of 22 large trial consents [1] found that shorter consents relying on discussions with study personnel improved understanding. In addition, participants of focus groups complain that consent forms contain too much information that is unhelpful for decision-making, and are intimidated by overly technical language [20]. We recommend that ethics and review committees adopt standards for acceptable length and complexity of consent documents which balance feasibility with transparency and provide guidance for investigators.

A recent Cochrane review [21] of consenting approaches enhanced with audio-visual presentation found some data suggesting a modest improvement in understanding. One recent study in a low-literacy groups found audio-video animation to be practicable for researchers and acceptable to participants [22]. The study used multimedia tool integrating video, animations and audio narrations and this proved to be effective in delivering the information and sustaining comprehension, improving participant satisfaction while preserving participation rates.

A consenting process that involves shorter and simpler text with interactive discussion or with multimedia components show promise in improving participant understanding, retention and satisfaction. Ethics boards, investigators and subject advocates must continue to work together to improve the IC process.

Figures

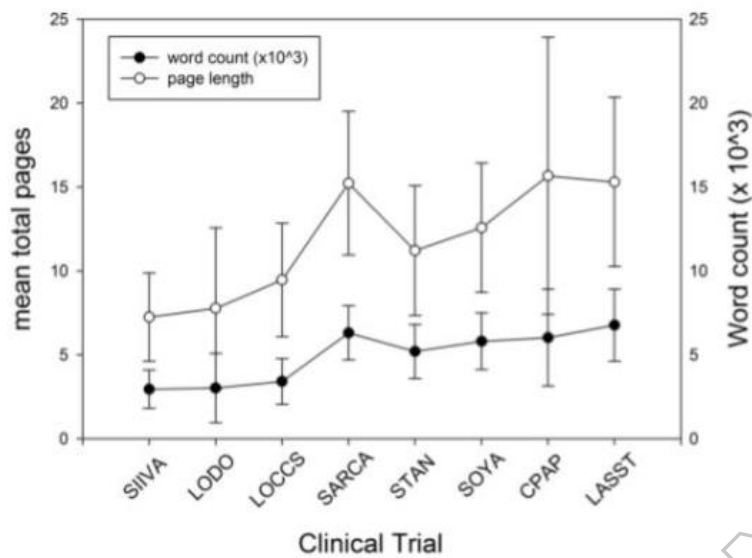


Fig 1. Percent of Participants Randomized into an ACRC clinical trial who gave consent and submitted a DNA sample for research. SIIVA – study of Inactivate Influenza Vaccine in Asthma (2000), LODO – Effect of Low Dose Theophylline as Add-on Therapy in Asthma (2002-2003), LOCCS – Leukotriene Modifier or Corticosteroid or Corticosteroid-Salmeterol Trial (2003-2005), SARCA – Study of Acid-Reflux in Childhood Asthma (2007-2011), STAN – Study of Asthma and Nasal Steroids (2010-2015), SOYA – Study of Soy Isoflavones in Asthma (2010-2012), CPAP – Effect of Positive Airway Pressure on Reducing Airway Reactivity in Patients With Asthma (2012-2014), LASST - Long-acting Beta Agonist Step Down Study (2012-2015)

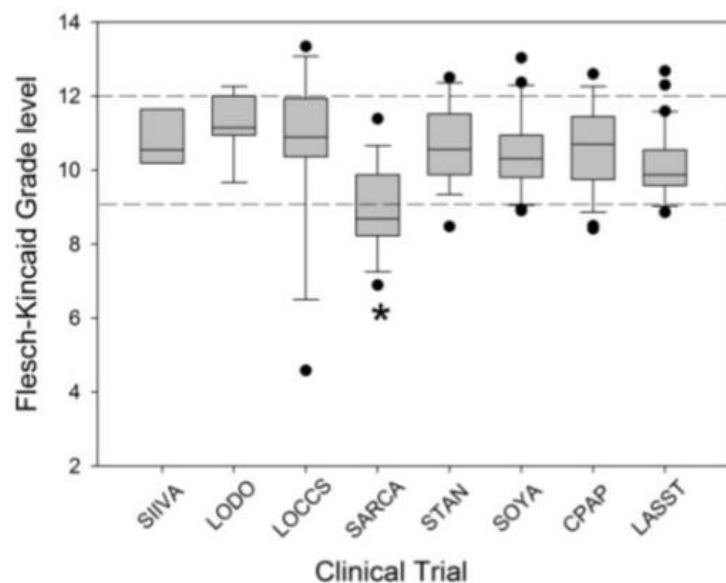


Fig 2. Language Complexity of Informed Consent Forms. All consent forms were approved by each local site's Institutional Review Board. Consent forms evaluated were the final (most up-to-date) version available. X-axis is not linear. There is zero suppression on the Y-axis. Central bars represent medians. Box plot and error bars represent intraquartile range (first and third quartiles) and $\pm 1.5 \times \text{IQR}$, respectively. * denotes the one solely pediatric study which included participants 5-17 years of age.

References

- [1] A. Nishimura, J. Carey, P. J. Erwin, J. C. Tilburt, M. H. Murad, and J. B. McCormick, "Improving understanding in the research informed consent process: a systematic review of 54 interventions tested in randomized control trials," *BMC Med. Ethics*, vol. 14, p. 28, Jul. 2013.
- [2] J. Flory and E. Emanuel, "Interventions to improve research participants' understanding in informed consent for research: a systematic review," *JAMA*, vol. 292, no. 13, pp. 1593–1601, Oct. 2004.
- [3] A. F. Isles, "Understood consent versus informed consent: a new paradigm for obtaining consent for pediatric research studies," *Front. Pediatr.*, vol. 1, p. 38, Nov. 2013.
- [4] S. M. Sharp, "Consent documents for oncology trials: does anybody read these things?," *Am. J. Clin. Oncol.*, vol. 27, no. 6, pp. 570–575, Dec. 2004.
- [5] I. Albala, M. Doyle, and P. S. Appelbaum, "The evolution of consent forms for research: a quarter century of changes," *IRB*, vol. 32, no. 3, pp. 7–11, Jun. 2010.
- [6] F. Ruth and T. L., *A History and Theory of Informed Consent*. New York: Oxford University Press.
- [7] "What makes clinical research ethical? emanuel EJ, wendler D, grady C. * JAMA 2000;283:2701-2711," *Am. J. Ophthalmol.*, vol. 130, no. 3, p. 381, Sep. 2000.
- [8] "CFR - Code of Federal Regulations Title 21."
- [9] W. Montalvo and E. Larson, "Participant comprehension of research for which they volunteer: a systematic review," *J. Nurs. Scholarsh. Off. Publ. Sigma Theta Tau Int. Honor Soc. Nurs.*, vol. 46, no. 6, pp. 423–431, Nov. 2014.
- [10] V. Naanyu, F. F. Some, and A. M. Siika, "I understood...but some parts were confusing and hard to grasp': Patients' perception of informed consent forms and clinical trials in Eldoret, Kenya," *Perspect. Clin. Res.*, vol. 5, no. 1, pp. 20–24, Jan. 2014.
- [11] The American Lung Association Asthma Clinical Research Centers, "The safety of inactivated influenza vaccine in adults and children with asthma," *N. Engl. J. Med.*, vol. 345, no. 21, pp. 1529–1536, 22 2001.
- [12] American Lung Association Asthma Clinical Research Centers, "Clinical trial of low-dose theophylline and montelukast in patients with poorly controlled asthma," *Am. J. Respir. Crit. Care Med.*, vol. 175, no. 3, pp. 235–242, Feb. 2007.
- [13] American Lung Association Asthma Clinical Research Centers *et al.*, "Randomized comparison of strategies for reducing treatment in mild persistent asthma," *N. Engl. J. Med.*, vol. 356, no. 20, pp. 2027–2039, May 2007.
- [14] Writing Committee for the American Lung Association Asthma Clinical Research Centers *et al.*, "Lansoprazole for children with poorly controlled asthma: a randomized controlled trial," *JAMA*, vol. 307, no. 4, pp. 373–381, Jan. 2012.
- [15] American Lung Association–Asthma Clinical Research Centers' Writing Committee *et al.*, "Efficacy of nasal mometasone for the treatment of chronic sinonasal disease in patients with inadequately controlled asthma," *J. Allergy Clin. Immunol.*, vol. 135, no. 3, p. 701–709.e5, Mar. 2015.
- [16] "The Study of Soy Isoflavones in Asthma - Study Results - ClinicalTrials.gov." [Online]. Available: <https://clinicaltrials.gov/ct2/show/results/NCT01052116>. [Accessed: 28-Dec-2017].

- [17] J. T. Holbrook *et al.*, “Effect of Continuous Positive Airway Pressure on Airway Reactivity in Asthma. A Randomized, Sham-controlled Clinical Trial,” *Ann. Am. Thorac. Soc.*, vol. 13, no. 11, pp. 1940–1950, Nov. 2016.
- [18] L. Rogers *et al.*, “Step-Down Therapy for Asthma Well Controlled on Inhaled Corticosteroid and Long-Acting Beta-Agonist: A Randomized Clinical Trial,” *J. Allergy Clin. Immunol. Pract.*, Sep. 2017.
- [19] P. P. Christopher, M. E. Foti, K. Roy-Bujnowski, and P. S. Appelbaum, “Consent form readability and educational levels of potential participants in mental health research,” *Psychiatr. Serv. Wash. DC*, vol. 58, no. 2, pp. 227–232, Feb. 2007.
- [20] F. Keusch, R. Rao, L. Chang, J. Lepkowski, P. Reddy, and S. W. Choi, “Participation in clinical research: perspectives of adult patients and parents of pediatric patients undergoing hematopoietic stem cell transplantation,” *Biol. Blood Marrow Transplant. J. Am. Soc. Blood Marrow Transplant.*, vol. 20, no. 10, pp. 1604–1611, Oct. 2014.
- [21] A. Synnot, R. Ryan, M. Prictor, D. Fetherstonhaugh, and B. Parker, “Audio-visual presentation of information for informed consent for participation in clinical trials,” *Cochrane Database Syst. Rev.*, no. 5, p. CD003717, May 2014.
- [22] M. O. Afolabi *et al.*, “Multimedia Informed Consent Tool for a Low Literacy African Research Population: Development and Pilot-Testing,” *J. Clin. Res. Bioeth.*, vol. 5, no. 3, p. 178, Apr. 2014.