**Description of IOWA Collection IA questions**

There are a total of 1095 Iowa IA questions, which were collected between April 1, 1996 and December 31, 1997. The questions were collected from 103 Iowa family physicians who were randomly selected from the eastern third of Iowa. The study excluded retired physicians and house officers. The principal investigator (John W. Ely, MD) visited each of the 103 physicians for a half day period. During the half-day observation period he stood in the hallway or the physician's office. Between office visits, physicians were asked to report any questions that occurred that were related to the care of their patients. The study excluded questions related to patient-specific clinical facts ("What was her potassium last week?") and questions about symptoms that the physician asked the patient ("How long have you been coughing?"). The principal investigator recorded the question on a standard form along with associated information, such as the resources used to answer the question and the time spent searching for an answer. A research nurse made a second visit to each of the 103 physicians and recorded questions using the same procedure. Most questions referred to patients seen during the observation period, but questions about patients seen earlier were also recorded. A full description of the methods used to collect the questions has been published (Ely JW, Osheroff JA, Ebell MH, Bergus GR, Levy BT, Chambliss ML, et al. Analysis of questions asked by family doctors regarding patient care. BMJ 1999;319:358-361).

The study was approved by the University of Iowa Institutional Review Board (identification number 9508513a, submission of questions considered exempt February 9, 2001).

The principal investigator, John W. Ely, MD is a family physician who practiced in a small town in Iowa for 13 years (1977 to 1990), then took a faculty development fellowship at the University of Missouri-Columbia (1990 to 1992), and then joined the faculty at the University of Iowa Department of Family Medicine (1992 to present).

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**Description of IOWA Collection IB questions**

The Iowa IB questions total 1892 and were collected between May 16, 1992 and April 22, 2002. All questions were collected by the principal investigator (John W. Ely, MD) who has been recording his own questions and those of the residents and medical students he has supervised since 1992. During the collection period, the investigator was a faculty member in the Department of Family Medicine at the University of Iowa. Questions arose during the care of his own patients and while supervising family medicine residents. Questions about the care of both hospitalized patient and clinic patients were included. The primary purpose was to build a database of questions and answers that could be referred to when subsequent patients with similar problems were encountered. The process was described in an article in which the authors recommended that all physicians document their efforts at lifelong self-directed learning by recording their questions in a computer database (Ely JW, Osheroff JA, Ferguson KJ, Chambliss ML, Vinson DC, Moore JL. Lifelong self-directed learning using a computer database of clinical questions. J Fam Pract 1997;45:382-388).

The study was approved by the University of Iowa Institutional Review Board (identification number 200012039, protocol modification approved April 21, 2003).

The principal investigator, John W. Ely, MD is a family physician who practiced in a small town in Iowa for 13 years (1977 to 1990), then took a faculty development fellowship at the University of Missouri-Columbia (1990 to 1992), and then joined the faculty at the University of Iowa Department of Family Medicine (1992 to present).

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**Description of IOWA Collection IC questions**

There are a total of 1062 Iowa IC questions, which were collected between July 31, 2001 and August 19, 2003. The questions were collected from 48 Iowa primary care physicians (16 general internists, 17 general pediatricians, and 15 family physicians). The study excluded retired physicians and house officers. The principal investigator (John W. Ely, MD) observed each physician for approximately 16 hours (4 visits per physician with 4 hours per visit), resulting in a total of 768 hours of observation time. During the half-day observation periods, he stood in the hallway or the physician's office. Between office visits, physicians were asked to report any questions that were related to the care of their patients. The 48 physicians asked 1062 questions, including 441 questions about patients seen during the observation period and 621 recalled about patients seen previously. The study excluded questions related to patient-specific clinical facts ("What was her potassium last week?") and questions about symptoms that the physician asked the patient ("How long have you been coughing?"). The principal investigator recorded the questions on a standard form along with associated information, such as the resources used to answer questions and any obstacles encountered when attempting to find answers.

The study was approved by the University of Iowa Institutional Review Board (identification number 200012039).

The principal investigator, John W. Ely, MD is a family physician who practiced in a small town in Iowa for 13 years (1977 to 1990), then completed a faculty development fellowship at the University of Missouri-Columbia (1990 to 1992), and then joined the faculty at the University of Iowa Department of Family Medicine (1992 to present).

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**Description of IOWA Collection ID questions**

There are a total of 605 Iowa ID questions, which were collected between 1999 and 2001. The questions were collected from 52 pediatricians at the University of Iowa (41 residents and 11 faculty). The questions arose as the pediatricians saw clinic patients and hospitalized patients and as they provided telephone coverage at night and on weekends. A modification of the critical incident technique was used, in which physicians were interviewed by phone and asked to "Think back to last night (or clinic today). What questions did you have for which you needed additional information to answer?" A pediatrician's question was broadly defined as any professional inquiry that the pediatrician wished to verbalize. Pediatricians were contacted by a research assistant and could be contacted up to 3 times per month. They were not aware of when they might be contacted. A description of the methods for collecting these questions has been published (D'Alessandro DM, Kreiter CD, Peterson MW. An evaluation of information-seeking behaviors of general pediatricians. Pediatrics 2004;113:64\_69).

The study was approved by the University of Iowa Institutional Review Board (identification numbers 200101064 and 200012039).

The principal investigator, Donna M. D'Alessandro, MD, is a pediatrician who completed her residency at Children's Memorial Hospital, Northwestern University Medical School (1989 to 1992) and a fellowship in general academic pediatrics at Children's Hospital/Harvard Medical School (1993 to 1995). She has been on the faculty at the University of Iowa Department of Pediatrics from 1996 to present.

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