

Emofilia

GLOBAL IMPLEMENTATION AND CLINICAL USE OF POINT-OF-CARE JOINT ULTRASOUND IN HEMOPHILIA: RESULTS FROM AN INTERNATIONAL SURVEY

R. Gualtierotti[1|2], C. Tedesco[1], S. Acharya[3], N. Bakeer[4], M.N.D. Di Minno[5], M. Fassi[1], A. von Drygalski[6], K. Fijnvandraat[7], A. Boban[8], C. Martinoli[9|10], N. O'Connell[11], M. Sigl-Kraetzig[12], A. Srivastava[13], F. Peyvandi[1|2]

[1]Fondazione IRCCS Ca' Granda Ospedale Maggiore Policlinico, Angelo Bianchi Bonomi Hemophilia and Thrombosis Center, Milano, Italy; [2]Department of Pathophysiology and Transplantation, Università degli Studi di Milano, Milano, Italy; [3]Division of Pediatric Hematology, Oncology and Stem Cell Transplant, Cohen Children's Medical Center, Northwell Health, New York, United States; [4]Division of Hematology, Children's Hospital of Philadelphia, Philadelphia, United States; [5]Department of Clinical Medicine and Surgery, Federico II University, Napoli, Italy; [6]Division of Hematology/Oncology, Department of Medicine, University of California San Diego, La Jolla, United States; [7]Emma Children's Hospital, Pediatric Hematology, University of Amsterdam, Amsterdam, The Netherlands; [8]Haemophilia Centre, Department of Haematology, University Hospital Centre Zagreb, Zagreb, Croatia; [9]Department of Health Science, University of Genoa, Genova, Italy; [10]istituto di Ricovero e Cura a Carattere Scientifico San Martino Hospital, Unit of Radiology, Genova, Italy; [11]National Coagulation Centre, St. James's Hospital, Dublin, Ireland; [12]Institute for Paediatric Research and Further Education, Blaubeuren, Germany; [13]Haematology Research Unit, St. John's Research Institute & Department of Clinical Haematology, St. John's Medical College Hospital, Bengaluru, India

Background. Point-of-care joint ultrasound (POCUS) is increasingly recognized as a valuable tool in hemophilia management, enabling rapid assessment of acute joint symptoms and early identification of synovial and osteochondral changes. Despite growing evidence supporting its clinical utility, adoption remains heterogeneous worldwide, largely due to variability in training, infrastructure, and standardization.

Aims. To characterize current practice patterns and unmet needs, the ISTH SSC Subcommittee conducted an international survey endorsed by EAHAD.

Methods. A 38-item questionnaire was developed by an international panel of experts in musculoskeletal ultrasound and hemophilia care and distributed through the ISTH RedCap platform. The survey explored professional background, access to equipment, training, clinical applications, perceived barriers, and follow-up practices. Responses were collected globally and analyzed descriptively.

Results. A total of 185 healthcare professionals from 31 countries completed the survey, including adult hematologists (21%), adult physiotherapists (19%), pediatric hematologists (17%), and pediatric physiotherapists (14%), with representation from additional disciplines. Overall, 71% of respondents reported regular use of POCUS in hemophilia care, while 29% did not routinely employ this modality. The main barriers to implementation were insufficient training or expertise (62%), limited time availability (50%), restricted funding or access to equipment (35% and 22%, respectively), lack of standardized definitions (22%), absence of reimbursement (16%), and uncertainty regarding longitudinal monitoring protocols (15%). POCUS was primarily used to confirm or exclude acute joint bleeding (71%), guide treatment duration during bleed follow-up (59%), assess synovitis (57%), support longitudinal joint surveillance (57%), evaluate painful musculoskeletal episodes (54%), and assist interventional procedures such as joint aspiration (19%). Substantial variability was observed among centers in terms of patient volumes and referral indications.

Conclusions. This international survey demonstrates that POCUS is widely valued and increasingly integrated into hemophilia care, although its implementation remains inconsistent. Major limitations include insufficient structured training, limited resources, and lack of standardized protocols. Addressing these gaps through coordinated educational initiatives, harmonized definitions, and supportive health policies is essential to promote equitable, evidence-based use. These findings represent a foundation for future efforts aimed at standardizing POCUS and improving early, personalized joint management in people with hemophilia.