

ERN eUROGEN Guidelines on the Management of Anorectal Malformations, Part IV: Organization of Care and Communication between Providers

Ophelia Aubert¹ Willemijn Irvine² Dalia Aminoff³ Ivo de Blaauw⁴ Salvatore Cascio⁵
Célia Cretolle⁶ Barbara Daniela Iacobelli⁷ Martin Lacher⁸ Konstantinos Mantzios² Paola Midrio⁹
Marc Miserez¹⁰ Sabine Sarnacki⁶ Eberhard Schmiedeke¹¹ Cornelius Sloots¹²
Pernilla Stenström¹³ Nicole Schwarzer^{14,*} Jan-Hendrik Gosemann^{8,*}

¹Department of Pediatric Surgery, University Medical Center Mannheim, University of Heidelberg, Mannheim, Germany

²Department of Evidence Based Medicine and Methodology, Qualicura Healthcare Support Agency, Breda, The Netherlands

³AIMAR-Associazione Italiana Malformazioni AnoRettali, Rome, Italy

⁴Department of Pediatric Surgery, Radboudumc Amalia Children's Hospital, Nijmegen, The Netherlands

⁵Department of Pediatric Surgery, School of Medicine, University College Dublin and Children's Health Ireland, Dublin, Ireland

⁶Department of Pediatric Surgery, Urology and Transplantation, Hôpital Necker Enfants Malades, APHP, Université de Paris Cité - National Rare Disease Center MAREP, Paris, France

⁷Medical and Surgical Department of the Fetus-Newborn-Infant, Ospedale Bambin Gesù, Rome, Italy

⁸Department of Pediatric Surgery, University Hospital Leipzig, Leipzig, Germany

Address for correspondence Jan-Hendrik Gosemann, MD, Department of Pediatric Surgery, University Hospital Leipzig, Leipzig, Sachsen, Germany
(e-mail: jan-hendrik.gosemann@medizin.uni-leipzig.de).

⁹Pediatric Surgery Unit, Cà Foncello Hospital, Treviso, Veneto, Italy

¹⁰Department of Abdominal Surgery, UZ Leuven, KU Leuven, Leuven, Flanders, Belgium

¹¹Department of Pediatric Surgery and Urology, Centre for Child and Youth Health, Klinikum Bremen-Mitte, Bremen, Germany

¹²Department of Pediatric Surgery, Erasmus Medical Center-Sophia Children's Hospital, Rotterdam, The Netherlands

¹³Department of Pediatrics, Clinical Sciences Lund University, Skane University Hospital Lund, Lund, Sweden

¹⁴Selfhelp Organization for Parents and Patients Born with Anorectal Malformations—SoMA e.V., Munich, Germany

Eur J Pediatr Surg 2025;35:128–134.

Abstract

Introduction Being born with an anorectal malformation (ARM) can have profound and lifelong implications for patients and parents. Organization of care and communication between health care providers is an overlooked area of patient care. The European Reference Network eUROGEN for rare and complex urogenital conditions assembled a panel of experts to address these challenges and develop comprehensive guidelines for the management of ARM.

Methods The Dutch Quality Standard for ARM served as the basis for the development of guidelines. Literature was searched in Medline, Embase, and Cochrane. The ADAPTE method was utilized to incorporate the newest available evidence. A panel of 15 experts from seven European countries assessed currency, acceptability, and applicability of recommendations. Recommendations from the Dutch Quality Standard were adapted, adopted, or rejected and recommendations were formed considering all available evidence, expert consensus, and the European context.

Results Aspects pertaining to organization of care, patient/parent/health care provider communication, and referral and collaboration between providers caring for ARM patients were assessed. Two new studies were identified. In total, the panel

Keywords

- ▶ ARM
- ▶ collaborative care
- ▶ communication

* Nicole Schwarzer and Jan-Hendrik Gosemann contributed equally to this article.

received

August 14, 2024

accepted

August 27, 2024

article published online

October 11, 2024

© 2024, Thieme. All rights reserved.
Georg Thieme Verlag KG,
Rüdigerstraße 14,
70469 Stuttgart, Germany

DOI <https://doi.org/10.1055/s-0044-1791248>.
ISSN 0939-7248.

adapted 12 recommendations, adopted 7, and developed 2 de novo. The overall level of newly found evidence was considered low and most recommendations were based on expert opinion.

Conclusion Collaborative care and organization of care are gaining importance in the field of ARM. This guideline gives practical guidance on how to achieve better communication and collaboration between all involved parties, applicable at the European level.

Introduction

Being born with an anomaly can have profound and lifelong implications for both patients and their parents (or guardians). Anorectal malformations (ARMs), a birth defect involving the anorectum and oftentimes the genitourinary region, generally require surgery in the neonatal period, and proper management during early life is critical in determining long-term functional outcomes, quality of life, and patient satisfaction.¹ ARM can to some extent be considered a chronic illness, as patients require frequent follow-up by a multidisciplinary team well into adulthood.^{2–5} However, which pediatric and adult specialists need to be involved, how effective communication between providers can be implemented, or which hospitals should even offer care to ARM patients remains elusive. The idea that complex and rare congenital malformations should be cared for by a select few with outstanding surgical expertise and who are able to offer all-encompassing and highly specialized care is not new, and many successful European examples exist.^{6–8}

The European Reference Network (ERN) eUROGEN for rare urogenital diseases and complex conditions assembled a panel of experts (the Adoption and Adaptation Working Group [AAWG]) to address these challenges within the field of ARM. The goal was to develop comprehensive guidelines for the management of ARM and the Dutch “Quality Standard for Anorectal Malformations” was used as a foundation for this endeavor. Using the ADAPTE method, the aim of the AAWG was to adapt and update the Dutch Quality Standard using the newest available evidence, to provide a patient-centered standard of care that harmonizes management strategies at the European level, ultimately improving patient outcomes.^{9,10}

The adaptation report comprises six categories: diagnostics, treatment, organization of care, collaboration, referral, and communication between providers, lifelong follow-up, and transition of care. The fourth and last part of the guidelines will focus on recommendations for organization of care, collaboration, referral, and communication between providers caring for ARM patients.

Methods

The methods for the adaptation of the Dutch Quality Standard for ARM have been reported previously (part I). Briefly, the Dutch Quality Standard was appraised according to the Appraisal of Guidelines for Research and Evaluation instrument and recommendations were adapted in adherence with

the ADAPTE method (detailed methodology available in the Supplementary Material).^{10,11} A systematic review of the literature since 2017 was performed according to the PRISMA guidelines and new studies relevant to organization of care, collaboration, referral, and communication between care providers of ARM patients were identified in the following databases: Medline, Embase, and Cochrane. The original search strategy, as well as inclusion and exclusion criteria for studies, is outlined in the Supplementary Material. Original recommendations and newly identified studies were assessed by the AAWG, a panel of 15 experts from seven European countries, including two patient representatives, within the ERN eUROGEN during a face-to-face meeting in Nijmegen (The Netherlands). Recommendations were either adopted, adapted, or newly developed based on the available evidence (→Table 1). A grade of recommendation was issued by the AAWG and methodologists (W.I., K.M.) for all recommendations to improve the rigor of development compared with the Dutch quality standard (→Table 2). For some recommendations, it was unclear from the Dutch Quality Standard whether this recommendation was based on expert opinion only or if there was also supporting evidence. In this case, the

Table 1 Definition of adopted, adapted, and new recommendations

Adopted	Recommendation is endorsed by the AAWG without changes
Adapted	Recommendation was modified and adapted to the needs and context of the ERN
New	Recommendation was created based on the included new evidence or expert opinion

Abbreviations: AAWG, Adoption and Adaptation Working Group; ERN, European Reference Network.

Table 2 Correspondence between grades of recommendations and study level of evidence

A	Based on consistent level 1 studies
B	Based on consistent level 2 or 3 studies or extrapolations from level 1 studies
C	Based on level 4 studies or extrapolations from level 2 or 3 studies
D	Based on expert opinion or inconclusive/inconsistent studies of any level

recommendation was discussed by the AAWG, and a grade D recommendation (“expert opinion”) was chosen if there was no supporting evidence.

Results

The following key and sub-questions were re-assessed by the AAWG:

- Which care provider(s) is responsible for good care, coordination, and managing of medical, psychological, and social care for patients with ARM in the different phases of care?
 - Which health care providers are involved in the follow-up of people with ARM in a (pediatric surgical) care center?
 - Which disciplines must be able to be consulted on indication?
 - What is the role of the expertise center, the specialized surgical treatment center, and the treatment team for ARM patients?
 - Who is the supervising physician (SP) and what are the tasks of the SP?
 - What measures are taken so that there is guidance/support on a social level (such as possible problems at school, work, insurance, applying for benefits)?
 - What measures are taken so that there is psychological/psychiatric/sexual treatment or guidance, so that attention is paid to the emotional aspect of patients with ARM?
- What measures/steps (issues to be addressed) are being taken to ensure a good exchange/provision of information between patient (family) and care providers, to properly inform the patient and family and to provide good quality care?
 - What measures/steps are being taken to ensure a good exchange of information between care providers within the same institution and with the care providers involved outside the institution?
 - What measures/steps are taken in the case of shared care for the patient (family) to achieve a good exchange of information between the care providers involved?
- Which measures/steps must be taken to achieve good cooperation between care providers and referral to care providers (from primary, secondary, tertiary care) who are involved in the care of the patient with ARM, with the aim of providing good quality care?
 - What measures/steps are taken so that the health care provider refers the patient with ARM to the right health care provider at the right time?

A total of two new studies addressing organization of care, communication, referral, and collaboration between providers caring for ARM patients were identified and considered by the panel in their recommendations.^{12,13} A detailed summary of all newly included studies for each key and sub-question is provided in the Supplementary Material.

Overall, the amount and level of newly found evidence was considered to be low. A total of 12 recommendations were adapted from the Dutch “Quality Standard for Anorectal Malformations,” 7 were adopted, and 2 were developed de novo. Key recommendations of the panel according to the available evidence are summarized in [Fig. 1](#).

Recommendations for Organization of Care for ARM

- Which care provider(s) is responsible for good care, coordination, and managing of medical, psychological, and social care for patients with ARM in the different phases of care?
 - Which health care providers are involved in the follow-up of people with ARM in a (pediatric surgical) care center?
 - Which disciplines must be able to be consulted on indication?
 - What is the role of the expertise center, the specialized surgical treatment center, and the treatment team for ARM patients?
 - Who is the SP and what are the tasks of the SP?
 - What measures are taken so that there is guidance/support on a social level (such as possible problems at school, work, insurance, applying for benefits)?
 - What measures are taken so that there is psychological/psychiatric/sexual treatment or guidance, so that attention is paid to the emotional aspect of patients with ARM?

How the care of congenital anomalies should be organized to ensure optimal patient outcomes and patient/parent satisfaction remains an overlooked and understudied aspect of patient care, and ARMs are no exception. Centralization of care is a crucial step toward improving the quality of care of ARM patients in the short and long term. Higher patient volumes have been shown to correlate with better patient outcomes in various surgical contexts.^{13–18} While the AAWG recognizes that this may be hard to achieve in certain European countries and that current eUROGEN recommendations advocate for a minimum of five reconstructions per year, the AAWG considers that ARM expertise centers should manage at least 10 reconstructions (including follow-up) per year ([Table 3](#)). Surgeons in a high-volume center generally benefit from more surgical exposure and may have already mastered their learning curve, which has been demonstrated to correlate with fewer complications.^{19,20} Furthermore, ARMs do not generally require emergent surgery after birth, even in the case of high malformations, leaving enough time for concertation about necessary next steps with an expert center and if necessary transfer of the patient.

Health care centers that want to be recognized as an ARM expertise center need to provide easy access to a variety of pediatric and adult medical specialists including (colorectal) surgeons, urologists, neurologists, neurosurgeons, gynecologists, psychologists but also nurses specialized in skin/stoma care and fecal/urinary incontinence, social workers, and physical therapists ([Table 3](#)).¹² Examinations, decisions, and

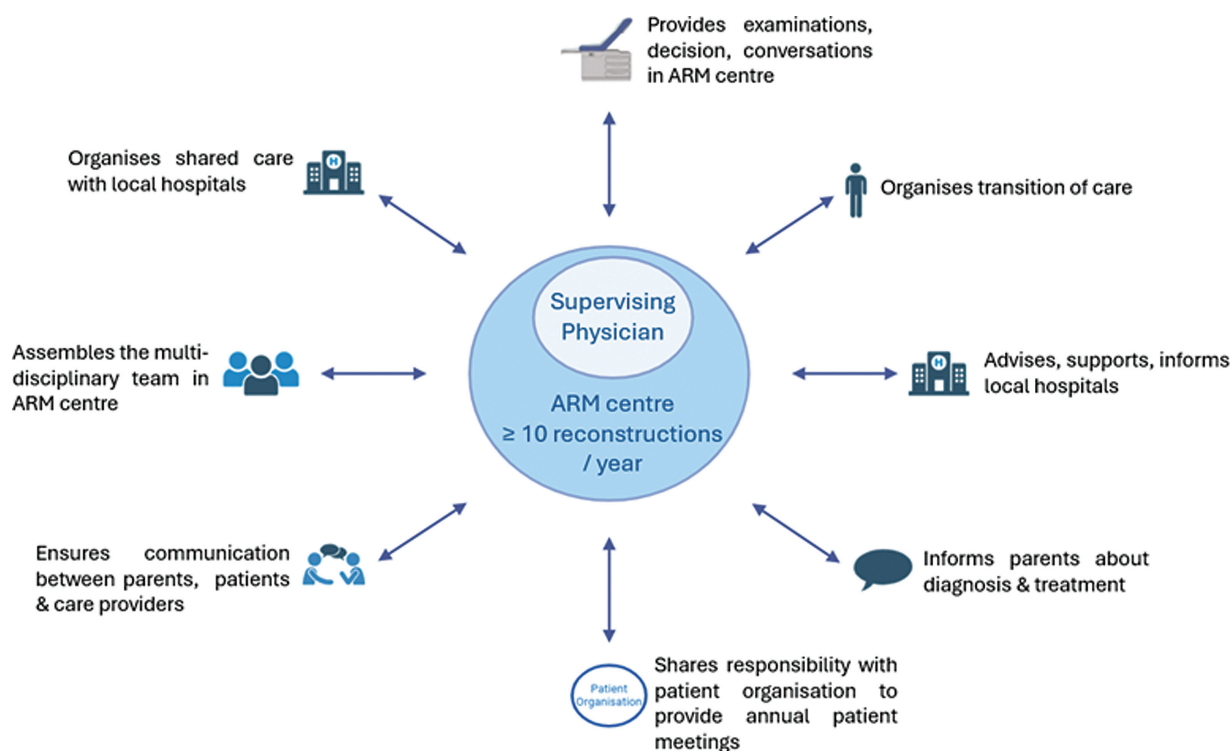


Fig. 1 Recommendations for organization of care and communication between care providers (made with biorender).

conversations with parents and patients, especially at critical time points (e.g., neonatal period, entering school, puberty, transition to adulthood) need to take place at the expertise center. In case of geographical or financial constraints, shared care between an expertise center and a local provider can be offered to patients and their family; however, the expertise center should determine which care is needed and where it can be provided best. It is the responsibility of the expertise center to ensure that all involved health care providers are kept informed, facilitate collaboration, provide guidelines, and periodically evaluate care of the patient. To facilitate this process, a SP and a care coordinator (case manager) should be appointed and act as the first point of contact for the parents, patients, and care providers outside of the expertise center. The SP ought to be in charge of the long-term multidisciplinary care of the patient and be aware of the newest developments in the field of ARM. Lastly, contact information of the SP and care coordinator needs to be provided to parents/patients.

Recommendations for Collaboration, Referral, and Communication

- What measures/steps (issues to be addressed) are being taken to ensure a good exchange/provision of information between patient (family) and care providers, to properly inform the patient and family and to provide good quality care?
 - What measures/steps are being taken to ensure a good exchange of information between care providers within the same institution and with the care providers involved outside the institution?

- What measures/steps are taken in the case of shared care for the patient (family) to achieve a good exchange of information between the care providers involved?
- Which measures/steps must be taken to achieve good cooperation between care providers and referral to care providers (from primary, secondary, tertiary care) who are involved in the care of the patient with ARM, with the aim of providing good quality care?
 - What measures/steps are taken so that the health care provider refers the patient with ARM to the right health care provider at the right time?

Effective communication and cooperation between all entities involved in the care of ARM patients is paramount. Thus, the AAWG decided to address this aspect in a dedicated section of the guidelines. Effective communication between the SP or care coordinator and the parents starts by providing accessible and complete information about the disease and its implications immediately after diagnosis (→ [Table 4](#)). This task may be in part delegated to other members of the multidisciplinary team such as a junior doctor or a specialized nurse, but the SP remains responsible for ensuring proper information flow and management. The SP, who is oftentimes a pediatric surgeon, assembles the multidisciplinary team and the SP and/or care coordinator, pediatrician, and specialized ARM nurse need to be present during multidisciplinary consultations. As previously mentioned, the SP ensures communication and cooperation between all involved health care providers in- and outside of the expertise center as well as with patients and parents. Local hospitals or health care providers need to work closely

Table 3 Recommendations for organization of care for ARM

Organization of care		Grade of recommendation
1	Hospitals treating patients with ARM should have easy access to the following health care providers: • Pediatric surgeon • Pediatrician • Nurse practitioner/case manager pediatric surgery • Nurse practitioner in urinary or fecal incontinence, materials, intermittent clean catheterization, and stoma care • (Pediatric) Anesthesiologist • (Pediatric) Cardiologist • Pediatric urologist • (Pediatric) Neurologist • (Pediatric) Neurosurgeon • Dietitian • Social worker • Neonatologist • General practitioner • Physical therapist • (Pediatric) Gastroenterologist • (Pediatric) Nephrologist • Clinical geneticist • (Pediatric/youth) Psychologist • (Pediatric) Radiologist • Colorectal surgeon • (Pediatric) Orthopaedic surgeon • (Pediatric) Cardiac surgeon • (Pediatric) Gynecologist • High risk pregnancy specialist • Urologist/andrologist • Sexologist or other provider that can help with sexual issues. • School counsellor A multidisciplinary team has to be tailored to the needs of the patients and local care agreements. [adapted]	B ¹²
2	It is recommended that expertise centers for ARM should manage ≥ 10 (reconstruction) cases per year/center with multidisciplinary teams. [new]	D
3	The examinations, decisions, and conversations with the parents of children with ARM take place in a pediatric surgical center with expertise in ARM. [adapted]	D
4	Within the expertise center, attention should also be paid to the transition of care for adolescents. [adopted]	D
5	In cases of shared care, a pediatric surgical center with expertise in ARM remains responsible for care coordination. The expertise center examines which care is needed and whether this can best be offered in the expertise center/pediatric surgery team or in the own region. [adapted]	D
6	The expertise center advises and supports the other health care providers in the care chain and is responsible for information provision, guidelines, and evaluation of care. Information exchange and periodic reporting collaboration between expert centers and regional pediatric (surgical) departments are important to ensure accessible care close to home for patients. [adapted]	D
7	A supervising physician (SP) and a care coordinator (case manager) are appointed for the entire long-term multidisciplinary care of the patient with an ARM. The SP in childhood directs during childhood and the transition phase. [adopted]	D
8	The SP is a medical specialist who is aware of the recent scientific developments and treatment methods of ARM, is in charge of the total long-term multidisciplinary care (including follow-up and shared care), and is the point of contact for the (parents of the) patient regarding health care questions and for health care providers within the multidisciplinary ARM team. [adapted]	D
9	The care coordinator (case manager) is the first point of contact for the (parents of the) patient and care providers from outside the multidisciplinary ARM team and/or outside the center. [adopted]	D
10	The parents of the child with an ARM are informed who the SP and care coordinator/case manager are and how they can be reached. [adopted]	D

Abbreviation: ARM, anorectal malformation.

Table 4 Recommendations for collaboration, referral, and communication

Collaboration, referral, and communication		Grade of recommendation
1	The supervising physician (SP) and/or the care coordinator starts providing information to parents of a child with ARM immediately after the diagnosis and continues throughout the care process. [adopted]	D
2	The SP and/or the care coordinator communicates in language understandable to the parents/patients, checks whether repetition of the information is necessary, and repeats the information if necessary. [adopted]	D
3	The SP has the task of providing information, but can also partly delegate this task to another care provider, for example, to a junior doctor or specialized nurse in ARM. However, the SP remains ultimately responsible. [adopted]	D
4	The SP ensures that the specialists involved primarily and secondarily within the multidisciplinary team are present at a multidisciplinary meeting. [adopted]	D
5	In any case, the SP/care coordinator, the pediatric surgeon, the pediatrician, and the specialized nurse in ARM and/or nurse practitioner are present during the multidisciplinary consultation. The SP is often a pediatric surgeon. [adopted]	D
6	The SP ensures the communication/cooperation (internal and external) among the involved health care providers, patients, and parents. [adopted]	D
7	The SP informs the general practitioner (GP) and—if involved—the pediatrician in the regional hospital about the ARM condition, including the possible complications and in which situations the SP or the care coordinator of the pediatric surgery center should be contacted. The GP or the pediatrician at the regional hospital contacts the SP of the pediatric surgical center for consultation and referral if necessary, in the following situations: • When ARM-associated complications arise in a child with ARM. • When a child with ARM is admitted to a general hospital. Agreements regarding cooperation and involvement with the child with ARM are recorded between the partners. [adopted]	D
8	Within an institution, care providers must effectively coordinate and communicate about care, treatments, and changes in the Individual Care Plan. [adopted]	D
9	Transfer of tasks and responsibilities takes place explicitly. When designing transfer moments, it is important to take into account frequently occurring risks (during transfer) and any specific characteristics of the patient's situation. [adopted]	D
10	Children with ARM will increasingly receive “shared care.” This means that a child is undergoing treatment at the expertise center/pediatric surgery center, but also in a hospital or other treatment center close to home. The local hospital/local health care provider works together with the expertise center/pediatric surgery center. [adopted]	D
11	The countries with a patient organization should organize at least annual meetings for patients. In case there is no patient organization, the expertise center should coordinate a yearly meeting. [new]	D

Abbreviation: ARM, anorectal malformation.

together with the expertise center to provide the best possible shared care. The SP is also the point of contact for pediatricians or general practitioners outside of the expertise center when a patient presents at a local hospital or private practice. The SP needs to be able to provide information about the condition, possible complications, and situations in which the SP or care coordinator needs to be contacted. Pediatricians or general practitioners should contact the SP at the pediatric expert center for consultation and if necessary, refer the patient in case of ARM-associated complications or whenever a child is admitted to a general hospital. Referral or transfer of patients between hospitals may imply risks, and tasks and responsibilities need to be clearly defined, coordinated, and documented.

Lastly, emphasis needs to be put on the role of patient organizations and the importance of meetings between

patient and their families in supporting affecting parties. Patient organizations should organize (at least) annual meetings, so that peer support, mutual learning, and self-management can be established. If there is no patient organization, this responsibility should be entrusted to the expertise center.

Evidence Gaps

Significant knowledge gaps persist in the organization of care of congenital anomalies, including ARM. The role of the ERNs is to provide a platform for gathering and dissemination of information on a European level among all involved entities. They facilitate collaboration between institutions and exchange of ideas and experiences between care providers as well as affected families. Furthermore, they gather

demographic and outcome data in a registry with the goal to inform future practice and ameliorate patient outcomes.

Conclusion

Collaborative care and organization of care are concepts that are gaining importance in the field of ARM.² While robust evidence on the topic may still be lacking, the importance of well-structured care and effective communication between care providers, patients, and parents cannot be overstated, as they are the foundation for successful management of ARM patients. With this publication dedicated to these two essential aspects of care, the AAWG aims to give practical guidance on how to achieve better communication, collaboration, and organization of care of ARM patients, applicable at the European level.

Collaboration

This work was performed in collaboration with experts involved in ERN ERNICA, EUPSA, and Qualicura.

Funding

This study was supported by the European Union.

Conflict of Interest

We would like to disclose that two of the authors of this adaptation report (I.D.B., C.S.) were also authors of the Dutch Quality Standard. However, it is important to note that neither I.D.B. nor C.S. has any conflict of interest to declare and they did not advocate for any particular viewpoints or positions in relation to the content of the Dutch Quality Standard. No conflicting interests were declared from the other authors.

Acknowledgments

We would like to acknowledge Elena Stallings, Patricia Gavin Benavent, Maria Jose Vicente Edo, and Montserrat Salas Valero from Aragon Health Sciences Institute (IACS, Spain) for their work on this project within the TENDER SANTE/2018/B3/030 "ERN Clinical Practice Guidelines (CPGs) and other Clinical Decision Support Tools (CDSTs)." Further, we would like to acknowledge the representatives of the patient organizations AIMAR and SoMA e.V. for their valuable insights and input.

References

- Levitt MA, Peña A. Anorectal malformations. *Orphanet J Rare Dis* 2007;2(01):33
- Choueiki JM, Sales S, Callicott S, et al. Is collaborative care the future of medicine? Lessons learned from the care of children with colorectal conditions. *Children (Basel)* 2024;11(05):570
- Bjoersum-Meyer T, Kaalby L, Lund L, et al. Long-term functional urinary and sexual outcomes in patients with anorectal malformations—a systematic review. *Eur Urol Open Sci* 2021;25:29–38
- Danielson J, Karlbom U, Graf W, Wester T. Outcome in adults with anorectal malformations in relation to modern classification – Which patients do we need to follow beyond childhood? *J Pediatr Surg* 2017;52(03):463–468
- Rigueros Springford L, Connor MJ, Jones K, Kapetanakis VV, Giuliani S. Prevalence of active long-term problems in patients with anorectal malformations: a systematic review. *Dis Colon Rectum* 2016;59(06):570–580
- Durkin N, Davenport M. Centralization of pediatric surgical procedures in the United Kingdom. *Eur J Pediatr Surg* 2017;27(05):416–421
- Wijnen MHW, Hulscher JBF. Centralization of pediatric surgical care in the Netherlands: lessons learned. *J Pediatr Surg* 2022;57(02):178–181
- Hukkinen M, Kerola A, Lohi J, et al. Treatment Policy and liver histopathology predict biliary atresia outcomes: results after national centralization and protocol biopsies. *J Am Coll Surg* 2018;226(01):46–57.e1
- Kwaliteitsstandaarden Zeldzame Aandoeningen. Kwaliteitsstandaard Anorectale Malformatie. Accessed June 17, 2024 at: <https://vsop.nl/media/zorgstandaard/kwaliteitsstandaard-anorectale-malformatie/>
- The ADAPTE Collaboration. The ADAPTE Process: Resource Toolkit for Guideline Adaptation. Version 2.0. 2010. Available at: <http://www.g-i-n.net>
- Brouwers MC, Kho ME, Browman GP, et al; AGREE Next Steps Consortium. AGREE II: advancing guideline development, reporting and evaluation in health care. *CMAJ* 2010;182(18):E839–E842
- Kastenberg ZJ, Wall N, Malhotra N, et al. The effect of multidisciplinary colorectal center development on short-term hospital readmissions for patients with anorectal malformations or Hirschsprung disease. *J Pediatr Surg* 2020;55(03):541–544
- Lacher M, Barthlen W, Eckoldt F, et al. Operative volume of newborn surgery in German University hospitals: high volume versus low volume centers. *Eur J Pediatr Surg* 2022;32(05):391–398
- Birkmeyer JD, Siewers AE, Finlayson EV, et al. Hospital volume and surgical mortality in the United States. *N Engl J Med* 2002;346(15):1128–1137
- Amini N, Spolverato G, Kim Y, Pawlik TM. Trends in hospital volume and failure to rescue for pancreatic surgery. *J Gastrointest Surg* 2015;19(09):1581–1592
- Peiffer SE, Mehl SC, Powell P, Lee TC, Keswani SG, King A. Treatment facility case volume and disparities in outcomes of congenital diaphragmatic hernia cases. *J Pediatr Surg* 2024;59(05):825–831
- Schmiedede E, Schaefer S, Aminoff D, Schwarzer N, Jenetzky E. Non-financial conflicts of interest: contribution to a surgical dilemma by the European Reference Networks for Rare Diseases. *Pediatr Surg Int* 2019;35(09):999–1004
- Wilms M, Jenetzky E, Märzheuser S, Busse R, Nimptsch U. Treatment of anorectal malformations in German hospitals: analysis of National Hospital Discharge Data from 2016 to 2021. *Eur J Pediatr Surg* 2024
- Oomen MWN, Hoekstra LT, Bakx R, Heij HA. Learning curves for pediatric laparoscopy: how many operations are enough? The Amsterdam experience with laparoscopic pyloromyotomy. *Surg Endosc* 2010;24(08):1829–1833
- Hruza M, Weiss HO, Pini G, et al. Complications in 2200 consecutive laparoscopic radical prostatectomies: standardised evaluation and analysis of learning curves. *Eur Urol* 2010;58(05):733–741