

Publications

Steven Arild Wuyts Andersen, MD, PhD

ORCID ID: [0000-0002-3491-9790](https://orcid.org/0000-0002-3491-9790)

* Key papers ¶ Papers on educational topics

I. ORIGINAL SCIENTIFIC PUBLICATIONS (PEER REVIEWED)

1. Salomo L, Salomo M, Andersen SA, Kamper AL. How to exhaust your bone marrow. *BMJ Case Rep*. 2013 Jun 21; 2013. (2 p).
2. Andersen SA, Mikkelsen PT, Noe KO, Sørensen MS. [Good experiences with interactive temporal bone surgical simulator]. *Ugeske Laeger*. 2014 Mar; 176(5):444–6. ¶
3. Andersen SA, Salomo L, Ralfkiaer E, Kjelsen L. [Gelatinous transformation of the bone marrow caused by excessive physical activity and insufficient calorie intake]. *Ugeske Laeger*. 2014 Sep 15; 176(38):1720–1723.
4. Andersen SA, Aabenhus K, Glad H, Sørensen MS. Graft take-rates after tympanoplasty: results from a prospective ear surgery database. *Otol Neurotol*. 2014 Dec; 35(10):e292–7.
5. Andersen SA, Cayé-Thomasen P, Sølvsten Sørensen M. Mastoidectomy Performance Assessment of Virtual Simulation Training Using Final-Product Analysis. *Laryngoscope*. 2015 Feb; 125(2):431–5. ¶
6. Andersen SA, Kiss K. Primary temporal region squamous cell carcinoma diagnosed by a superficial temporal artery biopsy. *Eur Ann Otorhinolaryngol Head Neck Dis*. 2015 Apr; 132(2):91–2.
7. Andersen SA. Cross-platform digital assesment forms for performance rating of surgical skills. *J Educ Eval Health Prof*. 2015 Apr 17; 12:13. (4 p.) ¶
- * 8. Andersen SA, Konge L, Cayé-Thomasen P, Sørensen MS. Learning curves of virtual mastoidectomy in distributed and massed practice. *JAMA Otolaryngol Head Neck Surg*. 2015; 141(10):913–918. ¶
9. Andersen SA, Öhman MC, Sørensen MS. The stability of short-term hearing outcome after stapedotomy: a prospective database study. *Acta Otolaryngol*. 2015 Sep; 135(9):871–9.
10. West N, Konge L, Cayé-Thomasen P, Sørensen MS, Andersen SA. Peak and ceiling effects in final-product analysis of mastoidectomy performance. *J Laryngol Otol*. 2015 Nov; 129(11):1091–6. ¶
11. Andersen SA, Cayé-Thomasen P, Sørensen MS. Novices perform better in virtual reality simulation than in traditional cadaveric dissection training of mastoidectomy. *Journal of Surgical Simulation*. 2015; 2:68–75. ¶
- * 12. Andersen SA, Mikkelsen PT, Konge L, Cayé-Thomasen P, Sørensen MS. Cognitive load in mastoidectomy skills training: virtual reality simulation and traditional dissection compared. *J Surg Educ*. 2016 Jan-Feb; 73(1):45–50. ¶
13. Andersen SA, Mikkelsen PT, Konge L, Cayé-Thomasen P, Sørensen MS. Cognitive load in distributed and massed practice in virtual reality mastoidectomy simulation. *Laryngoscope*. 2016 Feb; 126(2):E74–9. ¶
14. Rasmussen SR, Konge L, Mikkelsen PT, Sørensen MS, Andersen SA. Notes from the Field: Secondary Task Precision for Cognitive Load Estimation during Virtual Reality Surgical Simulation Training. *Eval Health Prof*. 2016 Mar; 39(1):114–20. ¶
15. Andersen SA, Konge L, Cayé-Thomasen P, Sølvsten Sørensen M. Retention of mastoidectomy skills after virtual reality simulation training. *JAMA Otolaryngol Head Neck Surg*. 2016 Jul 1; 142(7):635–40. ¶

- * 16. [Andersen SA](#), Mikkelsen PT, Konge L, Cayé-Thomasen P, Sørensen MS. The effect of implementing cognitive load theory based design principles in virtual reality simulation of surgical skills. *Adv Simul (Lond)*. 2016; 1:20. (8 p.) ¶
- * 17. [Andersen SA](#), Foghsgaard S, Konge L, Cayé-Thomasen P, Sørensen MS. The effect of self-directed virtual reality simulation on dissection training performance in mastoidectomy. *Laryngoscope*. 2016 Aug; 126(8):1883–8. ¶
18. Aabenhus K, [Andersen SA](#), Sørensen MS. Hearing results after tympanoplasty are stable short-term – a prospective database study. *Otol Neurotol*. 2016 Oct; 37(9):1335–43.
- * 19. [Andersen SA](#), Konge L, Mikkelsen PT, Cayé-Thomasen P, Sørensen MS. Mapping the plateau of novices in virtual reality simulation training of mastoidectomy. *Laryngoscope*. 2017 Apr;127(4):907–914. ¶
20. Frithioff A, Sørensen MS, [Andersen SA](#). European status on temporal bone training: a questionnaire study. *Eur Arch Otorhinolaryngol*. 2018 Feb;275(2):357-363. ¶
21. Hovgaard LH, [Andersen SA](#), Dalgaard T, Konge L, Ribbjerg C. Validity evidence for procedural competency in virtual reality robotic simulation, establishing a credible pass/fail standard for the vaginal cuff closure procedure. *Surg Endosc*. 2018 Oct;32(10):4200-4208. ¶
22. [Andersen SA](#), Konge L, Sørensen MS. The effect of distributed virtual reality simulation training on cognitive load during subsequent dissection training. *Med Teach*. 2018; 40(7):684–698. ¶
23. [Andersen SA](#), Foghsgaard S, Cayé-Thomasen P, Sørensen MS. The effect of a distributed virtual reality simulation training program on dissection mastoidectomy performance. *Otol Neurotol*. 2018 Dec; 39(10):1277-1284. ¶
- * 24. [Andersen SA](#), Mikkelsen PT, Sørensen MS. Expert sampling of VR simulator metrics for automated assessment of mastoidectomy performance. *Laryngoscope*. 2019 Sep;129(9):2170–2177. ¶
25. [Andersen SA](#), Nayahangan LJ, Konge L, Melchior J. Identifying and prioritizing technical procedures in otorhinolaryngology for simulation-based training: a national needs assessment in Denmark. *Eur Arch Otorhinolaryngol*. 2019 May;276(5):1517-1524. ¶
26. Frederiksen JG, Sørensen SM, Konge L, Svendsen MB, Nobel-Jørgensen M, Bjerrum F, [Andersen SA](#). Cognitive load and performance in immersive virtual reality versus conventional virtual reality simulation training of laparoscopic surgery – a randomized trial. *Surg Endosc*. 2020 Mar;34(3):1244-1252. ¶
27. Frendø M, Thinggaard E, Konge L, Sørensen MS, [Andersen SA](#). Decentralized Virtual Reality Mastoidectomy Simulation Training: A Prospective, Mixed-Methods Study. *Eur Arch Otorhinolaryngol*. 2019 Oct;276(10):2783–2789. ¶
28. [Andersen SA](#), Guldager M, Mikkelsen PT, Sørensen MS. The effect of structured self-assessment in virtual reality simulation training of mastoidectomy. *Eur Arch Otorhinolaryngol*. 2019 Dec;276(12), 3345–3352. ¶
29. Rölting JD, Nørskov JK, Paltved C, Konge L, [Andersen SA](#). Failure affects subjective estimates of cognitive load through a negative carry-over effect in virtual reality simulation of hip fracture surgery. *Advances in Simulation*. 2019;4:26. (8 p.) ¶
30. Kerwin T, Wiet G, Hittle B, Stredney D, Moberly A, De Boeck P, [Andersen SA](#). Standard setting of competency in mastoidectomy for the Cross-Institutional Mastoidectomy Assessment Tool. *Ann Otol Rhinol Laryngol*. 2020 Apr;129(4):340–346. ¶
31. [Andersen SA](#), Frendø M, Guldager M, Sørensen MS. Understanding the effects of structured self-assessment in directed, self-regulated simulation-based training of mastoidectomy: a mixed methods study. *J Otol*. 2020 Dec;15(4):117-123. ¶

32. [Andersen SA](#), Mikkelsen PT, Sørensen MS. The effect of simulator-integrated tutoring for guidance in virtual reality simulation training. *Simul Healthc*. 2020 Jun;15(3):147-153. ¶
33. Frithioff A, Frendø M, Mikkelsen PT, Sørensen MS, [Andersen SA](#). Ultra-high-fidelity virtual reality mastoidectomy simulation training—a randomized, controlled trial. *Eur Arch Otorhinolaryngol*. 2020 May;277(5):1335-1341. ¶
34. Guldager M, Melchior J, [Andersen SA](#). Development and validation of an assessment tool for technical skills in handheld otoscopy. *Ann Otol Rhinol Laryngol*. 2020 Jul;129(7):715-721. ¶
35. Fagö-Olsen H, Lynggaard CD, Aanæs K, Cayé-Thomasen P, [Andersen SA](#). Developing a national e-learning course in Otorhinolaryngology: the Danish experience. *Eur Arch Otorhinolaryngol*. 2020 Jun;277(6):1829-1836. ¶
36. [Andersen SA](#), Park YS, Sørensen MS, Konge L. Reliable assessment of surgical technical skills is dependent on context: an exploration of different variables using Generalizability theory. *Acad Med*. 2020 Dec;95(12):1929-1936. ¶
37. Frendø M, Cayé-Thomasen P, Konge L, Sørensen MS, [Andersen SA](#). Decentralized Virtual Reality Training of Mastoidectomy Improves Cadaver Dissection Performance: A Prospective, Controlled Cohort Study. *Otol Neurotol*. 2020 Apr;41(4):476–481. ¶
38. [Andersen SA](#), Frendø M, Sørensen MS. Effects on cognitive load of tutoring in virtual reality simulation training. *MedEdPublish*. 2020;9(1):51. ¶
39. Scott SI, Dalsgaard T, Jepsen JV, von Buchwald C, [Andersen SA](#). Design and validation of a cross-specialty simulation-based training course in basic robotic surgical skills. *Int J Med Robot*. 2020 Oct;16(5):1-10. ¶
40. von Buchwald JH, Frendø M, Guldager MJ, Melchior J, [Andersen SA](#). Content validity evidence for a simulation-based test of handheld otoscopy skills. *Eur Arch Otorhinolaryngol*. 2021 Jul;278(7):2313-2320. ¶
41. [Andersen SA](#), Bergman M, Keith JP, Powell KA, Hittle B, Malhotra P, Wiet GJ. Segmentation of temporal bone anatomy for patient-specific virtual reality simulation. *Ann Otol Rhinol Laryngol*. 2021 Jul;130(7):724-730.
42. Powell K, Wiet GJ, Hittle B, Oswald G, Keith JP, Stredney D, [Andersen SA](#). Atlas-Based Segmentation of Cochlear MicroStructures in Cone Beam CT. *Int J Comput Assist Radiol Surg*. 2021 Mar;16(3):363-373.
43. Sieber D, [Andersen SA](#), Sørensen MS, Mikkelsen PT. OpenEar image data enables case variation in high fidelity virtual reality ear surgery. *Otol Neurotol*. 2021 Apr 20. [Epub ahead of print].
44. Frendø M, Frithioff A, Konge L, Foghsgaard S, Mikkelsen PT, Sørensen MS, Cayé-Thomasen P, [Andersen SA](#). Assessing competence in cochlear implant surgery using the newly developed Cochlear Implant Surgery Assessment Tool. *Eur Arch Otorhinolaryngol*. 2021 Feb 19 [Epub ahead of print]. ¶
45. Frithioff A, Frendø M, Buchwald JH, Mikkelsen PT, Sørensen MS, [Andersen SA](#). Automated summative feedback improves performance and retention in simulation training of mastoidectomy: A randomized, controlled trial. *J Laryngol Otol*. 2021 Feb 4 [Accepted]. ¶
46. [Andersen SA](#), Varadarajan VV, Moberly AC, Hittle B, Powell KA, Wiet GJ. Patient-specific virtual temporal bone simulation based on clinical cone-beam computed tomography. *Laryngoscope*. 2021 Aug;131(8):1855-1862.
47. Favier V, Ayad T, Blanc F, Fakhry N, [Andersen SA](#). Use of simulation-based training of surgical technical skills among ENTs: an international YO-IFOS survey. *Eur Arch Otorhinolaryngol*. 2021 Apr 29 [Epub ahead of print]. ¶

48. Frendø M, Frithioff A, Konge L, Sørensen MS, Andersen SA. Cochlear Implant Surgery: Learning Curve in Virtual Reality Simulation Training and Transfer of Skills to a 3D-printed Temporal Bone—a prospective Trial. *Cochlear Implants Int*. 2021 Jun 19:1-8 [Epub ahead of print]. ¶
49. Frendø M, Frithioff A, Andersen SA. Ten tips for performing your first peer review: the next step for the aspiring academic plastic surgeon. *Arch Plastic Surg*. 2021 Jun 16 [Accepted]. ¶
50. Frendø M, Frithioff A, Konge L, Cayé-Thomasen P, Sørensen MS, Andersen SA. Cochlear implant surgery: Virtual reality simulation training and transfer of skills to cadaver dissection—a randomized, controlled trial. *J Int Adv Otol*. 2021 Aug 31 [Accepted]. ¶
51. Andersen SA, Keith JP, Hittle B, Riggs WJ, Adunka O, Wiet GJ, Powell KA. Automated calculation of cochlear implant electrode insertion parameters in clinical cone-beam CT. *Otol Neurotol* 2021 Oct 8 [Accepted].

II. SCIENTIFIC REVIEWS (PEER REVIEWED)

52. Al-Shahrestani F, Sørensen MS, Andersen SA. Performance metrics in mastoidectomy training: A systematic review. *Eur Arch Otorhinolaryngol*. 2019 Mar;276(3):657-664. ¶
53. Frithioff A, Frendø M, Pedersen DB, Sørensen MS, Andersen SA. 3D-printed models for temporal bone surgical training: A systematic review. *Otolaryngol Head Neck Surg*. 2021 Mar 2 [Epub ahead of print]. ¶
54. Andersen SA, Nayahangan LJ, Park YS, Konge L. The Use of Generalizability Theory for Exploring Reliability of Assessment of Technical Skills and Sources of Variance: A Systematic Review and Meta-Analysis. *Acad Med*. Acad Med. 2021 May 4 [Epub ahead of print]. ¶
55. Frithioff A, Guldager M, Andersen SA. Current status of handheld otoscopy training: a systematic review. *Ann Otol Rhinol Laryngol*. 2021 Feb 25:3489421997289 [Epub ahead of print]. ¶
56. Nayahangan LJ, Russell L, Konge L, Andersen S. Training and education of healthcare workers during viral epidemics: A systematic review. *BMJ Open*. 2021 May 28;11(5):e044111. ¶
57. Hovgaard LH, Al-Shahrestani F, Andersen SA. Current evidence for simulation-based training and assessment of myringotomy and ventilation tube insertion: A systematic review. *Otol Neurotol*. 2021 July 9 [Epub ahead of print]. ¶
58. Peitersen PI, Bjerrum F, Tolsgaard MG, Konge L, Andersen SA. Standard setting in simulation-based training of surgical procedures: a systematic review. *Ann Surg*. 2021 Aug 22. [Accepted]. ¶

III. OTHER PEER REVIEWED PUBLICATIONS

59. Andersen SA, Kiss K. Carcinome épidermoïde temporal primitif diagnostiqué par biopsie de l'artère temporale superficielle. *Annales françaises d'Oto-rhino-laryngologie et de Pathologie Cervico-faciale*. 2015 Apr; 132(2):88–89.
60. Frithioff A, Sørensen MS, Andersen SA. Authors' response to Commentary on "European status on temporal bone training: a questionnaire study". *Eur Arch Otorhinolaryngol*. 2018; 275(5):1351.
61. Frendø M, Damsgaard TE, Andersen SA. "Letter to the Editor: Design and fabrication of a generic 3D-printed silicone unilateral cleft lip and palate model". *J Plast Reconstr Aesthet Surg*. 2020 Mar;73(3):608-620.
62. Frithioff A, Hastrup J, Andersen SA. Letter on "3D printed patient individualized models versus cadaveric models in an undergraduate Oral and Maxillofacial Surgery Curriculum". *Eur J Dent Educ*. Nov;24(4):807-808.

63. Andersen SA, Hsueh WD. Editorial “Evidence of Mobile Apps in ORL targeted at patients”. *Ann Otol Rhinol Laryngol*. 2021 Jan;130(1):118.
64. Frensdø M, Ternov NK, Thomsen MV, Andersen SA. Letter on “A Structured Facial Feminization Fresh Tissue Surgical Simulation Laboratory Improves Trainee Confidence and Knowledge”. *Plast Reconstr Surg*. 2021 Jun;147(6):1070e-1071e.

IV. BOOK CHAPTERS AND BOOKS

65. Andersen SA. Virtual reality simulation training of mastoidectomy - studies on novice performance (thesis). *Dan Med J*. 2016 Aug; 63(8). (21 p.) ¶
66. Mikkelsen PT, Sørensen MS, Andersen SA. The Visible Ear Simulator Dissection Manual. Aug 2017. (75 p.)
67. Sørensen MS, Bloch SL, Cayé-Thomasen P, Andersen SA. Copenhagen Otology & Neurotology Dissection Guide. Sep. 2017. (50 p.).
68. Wiet G, Sørensen MS, Andersen SA. Otologic Skills Training. Book chapter in *Surgical Simulation in Otolaryngology*, ed. Malekzadeh S. *Otolaryngol Clin North Am*. 2017 Oct;50(5):933-945. ¶
69. Frithioff A, Andersen SA, Sørensen MS. Mastoidectomy dissection manual for 3D-printed models. Jan 2021. (13 p.).

V. NON-SCIENTIFIC AND POPULAR PUBLICATIONS

70. Andersen SA, Routhier AV, Bak P, Vilmar AC. [Akutte onkologiske tilstande: klinik, udredning og behandling]. *Scandinavian Update Magazine*. 2010; 1:4–8.

VI. PATENTS

[None]