Supplemental Table 1. Summary of studies focusing on procedural tele-mentoring or tele-supervision.

Year	Author	Title	Study Type and setting	Study Design	Video conferencing software	Laryngoscope	Outcome and result
2012	Abadia De Barbara	Virtual Simulation Training Using the Storz C-Hub to Support Distance Airway Training for the Spanish Medical Corps and NATO Partners	Proof of technology demonstration, simulation environment	Remote laryngoscopy training	Spanish Military telemedicine System	Storz C-Mac	Technology demonstration as part of ongoing study of educational effectiveness
2009	Berg	Remote Video laryngoscopy Skills Training for Pre-hospital Personnel	Prospective trial, simulation environment	Comparing remote education to face to face mentoring	Non-commercial system via laptop	Storz C-Mac	Time to intubation and intubation success between face to face mentoring and tele-mentoring. No difference between remote mentoring and face to face mentoring
2011	Boedeker	The combined use of Skype and the STORZ CMAC video laryngoscope in field intubation training with the Nebraska National Air Guard	Proof of technology demonstration, simulation environment	Tele-supervision of intubating manikins using video laryngoscopy	Skype	Storz C-Mac	Assessed participants ability to see the laryngoscope and hear and quality of teaching via skype using a likert scale. Participants reported an average of 9.5/10 for education quality, and all participants could hear and 11/12 could see clearly.
2014	Branecki	Use of Transatlantic Telebroncoscopy to Confirm Proper Endotracheal Tube Placement During a Simulation Chemical, Biological, Radiological or Nuclear or Explosive (CBRNE) Event	Proof of technology demonstration study, simulation environment	Telebroncoscopy to confirm intubation after novice user performed direct laryngoscopy	Adobe Connect	Storz C-Mac	Remote supervisor able to confirm correct placement in all cases.
2011	Cho	A Pilot study of the Tele-Airway Management System in a hospital emergency department	Prospective, non-inferiority study, Emergency department patients	Tele-present mentoring compared to on scene direction for intubation using video laryngoscopy	Non-commercial system connected via laptop. Two camera set up to observe video laryngoscope and practitioner	Glidescope	Primary outcome was time to intubation and success rate. No difference between groups of time to intubation or success rate.
2007	Chung	A comprehensive telemedicine system for remote guidance of emergency airway management	Prospective, simulation environment	Tele-presence mentoring compared to video laryngoscopy alone for intubations performed on a manikin by novice learners	Non-commercial system. Two camera set up to observe video laryngoscope and practitioner	Glidescope	Primary outcome was rate of successful intubation by novice intubators. Found that tele-presence with video laryngoscopy had a faster time to

							intubation and higher rate of first pass success when compared to video laryngoscopy alone.
2006	Cone	Remote anesthetic monitoring using satellite telecommunications and the internet	Proof of technology demonstration, anesthetized patients	Monitoring of anesthesia via video transmission and vital signs transmission	Microsoft Net Meeting	TrachView	Proof of concept that vital signs and laryngoscopy could be transmitted to remote monitoring
2020	Foronda	Teaching and Learning the Skill of Intubation Using Telehealth Glasses	Proof of technology demonstration, simulation environment	Using telehealth glasses to provide remote education during simulated intubation	Not-specified telehealth glasses	Direct laryngoscopy	Survey results of learners reactions. Overall found that the remote mentoring was an advantage and beneficial but there were issues with technology.
2012	Irizarry	Telementoring for Airway Management between a Far Forward Special Operations Location to a Major Medical Center Using Inexpensive Telemedicine Solutions	Proof of technology demonstration, simulation environment	Using videoconference software to guide inexperienced trainees through intubating manikin	Adobe connect, secondary camera to observe practitioner	Storz C-Mac	Successful guidance of intubation and training of novice user. Two subjects both able to successfully intubate manikins
2013	Mosier	Telebation: Next-Generation Telemedicine in Remote Airway Management Using Current Wireless Technology	Proof of technology demonstration, emergency department patients	Telementoring of intubations in ED using videoconference software	Skype, Apple FaceTime, Tango	Glidescope, Storz C-Mac, King Vision	Videoconference software offered a feasible platform for tele-mentoring. Reported that all intubations were successful. Rated video and audio quality of different software, found FaceTime to be highest rated.
2016	Perez Alonso	Randomized clinical simulation trial of a Google glass telemedicine application to assist orotracheal intubation	Prospective trial, simulation environment	Videoconference used to supervise unskilled user intubating compared to no supervision	Google Glasses	Direct laryngoscopy	Remote supervision had faster time to intubation and higher success rate.
2015	Prescher	Telepresent intubation supervision is as effective as in-person supervision of procedurally naïve operators.	Prospective, simulation environment	Telepresence vs in person supervision of novices intubating a manikin	Apple FaceTime	Storz C-Mac	Primary outcome was time to intubation which was not different between the groups
2011	Sakles	Telemedicine and Telepresence for Prehospital and Remote Hospital Tracheal Intubation Using a GlideScope Video laryngoscope: A Model for Tele-Intubation	Proof of technology demonstration, Emergency department patients	Telemonitoring of intubations at remote hospitals	Non-commercial system, existing telehealth system	Glidescope	Successful intubation, framework for further teleintubation studies or clinical practice
2008	Sibert	The Feasibility of Using Ultrasound and Video Laryngoscopy	Proof of technology demonstration,	Physician consult for ultrasound and intubation via video	Non-commercial, Fast Star system, one	Storz Medipac	Primary outcome was user satisfaction with the system for

		in a Mobile Telemedicine Consult	simulation environment	laryngoscope during EMS transport	way video and two-way voice system		supervision. All consultants indicated they would use the system to consult on EMS crews.
2017	Van Oeveren	Telemedicine-Assisted Intubation in Rural Emergency Departments: A National Emergency Airway Registry Study	Prospective observational, emergency department patients	Video telemedicine link for providers at rural hospitals	Non-commercial existing telemedicine link	Not specified	Reported that tele-mentoring was feasible and was being used as a backup in challenging intubations
2011	Walker	The Use of Virtual Training to Support Insertion of Advanced Technology at Remote Military Locations	Proof of technology demonstration, simulation environment	Use of video conferencing to guide Novice user through set up of technology and intubation.	Non-commercial system	Storz C-Mac	Proof that remote training and supervision can be used for intubation.
2015	Zeger	A description of teaching methods using an on-site instructor versus a distant site instructor to train laryngoscopy to medical students in Hanoi, Vietnam, from Omaha, Nebraska, by video communication.	Proof of technology demonstration, simulation environment	Comparison of in person training and supervision compared to remote training and supervision for intubation performed by medical students	Vidyo Link	Storz C-Mac	Compared intubation success and time to intubation between two groups. The success rates between the two groups were similar but the time to intubation was longer in the remote supervision arm (no statistical comparison made).