Table F-1. Inpatient evidence table: study characteristics

| **Author, Year**  (See Appendix C for full citation) | **Geographic Location of Studies** | **Study Period** | **Study Design** | **Comparison and Intervention** |
| --- | --- | --- | --- | --- |
| Alemi, 2017 | San Francisco, California USA | September 2015 to May 2016 | Prospective Cohort | A: In person B: Remote assessment |
| Armaignac, 2018 | Coral Gables, Florida  USA | December 2011 to August 2016 | Retrospective Cohort | A: Usual care B: Telehealth |
| Audebert, 2009 | Germany | July 2003 to March 2005 | Prospective Cohort | A: Hospitals not part of TEMPIS: without stroke telehealth consultation availability and no stroke ward B: Hospitals with a stroke telemedicine consultation availability and a stroke ward set up with a multidisciplinary team educated earlier by stroke MD and RNs. |
| Breslow, 2004 | Virginia  USA | A: July 1999 to June 2000 B: Jan 1, 2000 to June 2001 | Before-After | A: Before telehealth  B: After telehealth |
| Buckley, 2012 | Murrumbidgee Local Health District New South Wales | January 2002 to December 2010 | Before-After | A: Before telehealth  B: After telehealth |
| Burgess, et al., 2002 | Honolulu, Hawaii  USA | NR | Prospective Cohort | A: Conventional sinus surgery B: Teleproctored sinus surgery |
| Chan, et al., 2001 | Hong Kong | August 1998 to July 1999 | Before-After | A: Before telehealth B: After telehealth |
| Chu-Weininger, 2010 | Houston, Texas  USA | June 2005 to October 2005 | Pre/Post | A: Pre-telehealth B: Post-telehealth |
| Collins, 2017 | Pennsylvania, Philadelphia  USA | January 2008 to July 2011 | Retrospective Cohort | A: Surgical intensive care unit B: Virtual intensive care unit |
| Craig, 2004 | United Kingdom | January 1999 to June 1999 | Prospective Cohort | A: Hospital without a teleneurology consultation B: Hospital with a teleneurology consultation |
| Dharmar, 2013 | Northern California  USA | July 2003 to December 2010 | Retrospective Cohort | A: No telehealth  B: Telehealth |
| Engel, 2011 | Taoyuan, Taiwan 1 hospital | May and June 2009 | Prospective Cohort | A: In person B: Telehealth |
| Fortis, 2014 | Minneapolis, Minnesota  USA | 2011 and 2012 | Retrospective Cohort | A: No tele-ICU B: Tele-ICU |
| Franzini, 2011 same patients as Thomas, 2009 | Gulf Coast region  USA | A: January 2003 to August 2005 B: July 2004 to July 2006 | Economic Evaluation, Before-After | A: Before tele-ICU B: After tele-ICU |
| Fuertes-Guiró, 2016 | Barcelona, Spain 2 community hospitals 1 University hospitals | March 2013 and March 2014 | RCT | A: No mentor B: Telementoring |
| Grabowski, 2014 | Massachusetts  USA | October 2009 to September 2011 | RCT | A1: Nursing homes without telehealth, pre-intervention A2: Nursing homes without telehealth, post-intervention B1: Nursing homes with telehealth, pre-intervention B2: Nursing homes with telehealth, post-intervention |
| Gray, 2009 | Australia | January 2007 to September 2008 | Economic Evaluation | A: In-person visits B: Telehealth videoconferencing |
| Gupta, 2014 | Dehradun  India | Before: April 2012 to March 2013 After: April 2013 to March 2014 | Before-After | A: Before telehealth B: After telehealth |
| Huang, 2008 | California  USA | 2001 to 2006 | Before-After | A: NICU echocardiograms before telehealth B: NICU echocardiograms after telehealth |
| Kahn, 2016 | USA | 2001 to 2010  (4 years of data in each hospital) | Retrospective Cohort | A: Hospitals without ICU telehealth B: Hospitals with ICU telehealth |
| Kalb, 2014 | NR | January 2010 to March 2012 | Before-After | A: Before tele-ICU implementation B: After tele-ICU (2011, Quarter 3)  C: After tele-ICU (2012, Quarter 1) |
| Kim, 2013 | Arkansas  USA | March 2009 to March 2010 | Prospective Cohort | The following hospitals were compared before and after implementation of TH:  1. Non-TH hospital, non-NICU 2. Non-TH hospital, with NICU 3. TH-hospital - non-NICU 4. TH-hospital, with NICU 5. University hospital 6. Statewide infant mortality  Outcomes comparison:  A: Nontelehealth hospital, without NICU B: Telehealth hospital, without NICU |
| Klein, 2010 | Israel | January 1, 2005 to December 31, 2006 | Retrospective Cohort | A1: Transfer all patients with traumatic ICB to trauma center with neurosurgical service  A2: Transfer decisions made by clinical algorithm  B: Transfer decisions made by telehealth |
| Kohl, 2012 | Philadelphia, Pennsylvania  USA | April 2003 to June 2006 | Retrospective Cohort | A1: No telehealth, prior to implementation A2: No telehealth, post telehealth implementation B1: Telehealth, prior to implementation B2: Telehealth, post telehealth implementation |
| Labarbera, 2013 | Oregon  USA | January 2006 to October 2009 | Before-After | A: Before implementation of telehealth (consults only via telephone) B: After implementation of telehealth (consults mostly via videoconference, some by telephone), but before pediatric hospitalist program in community hospital C: After telehealth and after pediatric hospitalist program at community hospital |
| Lilly, 2011 | Massachusetts  USA | April 2005 to September 2007 | Prospective Cohort | A: Pre-telehealth B: Telehealth |
| Lilly, 2017 | Massachusetts  USA | January 2004 to May 2013 | Economic Evaluation | A: Pre-telehealth B: Post-telehealth C: Post-telehealth with added Logistics Center |
| Marcin, 2004a | USA  California | April 2000 to April 2002 | Retrospective Cohort | A1: Pre-telehealth control group  A2: Patients transferred, control group  B1: Patients receiving telehealth  B2: All ICU patients during telehealth period |
| Marcin, 2004b | USA  California | April 2000 to April 2002 | Retrospective Cohort | A: Patients who received telemedicine consultations  B: Patients who were in ICU who did not receive telemedicine consultations |
| Marcin, 2004c | Redding, California  USA | February 1998 to September 2000 | Retrospective Cohort | A1: Patients cared for in ICU prior to telemedicine  A2: Patients who did not have telehealth consult after telehealth program initiated B: Patients who had telehealth consult  C: All trauma patients admitted to adult ICU during telehealth program regardless of if they had telehealth consult |
| Martin-Khan, 2016 | Australia | Unclear | RCT | A: Usual care B: Telehealth |
| McCambridge, 2010 | USA | A: September 2002 to December 2003 B: January 2004 to September 2004 | Before-After | A: Before implementation of health information technology with remote intensivist coverage (HITB-RIC) B: After implementation of HITB-RIC |
| Mielonen, 2000 | Finland | November 1997 to 1998 | Prospective Cohort | A: Conventional consults B: Telehealth consults |
| Migliaretti, 2013 | Italy | 2009 | Prospective Cohort | A: Patients admitted to the same hospital in 2009 who did not receive a neurosurgery teleconsultation B: Patients admitted in 2009 for whom a neurosurgery teleconsultation was obtained |
| Miyamoto, 2014 | California  USA | January 2004 to December 2009 | Retrospective Cohort | A: Comparison site B: telehealth site (hospital access to telehealth consultations during forensic examinations) |
| Morrison, et al., 2010 | Chicago, Illinois  USA | December, 2002 to October 2004 | Before-After | A: Baseline (before telehealth; 12/1/2002 to 3/1/2003) B: eICU Wave 1 (12/1/2003 to 3/1/2004)  C: eICU Wave 2 (7/1/2004 to 10/31/2004) |
| Nagayoshi, 2016 | Kumamoto, Japan | January 2010 to December 2014 | Before-After | A: Before telehealth B: After telehealth |
| Nassar, 2014 | Upper Midwest USA  7 VA Hospitals | 2011 to 2012 | Before-After | Usual care A1: Usual care before telehealth period A2: Usual care after telehealth period Telehealth B1: Telehealth, before telehealth period B2: Telehealth, after telehealth period |
| Panlaqui, 2017 | Australia and New Zealand | 2010 to 2015 | Before-After | A: Before telehealth B: After telehealth |
| Rendina, 1997 | Chapel Hill, North Carolina USA | 1994 and 1995 | Economic Evaluation | A: Usual care B: Telehealth |
| Rendina, 1998 | USA, North Carolina | 3 years, 1994 to 1996 | Retrospective Cohort | A: Hospital without telehealth B: Hospital with telehealth |
| Rincon, 2012 | Philadelphia, Pennsylvania USA | January to February 2011 | Before-After | A: Before telehealth B: After telehealth |
| Robison, 2016 | Wilmington, Delaware USA | February 2014 to October 2014 | Prospective Cohort | A: Usual care B: Telehealth |
| Romig, 2012 | Baltimore, Maryland  USA | January 2010 to April 2010 | Before-After, Prospective Cohort | A: No telehealth, n=612 B: Telehealth, n=793; 403 received telehealth Nurse survey: Before telehealth, n=11 After telehealth, n=27 |
| Rosenfeld, 2000 | Baltimore, Maryland  USA | September 1997 to December 1997 | Before-After (two time periods before telehealth) | A: Surgical ICU without onsite ICU physician staff directly responsible for patient care. Two baseline periods to control for seasonal variations:  A.1: 9/1/96 - 12/18/96 and A-2: 2/1/97 - 5/18/97 B Intervention: 9/1/97 to 12/18/97 during which one of 4 intensivists provided round-the-clock monitoring of ICU patients from their homes |
| Ruesch, 2012 | Alaska  USA | A: NR B: January 2009 to December 2009 | Before-After | A: Before telemedicine B: Telehealth with nurse support C: Telehealth with nurse support and physician support |
| Sadaka, 2013 | Missouri  USA | July 2009 to March 2011 | Before-After | A: Before teleICU B: After teleICU |
| Sharma, 2016 | Philadelphia, Pennsylvania  USA | March 2014 to July 2014 | Before-After | A: Before telehealth B: After telehealth |
| Shin, 2015 | Los Angeles, California USA | October 2013 to May 2014 | Prospective Cohort | A: In-room mentoring B: Tele-mentoring |
| Steinman, 2015 | Sao Paulo  Brazil | May 2012 to May 2013 | Before-After, Prospective Cohort | A: 1 year before telehealth B: 1 year after telehealth Once telehealth established C: Nontelehealth consultations D: Telehealth consultations n=unclear |
| Thomas, 2009 same patients as Franzini, 2011 | USA | A: January 2003 to August 2005 B: July 2004 to July 2006 | Economic Evaluation, Before-After | A: Before remote monitoring of ICU patients  B: After remote monitoring of ICU patients |
| Wallace, 2008 | United Kingdom | March 2003 to May 2003 | Prospective Cohort | A: Site without telehealth B: Site with telehealth |
| Webb, 2013 | 9 sites: Ann Arbor MI, Chicago IL, Denver CO, Wash DC, Winston-Salem NC, Detroit MI, Pittsburg PA, Charlottesville VA, Houston TX, Portland OR  USA | July 1999 to Dec 2001 | Prospective Cohort | A: Babies born at hospital without access to telehealth  B: Babies born at hospital with access to telehealth |
| Willmitch, 2012 | Florida  USA | December 2004 to July 2007 | Before-After | A: Before telehealth B: 1 year after telehealth C: 2 years after telehealth D: 3 years after telehealth |

eICU = electronic intensive care unit; ICU = intensive care unit; NICU = neonatal intensive care unit; NR = not reported; RCT = randomized control trial; TEMPIS = Telemedic Pilot Project for Integrative Stroke Care; TH = telehealth

**See Appendix C. Included Studies for full citations**