Describing the evidence linking interprofessional education interventions to improving the delivery of safe and effective patient care: A scoping review

**APPENDIX 2.** [**Table of Included Source of Evidence Characteristics**](https://docs.google.com/document/d/13Lz6ZAGjxlSUe3ArVZZQLu1nciNwlvqpx6IEBU6vKhM/edit?usp=sharing)

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| **Article** | **Country** | | | | **Design** | | | **Professions** | | | **Training** | | | **Setting** | | | **Outcomes** |
| Adekpedjou et al. 2020 | Canada | | | | Randomized controlled trial | | | Nursing, Social work, Physical therapy or physiotherapist, Dietitian or nutritionist, Respiratory therapy, Occupational therapy, Other | | | Professionals | | | Outpatient | | | Improved patient or caregiver education |
| Agee et al. 2015 | United States | | | | Before-and-after study | | | Medicine, Pharmacy | | | Professionals | | | Inpatient | | | Decreased medication errors |
| Alupo et al. 2017 | Uganda | | | | Before-and-after study | | | Medicine, Nursing, Pharmacy | | | Professionals | | | Inpatient | | | Improved medication adherence |
| Anderson et al. 2018 | United States | | | | Before-and-after study | | | Medicine, Nursing, Physical therapy or physiotherapist, Respiratory therapy, Other | | | Professionals | | | Inpatient | | | Decreased length of stay, decreased medical errors |
| Angel et al. 2016 | United States | | | | Before-and-after study | | | Medicine, Nursing | | | Professionals | | | Inpatient | | | Decreased length of stay, no change in medical errors |
| Atkinson et al. 2018 | United States | | | | Before-and-after study | | | Medicine, Nursing, Pharmacy, Physical therapy or physiotherapist, Respiratory therapy, Other | | | Professionals | | | Inpatient | | | No change in patient satisfaction, no change in readmission rate |
| Babine et al. 2018 | United States | | | | Before-and-after study | | | Medicine, Nursing, Social work, Physical therapy or physiotherapist, Occupational therapy | | | Professionals | | | Inpatient | | | Decreased length of stay, decreased medical errors |
| Bamberger et al. 2017 | Israel | | | | Non-randomized controlled trial | | | Medicine, Nursing | | | Professionals | | | Inpatient | | | Improved patient satisfaction |
| Beaudreau et al. 2021 | United States | | | | Before-and-after study | | | Social work, Psychology | | | Professionals | | | Outpatient | | | Improved patient satisfaction, decreased mortality |
| Bekmezian et al. 2015 | United States | | | | Interrupted time series study | | | Medicine, Nursing, Pharmacy, Respiratory therapy | | | Professionals | | | ED | | | No change in length of stay, decreased medication errors |
| Block et al. 2021 | United States | | | | Descriptive cross-sectional study | | | Medicine, Pharmacy, Psychology | | | Students and professionals | | | Outpatient | | | Improved patient satisfaction |
| Blouin-Delisle et al. 2020 | Canada | | | | Before-and-after study | | | Medicine, Nursing, Pharmacy, Social work, Physical therapy or physiotherapist, Dietitian or nutritionist, Occupational therapy, Other | | | Professionals | | | More than one setting | | | Decreased length of stay |
| Boet et al. 2020 | Canada | | | | Before-and-after study | | | Medicine, Nursing, Respiratory therapy | | | Professionals | | | Inpatient | | | No change in mortality |
| Bohnenkamp et al. 2020 | United States | | | | Before-and-after study | | | Medicine, Nursing, Other | | | Professionals | | | Inpatient | | | Decreased mortality, decreased infection rate |
| Bonalumi et al. 2017 | United States | | | | Before-and-after study | | | Medicine, Nursing, Pharmacy, Social work, Other | | | Professionals | | | ED | | | No change in length of stay, improved patient satisfaction |
| Bonderski et al. 2018 | United States | | | | Randomized controlled trial | | | Medicine, Pharmacy, Psychology, Other | | | Professionals | | | Outpatient | | | Improved patient satisfaction, improved medication adherence, decreased readmission rate |
| Borckardt et al. 2020 | United States | | | | Interrupted time series study | | | Medicine, Nursing | | | Professionals | | | Inpatient | | | Decreased length of stay, worsened medical errors, decreased mortality, no change in readmission rate |
| Borenstein et al. 2016 | United States | | | | Randomized controlled trial | | | Medicine, Nursing, Pharmacy, Social work | | | Professionals | | | Inpatient | | | Decreased length of stay, no change in medical errors, no change in mortality, no change in readmission rate |
| Braddock et al. 2015 | United States | | | | Before-and-after study | | | Medicine, Nursing | | | Professionals | | | Inpatient | | | Decreased medical errors, decreased mortality |
| Broom et al. 2019 | Australia | | | | Before-and-after study | | | Medicine, Nursing, Pharmacy | | | Professionals | | | Inpatient | | | No change in length of stay, decreased medication errors, no change in mortality, no change in infection rate, no change in readmission rate |
| Buregyeya et al. 2021 | Uganda | | | | Descriptive cross-sectional study | | | Other | | | Students | | | Other | | | Improved patient satisfaction |
| Cao et al. 2020 | United States | | | | Before-and-after study | | | Medicine, Nursing, Pharmacy, Social work, Physical therapy or physiotherapist, Occupational therapy | | | Students | | | Outpatient | | | Improved patient satisfaction |
| Chang et al. 2019 | Malawi | | | | Before-and-after study | | | Medicine, Midwifery, Other | | | Professionals | | | Inpatient | | | No change in medical errors, decreased mortality |
| Ching et al. 2016 | United Kingdom | | | | Before-and-after study | | | Medicine, Nursing | | | Professionals | | | Outpatient | | | Decreased medical errors |
| Christensen et al. 2016 | United States | | | | Before-and-after study | | | Medicine, Nursing | | | Professionals | | | ED | | | Decreased length of stay |
| Clapp et al. 2015 | United States | | | | Before-and-after study | | | Medicine, Nursing | | | Professionals | | | Inpatient | | | Decreased medical errors |
| Coleman et al. 2017 | United States | | | | Non-randomized controlled trial | | | Medicine, Nursing, Pharmacy, Social work, | | | Students and professionals | | | Outpatient | | | Improved patient satisfaction, improved patient or caregiver education |
| Colonna et al. 2019 | United States | | | | Before-and-after study | | | Medicine, Pharmacy | | | Professionals | | | Outpatient | | | Improved hospice use |
| Connolly et al. 2015 | New Zealand | | | | Randomized controlled trial | | | Medicine, Nursing, Pharmacy | | | Professionals | | | Hospice or long-term care | | | No change in length of stay, no change in mortality, no change in readmission rate |
| Constantine et al. 2016 | United States | | | | Before-and-after study | | | Medicine, Nursing, Social work, Other | | | Professionals | | | Inpatient | | | Decreased length of stay, no change in patient or caregiver education, no change in mortality |
| Corcoran et al. 2017 | United States | | | | Before-and-after study | | | Medicine, Nursing, Physical therapy or physiotherapist, Respiratory therapy, Occupational therapy, Other | | | Professionals | | | Inpatient | | | Decreased length of stay, no change in readmission rate |
| Cropper et al. 2018 | United States | | | | Before-and-after study | | | Medicine, Nursing | | | Professionals | | | Inpatient | | | Decreased medication errors, decreased medical errors |
| Davis et al. 2015 | United States | | | | Before-and-after study | | | Medicine, Nursing, Respiratory therapy | | | Professionals | | | Inpatient | | | Decreased mortality |
| Dennis et al. 2016 | United States | | | | Non-randomized controlled trial | | | Medicine, Nursing, Respiratory therapy, Other | | | Professionals | | | ED | | | Decreased length of stay, no change in mortality |
| Dodds et al. 2019 | United States | | | | Before-and-after study | | | Medicine, Nursing, Social work, Psychology | | | Professionals | | | Inpatient | | | Decreased length of stay |
| Eckstrom et al. 2016 | United States | | | | Before-and-after study | | | Medicine, Nursing, Pharmacy, Social work, Physical therapy or physiotherapist, Occupational therapy, Other | | | Professionals | | | More than one setting | | | No change in readmission rate |
| Edwards et al. 2019 | United States | | | | Non-randomized controlled trial | | | Medicine, Pharmacy, Social work, Psychology, | | | Students and professionals | | | Outpatient | | | Improved medication adherence, decreased readmission rate |
| Egenberg et al. 2017 | | Tanzania | | Before-and-after study | | | Medicine, Nursing, Midwifery, Other | | | Professionals | | | Other | | | Decreased medical errors, no change in mortality | |
| Engelhard et al. 2018 | United States | | | | Before-and-after study | | | Nursing, Pharmacy, Physical therapy or physiotherapist, Dietitian or nutritionist, Other | | | Professionals | | | Outpatient | | | Improved medication adherence |
| Ersson et al. 2018 | Sweden | | | | Before-and-after study | | | Medicine, Nursing, Social work, Physical therapy or physiotherapist, Other | | | Professionals | | | Inpatient | | | Decreased length of stay, decreased mortality |
| Fisher et al. 2020 | United States | | | | Before-and-after study | | | Medicine, Nursing, Pharmacy, Psychology, | | | Students and professionals | | | Outpatient | | | Improved medication adherence |
| Flentje et al. 2020 | Germany | | | | Before-and-after study | | | Medicine, Nursing, Midwifery | | | Professionals | | | Inpatient | | | No change in medical errors |
| Fortin et al. 2021 | Canada | | | | Randomized controlled trial | | | Nursing, Respiratory therapy, Other | | | Professionals | | | Outpatient | | | Improved patient satisfaction |
| Fransen et al. 2016 | Netherlands | | | | Randomized controlled trial | | | Medicine, Nursing, Midwifery, | | | Professionals | | | Inpatient | | | No change in mortality |
| Gonzalez et al. 2015 | United States | | | | Before-and-after study | | | Medicine, Nursing, Pharmacy, Respiratory therapy, Other | | | Professionals | | | ED | | | Improved medication adherence |
| Greenberg et al. 2020 | United States | | | | Before-and-after study | | | Nursing, Other | | | Students | | | Other | | | Improved patient or caregiver education |
| Hallin et al. 2018 | Sweden | | | | Retrospective cohort | | | Medicine, Nursing, Physical therapy or physiotherapist, Occupational therapy, | | | Students | | | Inpatient | | | No change in length of stay, no change in mortality |
| Hoffman et al. 2017 | United States | | | | Before-and-after study | | | Medicine, Nursing, Respiratory therapy, Other | | | Professionals | | | Inpatient | | | Decreased readmission rate |
| Howell et al. 2021 | United States | | | | Descriptive cross-sectional study | | | Medicine, Other | | | Students and professionals | | | Outpatient | | | Improved patient satisfaction |
| Hu et al. 2016 | China | | | | Before-and-after study | | | Medicine, Nursing, Midwifery, Other | | | Professionals | | | Inpatient | | | Improved medication adherence, no change in readmission rate |
| Kent et al. 2016 | Australia | | | | Retrospective cohort | | | Medicine, Nursing, Social work, Physical therapy or physiotherapist, Dietitian or nutritionist, Respiratory therapy, Occupational therapy, Other | | | Students | | | Outpatient | | | No change in readmission rate |
| Larson et al. 2018 | United States | | | | Before-and-after study | | | Medicine, Nursing, Pharmacy, Other | | | Professionals | | | Inpatient | | | Decreased length of stay |
| Lawrence et al. 2015 | United States | | | | Non-randomized controlled trial | | | Medicine, Nursing | | | Students | | | Outpatient | | | Improved patient satisfaction |
| Lee et al. 2021 | United States | | | | Descriptive cross-sectional study | | | Medicine, Nursing, Pharmacy, Social work, Other | | | Students | | | Hospice or long-term care | | | Improved patient satisfaction, improved patient or caregiver education |
| Lo et al. 2021 | Hong Kong | | | | Randomized controlled trial | | | Other | | | Students | | | Outpatient | | | Improved patient or caregiver education |
| McBeth et al. 2018 | United States | | | | Before-and-after study | | | Medicine, Nursing, Respiratory therapy, Other | | | Professionals | | | Inpatient | | | Decreased infection rate |
| McQuaid-Bascon et al. 2018 | Canada | | | | Before-and-after study | | | Medicine, Nursing, Social work, Physical therapy or physiotherapist, Dietitian or nutritionist, Occupational therapy, Other | | | Professionals | | | More than one setting | | | Decreased medical errors |
| Morgan et al. 2015 | United Kingdom | | | | Interrupted time series study | | | Nursing, Other | | | Professionals | | | Inpatient | | | No change in length of stay, no change in readmission rate |
| Mozer et al. 2021 | United States | | | | Before-and-after study | | | Medicine, Nursing, Pharmacy | | | Professionals | | | Inpatient | | | Improved patient or caregiver education |
| Murphy et al. 2018 | Australia | | | | Before-and-after study | | | Medicine, Nursing, Social work, Other | | | Professionals | | | Inpatient | | | Worsened length of stay, no change in mortality, no change in readmission rate |
| Myers et al. 2018 | United States | | | | Before-and-after study | | | Medicine, Nursing, Pharmacy, Other | | | Professionals | | | Inpatient | | | Decreased medication errors |
| Myers Virtue et al. 2018 | United States | | | | Non-randomized controlled trial | | | Pharmacy, Other | | | Students | | | Outpatient | | | Improved patient or caregiver education |
| Nagelkerk et al. 2018a | United States | | | | Before-and-after study | | | Medicine, Nursing, Social work, Dietitian or nutritionist, Other | | | Students and professionals | | | Outpatient | | | Improved patient or caregiver education |
| Nagelkerk et al. 2018b | United States | | | | Before-and-after study | | | Medicine, Pharmacy, Dietitian or nutritionist, Other | | | Students | | | Outpatient | | | Improved patient or caregiver education |
| Patton et al. 2015 | United States | | | | Before-and-after study | | | Medicine, Other | | | Professionals | | | Outpatient | | | Decreased length of stay |
| Peralta et al. 2020 | United States | | | | Before-and-after study | | | Medicine, Nursing, Other | | | Professionals | | | Inpatient | | | Decreased length of stay, no change in readmission rate |
| Philips et al. 2021 | United States | | | | Before-and-after study | | | Medicine, Nursing, Pharmacy, Other | | | Students and professionals | | | Inpatient | | | Improved patient or caregiver education |
| Ploylearmsang et al. 2021 | Thailand | | | | Descriptive cross-sectional study | | | Medicine, Pharmacy, Other | | | Students | | | Other | | | Improved patient satisfaction |
| Rea et al. 2019 | United States | | | | Before-and-after study | | | Medicine, Nursing, Other | | | Professionals | | | Outpatient | | | Decreased medication errors |
| Robinson-Dooley et al. 2016 | United States | | | | Retrospective cohort | | | Nursing, Social work, Other | | | Professionals | | | Outpatient | | | Improved patient satisfaction |
| Rotz et al. 2018 | United States | | | | Retrospective cohort | | | Pharmacy, Other | | | Students | | | Outpatient | | | Decreased medication errors |
| Sagahutu et al. 2020 | Rwanda | | | | Randomized controlled trial | | | Medicine, Nursing, Social work, Physical therapy or physiotherapist, Dietitian or nutritionist, Psychology | | | Professionals | | | Inpatient | | | Decreased medical errors |
| Sauter et al. 2016 | Switzerland | | | | Before-and-after study | | | Medicine, Nursing | | | Professionals | | | ED | | | Decreased medical errors |
| Schentrup et al. 2019 | United States | | | | Before-and-after study | | | Medicine, Nursing, Pharmacy, Other | | | Professionals | | | Outpatient | | | Decreased medical errors |
| Schussel et al. 2019 | United States | | | | Descriptive cross-sectional study | | | Medicine, Nursing, Pharmacy, Dietitian or nutritionist | | | Students | | | Other | | | Improved patient satisfaction, improved patient or caregiver education |
| Schuttner et al. 2017 | United States | | | | Before-and-after study | | | Medicine, Pharmacy, Social work,Dietitian or nutritionist, Psychology | | | Students and professionals | | | Outpatient | | | Decreased readmission rate |
| Shirey et al. 2020 | United States | | | | Before-and-after study | | | Medicine, Nursing, Pharmacy, Social work, Physical therapy or physiotherapist, Dietitian or nutritionist, Other | | | Students and professionals | | | Other | | | Improved patient satisfaction |
| Shrader et al. 2018 | United States | | | | Before-and-after study | | | Medicine, Nursing, Pharmacy, Social work, Physical therapy or physiotherapist, Dietitian or nutritionist, Occupational therapy, Psychology | | | Students and professionals | | | Outpatient | | | Improved patient satisfaction, improved patient or caregiver education |
| Shrader et al. 2019 | United States | | | | Descriptive cross-sectional study | | | Medicine, Nursing, Pharmacy, Social work, Physical therapy or physiotherapist, Dietitian or nutritionist, Occupational therapy, Psychology | | | Students | | | Outpatient | | | Improved patient satisfaction |
| Siddle et al. 2018 | United States | | | | Before-and-after study | | | Social work, Other | | | Professionals | | | Other | | | Decreased length of stay |
| Simone et al. 2017 | United States | | | | Before-and-after study | | | Medicine, Nursing, Pharmacy, Psychology | | | Students and professionals | | | Inpatient | | | Improved patient or caregiver education |
| Straub et al. 2019 | Germany | | | | Descriptive cross-sectional study | | | Medicine, Nursing | | | Students and professionals | | | Inpatient | | | Improved patient or caregiver education |
| Tedesco et al. 2017 | United States | | | | Before-and-after study | | | Medicine, Nursing, Pharmacy, Other | | | Professionals | | | ED | | | Improved patient or caregiver education, decreased mortality, decreased infection rate |
| Theilen et al. 2017 | United Kingdom | | | | Before-and-after study | | | Medicine, Nursing | | | Professionals | | | Inpatient | | | Decreased length of stay, decreased medical errors, decreased mortality, decreased readmission rate |
| Truijens et al. 2015 | Netherlands | | | | Before-and-after study | | | Medicine, Nursing, Midwifery, Other | | | Professionals | | | Outpatient | | | Improved patient satisfaction, improved patient or caregiver education |
| Tuuri et al. 2016 | United States | | | | Before-and-after study | | | Medicine, Nursing, Pharmacy, Other | | | Professionals | | | ED | | | Decreased medication errors, decreased medical errors |
| Urisman et al. 2017 | United States | | | | Before-and-after study | | | Medicine, Nursing, Respiratory therapy, Other | | | Students and professionals | | | Inpatient | | | Decreased length of stay, improved patient or caregiver education |
| Van de Ven et al. 2017 | Netherlands | | | | Randomized controlled trial | | | Medicine, Nursing, Midwifery | | | Professionals | | | Outpatient | | | Decreased medical errors |
| Walker et al. 2016 | Mexico | | | | Randomized controlled trial | | | Medicine, Nursing | | | Students and professionals | | | Inpatient | | | Decreased medical errors, decreased mortality, no change in infection rate |
| Weng et al. 2017 | Taiwan | | | | Before-and-after study | | | Medicine, Nursing, Pharmacy, Social work, Psychology, Other | | | Professionals | | | Hospice or long-term care | | | Improved patient or caregiver education |
| Wickersham et al. 2020 | United States | | | | Before-and-after study | | | Medicine, Nursing, Physical therapy or physiotherapist | | | Students and professionals | | | Inpatient | | | No change in length of stay, improved patient or caregiver education |
| Wyer et al. 2015 | United States | | | | Before-and-after study | | | Medicine, Nursing, Other | | | Professionals | | | Inpatient | | | No change in length of stay, decreased readmission rate |
| Yamada et al. 2016 | United States | | | | Case report | | | Medicine, Nursing, Pharmacy, Respiratory therapy | | | Professionals | | | Other | | | Decreased medical errors, improved patient or caregiver education |
| Zorek et al. 2015 | United States | | Before-and-after study | | | Medicine, Nursing, Pharmacy | | | Students and professionals | | | Outpatient | | | Decreased medical errors, improved patient satisfaction, improved medication adherence | | |

ED = emergency department. “Other" in both “Profession” and “Setting” are used as they are in Table 2.