***Supplemental Digital Content 2: Article Characteristics (n=15)***

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| Article Characteristics | N (%) |
| Year of publication<20002000-20052006-20102011-2015>2016 | 2 (13.3)2 (13.3)3 (20)4 (26.7)4 (26.7) |
| Country of publicationBrazilChinaFinlandGermanyUnited States of America | 2 (13.3)1 (6.7)1 (6.7)1 (6.7)10 (66.6) |
| Study types Competency inventory developmentCompetency measurement instrument development Scoping reviewQuasi-experimental competency assessment |  11 (73.3) 1 (6.7)  1 (6.7) 2 (13.3) |
| Population of interestNurse leaders (including directors, managers)Nurses in executive level leadership positionsNurses in various roles | 8 (53.3)1 (6.7)4 (26.7) |
| Frameworks/processes used to inform competency identification (not mutually exclusive)American Organization of Nurse Executives (AONE)Australian Health Informatics Education Council (AHIEC)Canada's Health Informatics Association (COACH) HIP CompetencyGeneric organizational behaviour theoriesGlobal Health Workforce Council (GHWC)Information Management FrameworkInformatics Research Organizing (IRO)Technology Informatics Guiding Education Reform (TIGER)Frameworks from prior competency research  | 2 (13.3)1 (6.7)1 (6.7)1 (6.7)1 (6.7)2 (13.3)1 (6.7)4 (26.7)6 (40) |
| Primary method used to identify competencies Expert InterviewsQualitative descriptive case studyDelphi techniqueEnvironmental scanSurveysTask force | 2 (13.3)1 (6.7)5 (33.3)1 (6.7)5 (33.3)1 (6.7) |
| Number of relevant competencies identified10-2526-5051-7576-100>100 | 5 (33.3)3 (20)3 (20)2 (13.3)2 (13.3) |