

Infection Prevention and Control in Baccalaureate Nursing Education: Identifying Content, Teaching Strategies and Gaps

Mary Lou Manning, PhD, CRNP, CIC, FAAN; Monika Pogorzelska-Maziarz, PhD, MPH, CIC

Jefferson College of Nursing

BACKGROUND

Healthcare-associated infections (HAI) are a major risk to patient safety. In the US, on any given day, 1 of every 25 inpatients has at least one HAI, resulting in significant health, social, and economic consequences. It is estimated that up to 70% of some types of HAIs are preventable through improved infection prevention and control (IPC) practices of health care providers.

Additionally, antibiotic resistant infections and emerging and re-emerging infectious diseases represent ongoing threats to population health.

Integrating IPC concepts and content in baccalaureate nursing education is crucial to ensure that nurses have the essential knowledge, skills and abilities to recognize, prevent and manage simple to complex infections across a variety of situations and settings.

It is important to understand how nursing students are being prepared for contemporary IPC practice. We conducted a review of the literature to identify IPC curricular concepts and content in prelicensure baccalaureate nursing education programs.

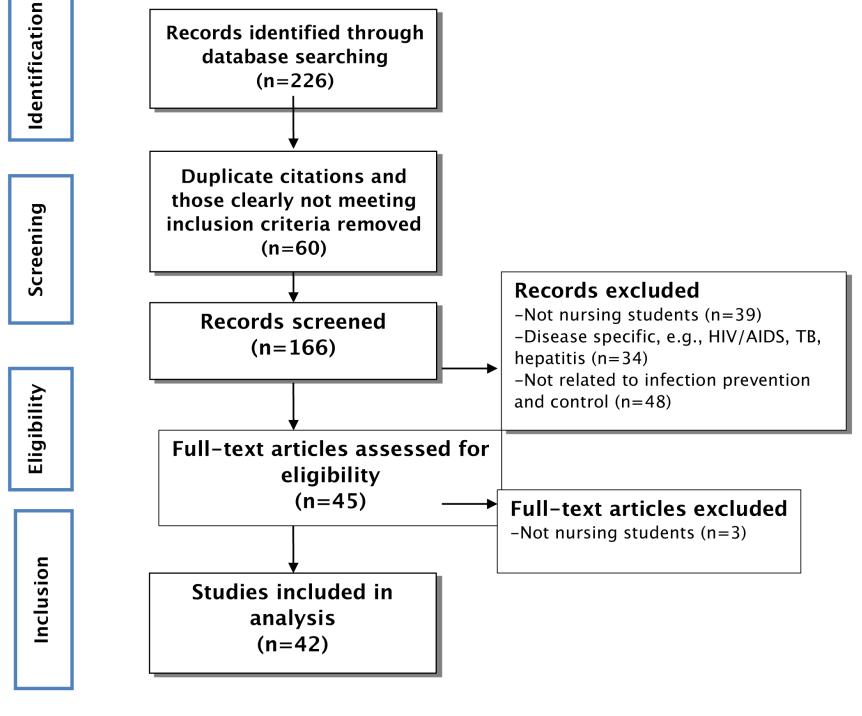
METHODS

In collaboration with a research librarian, we searched electronic databases OVID Medline, CINAHL and Scopus from January 1, 2000 to March 31, 2016.

METHODS

The search in title or abstract included the terms "infection control," "infection prevention," "curriculum," "course content," "nursing," "baccalaureate," "prelicensure," or "undergraduate." Additional inclusion criteria included: published in English in a peer-reviewed journal, focused on existing IPC curricular concepts and content, and not disease specific (e.g., HIV/AIDS, hepatitis).

RESULTS



Flow diagram of search and study selection

RESULTS

Articles fell into two categories: evaluation of student IPC knowledge, compliance, and competency (n=19) and description of teaching strategies used by faculty to teach IPC content (n=23). The student knowledge and clinical skills most often evaluated were hand hygiene, use of barrier precautions and isolation procedures. The most frequent faculty teaching strategies for teaching IPC concepts included lecture, simulation, and games and lecture. No studies described conceptual learning, attempts to build on prior knowledge, or exemplars for students to transfer ideas to new situations.

CONCLUSIONS

There is a significant lack of evidence indicating how baccalaureate nursing programs are preparing students to implement safe IPC practices. Most studies evaluated IPC content and/or student outcomes for one undergraduate course in one school of nursing. We found no evidence of undergraduate IPC concept-based curricula. There is a significant opportunity for nurse educators, clinicians, and researchers to build and evaluate an IPC curricula.

REFERENCES

Magill SS, Edwards JR, Bamberg W, et al. Multistate point-prevalence survey of health-care associated infections. *NEJM* 2014;370:1198-1208.

Umscheid CA, Mitchell MD, Doshi JA, et al. Estimating the proportion of healthcare-associated infections that are reasonably preventable and the related mortality and costs. *Infect Control Hosp Epidemiol* 2011;32:101-14.