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DATE: 21 AUGUST 2024

Please find following a summary of a literature search and relevant results. All articles can be provided in full - email <u>library@monashhealth.org</u> for a list of the articles you require.

#### QUESTION

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ibrary.

What models exist for a Diabetic Nurse Educator service?

#### RESULTS

#### **ONLINE RESOURCES (GREY LITERATURE)**

#### **GOVERNMENT DOCUMENTS**

- Queensland Health. (2023). Statewide Diabetes Clinical Network Type 1 Diabetes Transition Model of Care: A journey from Paediatric to Adult Health Care. Web link.
  - Includes responsibility and role of diabetes educator.
- South Australia Health. (2021). Diabetes assessment and education. Web link.
  - o Includes minimum standards for documenting diabetes education.
- National Diabetes Nursing Scheme. (2020). National Diabetes Nursing Education Framework 2020-2022. Web link.
  - Includes professional development pathway, practice level descriptors, and nursing practice statements.

#### **GUIDELINES AND PRODESSIONAL ASSOCIATION DOCUMENTS**

- The National Association of Diabetes Centres and the Australian Diabetes Society. (2019).
  Type 2 Diabetes: Model of Care Toolkit. Web link.
- Australian Diabetes Educators Association ADEA. (2022). Role and Scope of Practice for Credentialled Diabetes Educators in Australia 2022. Web link.

#### **PEER-REVIEWED LITERATURE – MOST RECENT FIRST**

Articles are grouped by theme:

- Benefits
- Multi-disclipinary teams
- Nurse education
- EMR

#### BENEFITS





Celik, S., et al. (2022). Assessment the effect of diabetes education on self-care behaviors and glycemic control in the Turkey Nursing Diabetes Education Evaluating Project (TURNUDEP): a multi-center study. *BMC nursing, 21*(1), 215. <u>Click for full-text.</u>

Approximately three-quarters of individuals with type 2 diabetes mellitus received education by diabetes nurse educators in Turkey. Diabetes education is positively correlated with self-care and glycemic control levels among patients with type 2 diabetes mellitus. Efforts for generalization and standardized education for all diabetes patients are necessary.

## Akiboye, F., et al. (2021). Impact of diabetes specialist nurses on inpatient care: A systematic review. *Diabetic medicine*, *38*(9), e14573. <u>Click for full-text</u>.

These studies suggest a reduction in LOS and improved clinical care for patients with diabetes after the introduction of diabetes inpatient specialist nurses. Future research should examine a range of benefits associated with diabetes inpatient specialist nurse delivered services, including reduction of inpatient complications such as infections and cardiovascular events.

## Awang Ahmad, N. A., et al. (2020). Self-Care Management of Patients with diabetes: nurses' perspectives. *Journal of diabetes and metabolic disorders*, *19*(2), 1537–1542. <u>Click for full-text</u>.

Diabetic nurse educator plays a crucial role to ensure patient with diabetes achieved competency and compliance with long term self-care management. Nurses' need to ensure psychological preparedness and patient literacy assessment when designing individualised health education session. While identifying and addressing key barriers for each patient to ensure effectiveness of management plan and improve quality of life.

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Lawler, J., et al. (2019). Does the Diabetes Specialist Nursing workforce impact the experiences and outcomes of people with diabetes? A hermeneutic review of the evidence. *Human resources for health*, *17*(1), 65. <u>Click for full-text</u>.

The Diabetes Specialist Nursing workforce is essential in diabetes care, particularly in hospital settings. They improve patient experience and outcomes.

# Nikitara, M., et al. (2019). The Role of Nurses and the Facilitators and Barriers in Diabetes Care: A Mixed Methods Systematic Literature Review. *Behavioral sciences (Basel, Switzerland)*, 9(6), 61. Click for full-text.

Taking into serious consideration that a large number of hospital users are people with diabetes and that there is an inconsistency among countries about the work settings of Diabetes Specialist Nurses (DSNs), it is important to give greater focus to inpatient care and perhaps to enhance nurses' roles by eliminating any barriers that prevent them from providing adequate quality care. Furthermore, integrated care involving the role of DSNs within the inpatient care would have been more beneficial for patients.

Wilson, M., et al. (2019). Impact of nurse champion on quality of care and outcomes in type 2 diabetes patients. *International journal of evidence-based healthcare*, *17*(1), 3–13. <u>Click for full-text</u>.

Nurse champions in this review also refer to clinical nurse specialists, certified diabetes educators, and clinical mentors. The synthesis of evidence indicated that implementation of a nurse champion model did not only significantly improve nurses' diabetic knowledge and skills, but also improved the health outcomes of diabetic patients.







#### MULTI-DISCLIPINARY TEAMS

Liu, Y., & Liu, C. (2024). Effect of the AADE7 Self-Care Behaviors Framework on Diabetes Education Management in a Shared Care Model. *International journal of endocrinology*, 2024, 7278207. Click for full-text.

According to the process of outpatient consultation, each patient received health education provided by diabetes education nurses and dietitians after consultation. Stepwise regression analysis was performed, and the results showed that, with other conditions held constant, a greater number of days per week to follow a healthy diet, to take hypoglycemic medication as prescribed, to monitor blood glucose, and to exercise and higher education level were associated with lower levels of glycosylated hemoglobin.

Black, R. L., & Duval, C. (2019). Diabetes Discharge Planning and Transitions of Care: A Focused Review. *Current diabetes reviews*, *15*(2), 111–117. <u>Request full-text</u>.

Structured discharge planning per guideline recommendations can help improve transitions in care for patients with diabetes. A team based, patient-centered approach can help improve patient outcomes by reducing medication errors, delay of care, and hospital readmissions.

#### NURSE EDUCATION BY DNE

Piya, M. K., et al. (2022). The impact of nursing staff education on diabetes inpatient glucose management: a pilot cluster randomised controlled trial. *BMC endocrine disorders*, 22(1), 61. <u>Click for full-text.</u>

The online ward provided an online competency-based diabetes education program and 1-h F2F teaching from a diabetes nurse educator (DNE). The inclusion of online education increased diabetes training uptake among nursing staff. GDD and appropriate hypoglycaemia management increased in the online education wards.

#### EMR

Edholm, K., et al. (2020). Reducing Diabetic Ketoacidosis Intensive Care Unit Admissions Through an Electronic Health Record-Driven, Standardized Care Pathway. *Journal for healthcare quality*, 42(5), e66–e74. <u>Click for full-text.</u>

We aimed to decrease intensive care unit (ICU) admission for DKA by implementing a standardized, electronic health record-driven clinical care pathway that used subcutaneous insulin, rather than a continuous insulin infusion, for patients with nonsevere DKA. Post-implementation, diabetes nurse educator consultation increased from 45.3% to 63.9%



#### **APPENDIX**

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#### SEARCH METHODOLOGY

A systematic search was conducted for literature. The results were screened by librarians using <u>Covidence</u>.

#### SEARCH LIMITS

- English-language
- Published within the last 5 years

#### DATABASES SEARCHED

- Medline index of peer reviewed articles across health sciences and medicine.
- Embase index of biomed and pharmacological peer reviewed journal articles.
- Emcare index of nursing, allied health, critical-care medicine and more.
- CINAHL scholarly journals, theses, and books for nursing.
- UpToDate & BMJ Best Practice synthesised evidence for patient care.
- Grey literature Google, Google Scholar, Trip database, Biomed Central Proceedings.

#### **SEARCH TERMS**

Concept	MeSH headings	Libran Keywords
Diabetes	exp Diabetes Mellitus	Diabetes; Diabetic
Nurses	exp Nurses	Nurs(e)(es)(ing); Diabet(ic)(es) nurse educator(s)
Patient Education	Patient Education as Topic; exp Consumer Health Information; Health Promotion	Educat(e)(es)(ing)(ion); Train(s)(ing) [within 3 words of] Patient(s); In(- )patient(s); Consumer(s)
Hospitals	exp Hospitals	hospital* or tertiary care centre* or tertiary care center* or secondary care centre* or secondary care center* or ward*





Models	Practice guideline; Clinical protocols; Clinical competence; Practice Guidelines as Topic; Practice Guideline; Guideline; Guideline Adherence; Treatment outcome; Patient Care Management; exp "Delivery of Health Care";	Protocol(s); Pathway(s); Guideline(s); Practice(s); Model(s)(ling); Structure(s); Organi(s/z)ation(s); Delivery; System(s); Service(s); Framework(s)
	"Delivery of Health Care"; Models, Organizational	

#### MEDLINE SEARCH STRATEGY

Ovid MEDLINE(R) ALL <1946 to August 12, 2024>

- 1 (diabetes or diabetic).ti.425118
- 2 exp Diabetes Mellitus/ 531904
- 3 1 or 2 602246
- 4 (Nurs\* or diabet\* nurse educator\*).tw. 547290
- 5 exp Nurses/ 101131
- 6 4 or 5 582092
- 7 ((educat\* or train\*) adj3 (patient\* or inpatient\* or in-patient\* or consumer\*)).tw.
  73172
- 8 Patient Education as Topic/ or exp Consumer Health Information/ or Health Promotion/ 181248
- 9 7 or 8 238939 Monash Health Library

10 (hospital\* or tertiary care centre\* or tertiary care center\* or secondary care centre\* or secondary care center\* or ward\*).tw. 1780856

- 11 exp hospitals/ 328839
- 12 10 or 11 1888304

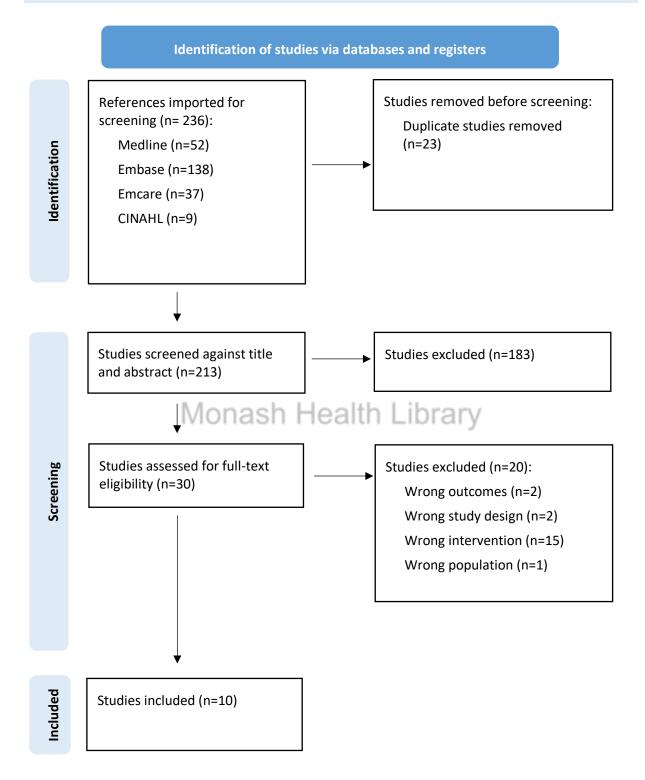
13 (protocol\* or pathway\* or guideline\* or practice\* or model\* or structure\* or organi?ation\* or delivery or system\* or service\* or framework\*).mp. 15106260

- 14 practice guideline/ or clinical protocols/ or Clinical Competence/ or Practice Guidelines as Topic/ or Practice Guideline/ or Guideline/ or Guideline Adherence/ or treatment outcome/ or Patient Care Management/ or exp "Delivery of Health Care"/ or Models, Organizational/ 2679411
- 15 13 or 14 16193469
- 16 3 and 6 and 9 and 12 and 15 251
- 17 limit 16 to (english language and last 5 years) 52





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