

META-ANALYSIS

The Effect of Continuing Nursing Intervention on Peritoneal Dialysis Patients and the Occurrence of Peritonitis: A Meta-Analysis

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ABSTRACT

Background • Chronic kidney disease, affecting millions globally, has emerged as a significant health concern alongside tumors, diabetes, and cardiovascular diseases. Peritoneal dialysis is a widely used therapeutic intervention, but its effectiveness can be compromised by complications such as peritonitis.

Methods • We conducted a comprehensive search across eight international databases to obtain controlled trials evaluating the impact of continuous nursing on peritonitis occurrence in peritoneal dialysis patients. Following stringent quality assessment, data analysis was performed using RevMan 5.3 software.

Results • Our meta-analysis included 15 controlled trials. Of these, 13 reported peritonitis rates in both intervention and control groups. Continuous nursing was associated with a significant reduction in peritonitis incidence (OR: 0.32; 95% CI: 0.23,0.44) and complications (SMD: 3.21; 95% CI: 1.17,5.25; $P = .01$), as well as a decrease in serum creatinine levels (SMD: -130.06; 95% CI: -195.46,-64).

Conclusion • The findings of this study support the possibility that ongoing nursing is beneficial for the complications and creatinine for peritoneal dialysis patients. (*Altern Ther Health Med.* 2023;29(8):558-563).

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INTRODUCTION

Chronic Kidney Disease and Its Impact: The global landscape of medical diseases reveals a rising prevalence of chronic illnesses in contrast to infectious diseases.¹ Prominent among these is chronic kidney disease (CKD), attributed to a variety of factors leading to kidney abnormalities over extended durations. CKD not only has serious implications on patients' health and quality of life but is also largely driven by alterations in glomerular filtration rate, aberrations in blood or urine compositions, and anomalous glomerular imaging examinations.⁵

Peritoneal dialysis is a dialysis method that uses the human body's own peritoneum as a dialysis membrane. The patient's excess water and metabolic waste are removed by exchanging the dialysate with the plasma components in the capillaries on the other side of the peritoneum. Supplement the necessary substances for the body, and achieve the purpose of

external artificial support treatment through continuous peritoneal dialysis treatment to protect the residual renal function. Peritoneal dialysis is one of the most efficient ways to treat end-stage chronic renal failure. It is increasingly employed in the clinical intervention of end-stage chronic renal failure due to its affordable and practical therapy.⁶⁻⁷

In 2003, the American Geriatrics Association defined continuing nursing as a series of procedures designed to ensure the coordination and continuity of services received by patients.⁶ Continuity of care includes the continuation of patient information, the continuation of medical care services, and the continuation of doctor-patient and nurse-patient relationships. The main forms of existing continuing nursing include telephone follow-up, family follow-up, outpatient follow-up, and information-based follow-up. Nursing has been grounded in the pursuit of health equity and social justice for over 100 years. There are two main types of continuing nursing practice abroad: application in primary health care and nursing practice transferred from the medical setting where acute care is located. First, nursing services in the field of primary health care are based on the community, mainly Guided Care (GC) and Geriatric Resources for Assessment and Care of Elders (GRACE). However, the time, cycle, content, method, and process of continuous nursing have no unified standards and are not systematically normative enough, and the specific implementation conditions vary greatly from

Table 1. The basic characteristics of the included studies

Study	Sample Size(T/C)	Man/Woman	Age (years)(Mean±SD) (T/C)	T	C	Main Outcomes
Gui, 2019 ⁹	39/41	47/33	51.42±6.03/51.36±6.07	Continuing Nursing	Routine nursing	Peritonitis, Complication
Liang, 2021 ¹⁰	73/73	85/61	50.63±13.15/51.08±14.08	Continuing Nursing	Routine nursing	Peritonitis, Complication
Zhou, 2017 ¹¹	119/119	124/114	50.4±13.8/50.2±14.2	Continuing Nursing	Routine nursing	Peritonitis
Cai, 2022 ¹²	30/30	35/25	42.19±5.34/42.36±5.33	Continuing Nursing	Routine nursing	Peritonitis, Complication
Liu, 2018 ¹³	41/41	42/40	None	Continuing Nursing	Routine nursing	Peritonitis, Complication, Creatinine
Shong, 2018 ¹⁴	45/45	49/41	42.21±5.77/43.77±4.21	Continuing Nursing	Routine nursing	Peritonitis
Yang, 2019 ¹⁵	40/40	41/39	45.1±13.9/42.19±12.1	Continuing Nursing	Routine nursing	Peritonitis
Fan, 2019 ¹⁶	30/30	32/28	46.3±2.64/49.53±2.39	Continuing Nursing	Routine nursing	Peritonitis, Creatinine
Peng, 2019 ¹⁷	150/150	147/153	53.42±3.23/54.23±3.42	Continuing Nursing	Routine nursing	Peritonitis, Complication
Li, 2022 ¹⁸	59/59	67/51	51.69±15.83/51.21±15.46	Continuing Nursing	Routine nursing	Peritonitis, Complication, Creatinine
Huang, 2020 ¹⁹	45/45	49/41	45.35±30.63/44.26±30.54	Continuing Nursing	Routine nursing	Peritonitis
Cheng, 2017 ²⁰	32/32	37/27	57.83±1.35/57.36±1.65	Continuing Nursing	Routine nursing	Peritonitis, Creatinine
Chen, 2018 ²¹	50/50	69/31	51.6±5.5/50.4±4.9	Continuing Nursing	Routine nursing	Peritonitis
Zhao, 2020 ²²	97/97	114/80	54.10±17.08/52.39±14.89	Continuing Nursing	Routine nursing	BMI, ALB
Li, 2012 ²³	69/66	79/56	57.4±12.8/55.2±11.9	Continuing Nursing	Routine nursing	KDQOL-SF score

Abbreviations: T: trial group; C: control group.

place to place. There is no clear basis for whether to use one of them alone or to use some forms of continuing nursing in combination. Continuing nursing refers to a series of nursing services and health education during hospitalization and after discharge to provide continuous and professional nursing services to patients, intending to consolidate the therapeutic effect.⁸ We performed a meta-analysis to determine the effect of continuing nursing intervention on peritoneal dialysis patients and the occurrence of peritonitis.

MATERIALS AND METHODS

Study design

Cochrane Library, Web of Science, CBM, CQVIP, & Wanfang, Pubmed, Embase, and CNKI, among other databases and affiliated research organisations, were searched for this study. Design of the Study published studies that detected the outcomes for individuals receiving peritoneal dialysis and the risk of peritonitis. Animal experimentation was, however, not included.

Inclusion and exclusion criteria

Peritoneal dialysis patients in the first People's Hospital of Linping District, Hangzhou were enrolled in this study. Patients with other systemic disease were excluded from the study.

Intervention Types

The intervention category received continuing nursing for peritoneal dialysis patients, and The nursing time for the control group was the same as that for the experimental group, and they got normal care.

Types of Outcome Measures

Outcome indicators for peritoneal dialysis patients and the occurrence of peritonitis; According to research, the assessment tools for peritoneal dialysis patients are (1) Peritonitis condition; (2) Complication condition; (3) serum creatinine.; The literature included in this study evaluated outcome measures using at least one of the above scales.

Search Strategy

The computer retrieves the databases: Cochrane Library, CNKI, Embase, China Biomedical Literature Database

(CBM), VIP, PubMed, WanFang and Web of Science, The search term is "continuing nursing", "peritoneal dialysis". The databases were searched from their inception until February 2022. The specific steps of literature search are (1) Search for relevant documents in the Chinese and English databases, read the title, abstract, and Keywords further identify the search terms for this study; (2) The English database search used "MeSH Terms" to identify the subject terms, searched using a combination of subject words and keywords.

Extracting data and evaluating its quality

The abstract was initially screened, and after the initial screening, the literature screening results were obtained by reading the full text, and the process was completed independently by 2 researchers. Exchange screening results, discuss dissenting literature or consult a third researcher until the results are agreed. The information extracted from the data includes: basic information of the literature, type of study, study object, sample size, and intervention content, outcome measures, etc.

Statistical Analysis

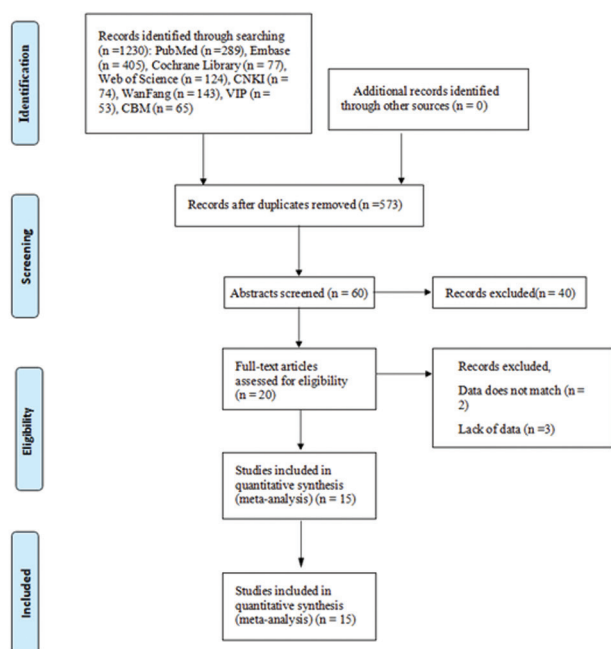
The Review Manager programme was used to carry out this meta-analysis (RevMan). Effects are combined: The outcome measures in this study were all measured data, the tools used to evaluate are different. There are differences between scores. Therefore, the standardized mean difference is used (standardize mean difference, SMD) and 95% Confidence Interval (CI). As an indicator of effect. (2) Heterogeneity test: Chi-square tests are used to determine whether there is heterogeneity between studies, if $P > .1$, $I^2 < 50\%$. The encompassed work is more homogeneous, Proceed with a fixed-effects model Meta-analyses; if $P < .1$, $I^2 = 50\%$, Heterogeneity was indicated in the included studies, Analyze heterogeneous sources, Clinical heterogeneity is absent. For meta analysis, a random-effects model is used. Furthermore, possible differences in qualitative factors were subgroup analyzed.

RESULTS

Search Results

The search identified 1230 references. After removing duplicates, 573 articles were screened by title and abstract.

Figure 1. Flow Chart



The full text of 20 articles was reviewed, and five were excluded due to data mismatch ($n = 2$) and missing data ($n = 3$). Thus, 15 studies⁹⁻²³ were included in this meta-analysis, as depicted in the PRISMA flow chart (Figure 1).

Peritonitis

Thirteen studies examined the incidence of peritonitis in the intervention group versus the control groups. The meta-analysis showed a significantly lower occurrence of peritonitis in the intervention group (OR: 0.32; 95% CI: 0.23-0.44; $P = .01$, Figure 2). Low heterogeneity was seen in the outcomes of all of these trials, & a sensitivity analysis was carried out (Figure 3). Continued nursing significantly improves the condition of peritonitis in peritoneal dialysis sick people when compared to the control group.

Complication

The complexity of the test & the control subject was reported in 6 research. Per a meta-analysis, the problems in the test group were significantly lower than those in the control sample (OR: 0.35; 95 percent CI: 0.27,0.47; $P = .01$, Figure 4). When compared to the control, ongoing nursing significantly reduces the number of problems in peritoneal dialysis patient populations.

Serum creatinine

In 4 research, the serum creatinine concentrations of the test and control categories were recorded. The test group's serum creatinine level was considerably lower than the corresponding group's, according to meta-analysis (SMD: -130.06; 95 percent CI: -195.46,-64.64; $P < .01$, Figure 5).

Figure 2. Forest illustration of the peritonitis

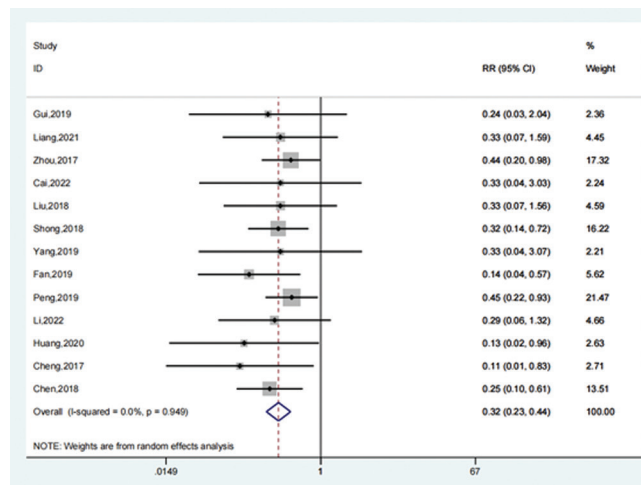


Figure 3. Sensitivity analysis of the peritonitis

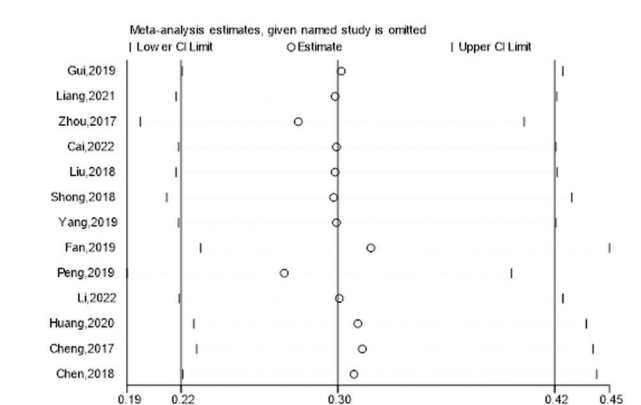
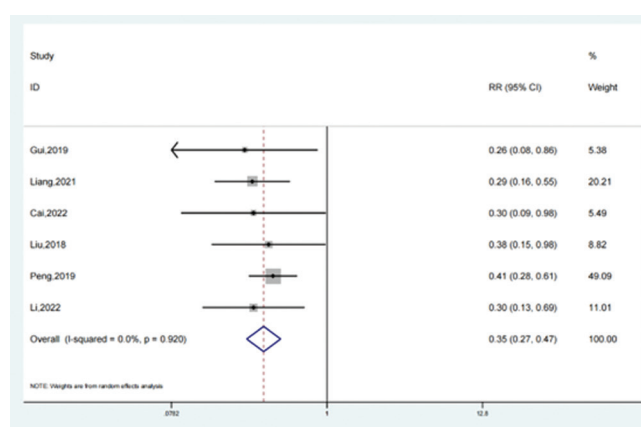


Figure 4. Forest illustration of the complication



Other outcomes

Zhao's study²² showed that after continuing nursing, compared with routine nursing, continuing nursing improves BMI and ALB levels in peritoneal dialysis patients. Li's study²³ showed that after continuing nursing, compared with routine nursing, continuing nursing improves the KDQOL-SF score in peritoneal dialysis patients.

Figure 5. Forest illustration of the serum creatinine

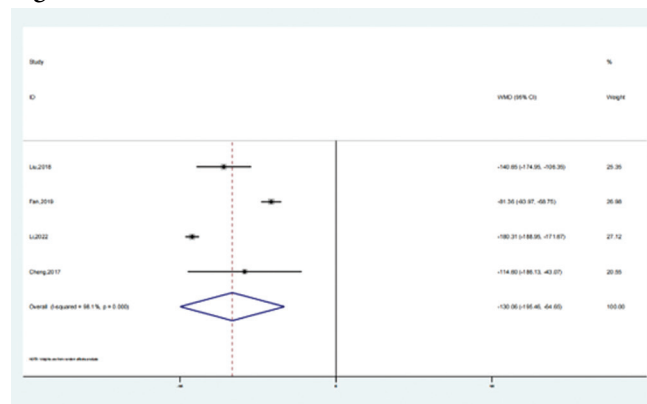
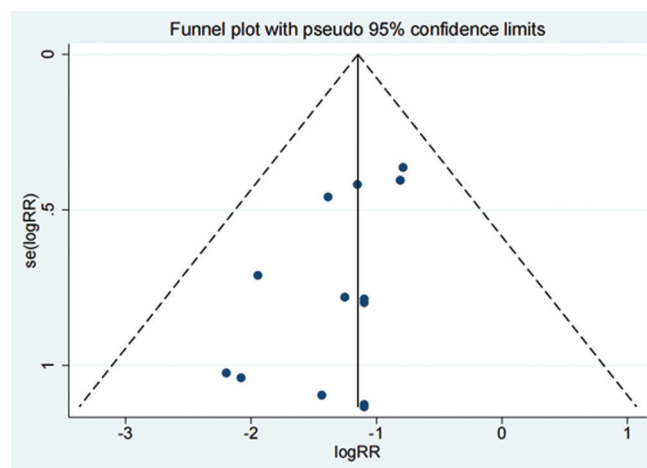


Figure 6. Funnel chart of the peritonitis



Publishing Prejudice

Begg's test revealed no possible publish bias despite the unequal distribution of the peritonitis in the funnel plot (Figure 6). ($P = .360$).

DISCUSSION

In recent years, the biomedical model has prompted a corresponding change in the clinical nursing model," could be simplified to "Recent advancements in the biomedical model have transformed clinical nursing practices. Continuing nursing abroad was carried out earlier, and has now developed more maturely, and its application in the rehabilitation of various diseases has also achieved certain results. Guided nursing can improve the patient's perception and control of the disease in various ways, thereby improving the patient's health level²⁴⁻²⁵ and obtaining good social and economic benefits.²⁶⁻²⁷ GRACE aims to improve the quality of medical care for the elderly, reduce the misuse of health care resources, and prevent the elderly from being placed in nursing homes.²⁸ Second, two main types of nursing practice are transferred from the medical setting where acute care is located: the model led by the Advanced Practice Nurse (APN) and the model of continuing nursing intervention. The first pilot trials of the APN-led model were conducted at the University of

Pennsylvania in the United States,²⁹ and studies have shown strong utility for the out-of-hospital continuum of care for patients with long-term chronic conditions.³⁰ The continuing nursing intervention mode refers to the coordination among patients, family members and medical workers through preparation and arrangement. A Baylor Medical Center study demonstrated the effectiveness of post-discharge continuing care procedures for patients with heart failure.³¹ Intermediate ward continuing care in Norway³² had a positive impact on the quality of care and economic benefits for the elderly, patients receiving intermediate ward continuation care had higher satisfaction and higher functional levels than inpatients, and each ward per ward The average cost per patient is also lower than other departments in the hospital. With the development of society, the continuing care model has gradually derived from other models in various countries, such as the establishment of community care centers in Japan³³; the Netherlands providing nursing guidance cards to hospitalized patients³⁴; Canada and Australia adopt the method of medical and nursing cooperation for patients. Conduct home visits to improve medication adherence.³⁵⁻³⁶ Continuing care with telephone follow-up is effective for patients treated for alcohol abstinence and drug dependence.³⁷ At present, foreign countries mainly use artificial intelligence or telemedicine to monitor patients' health in families, communities or nursing homes and continue professional nursing in various places.

Continuing nursing in China has emerged in recent years, mainly divided into hospital-based and community-based continuation nursing. Hospital-based continuous nursing is the main mode currently adopted in China. The subjects of the study mainly include maternal,³⁸⁻³⁹ stroke patients,⁴⁰⁻⁴¹ diabetic patients,⁴²⁻⁴³ hypertension patients, chronic heart failure patients, chronic obstructive pulmonary disease patients and cancer patients, etc.⁴⁴⁻⁴⁵ With the progress of research, the content and objects of continuous nursing are also constantly expanding. Shaoling's team was the first to establish a "4C" model for chronic obstructive pulmonary disease, which refers to the development of nursing practice based on comprehensiveness, collaboration, coordination and continuity.⁴⁶ Taiwan integrates medical resources to carry out discharge preparation services so that patients can continue to receive continuous nursing services after discharge.⁴⁷ Some hospitals in mainland China have established hotlines, nursing specialist clinics, and extended care service centers.⁴⁸⁻⁵² There are still many problems in my country's continuous nursing. For example, the role of continuous nursing is not paid attention to and correctly played, and the measures of continuous nursing are relatively simple, and it is easy to become a mere formality in the implementation process, which affects the implementation of continuous nursing. Effect. Therefore, research on continuous nursing should continue to provide an evidence-based basis and basis for the subsequent development of continuous nursing.

The early clinical symptoms are not obvious, and as the disease progresses, CKD may cause uremia symptoms, such as bad breath, nausea, vomiting, edema, etc., and even

further induce anemia. CKD patients need long-term maintenance renal standby treatment, including kidney transplantation, peritoneal dialysis, hemodialysis, etc.⁵³ In the long-term treatment process, they face many physical and psychological problems and poor quality of life. Compared with the other two treatment modes, peritoneal dialysis has improved patients' quality of life, but because patients need to perform multiple daily operations during home treatment, and monitor and record physiological indicators such as body weight and blood pressure. In addition, patients also need regular care of the catheter outlet, dialysis tubing, and strict control of diet and fluid intake.⁵⁴ In recent years, the biomedical model has prompted a corresponding change in the clinical nursing model, It also has an impact on the patients' survival and quality of life, which is particularly evident in peritoneal dialysis patients.

At present, Included is the peritoneal dialysis patients' quality of life as an important measure to evaluate the patient's disease outcome. According to Fredric,⁵⁵ the aim of care for peritoneal dialysis sufferers may be to modify treatment to improve the patient's quality of life regarding their health. Incorporating life quality assessments into peritoneal dialysis patients' care is important and should serve as an important indicator of dialysis adequacy and help healthcare providers design the best treatment plan for each patient.⁵⁶⁻⁵⁸

The study used 15 pieces of literature, with 919 individuals in the experimental class & 918 in the control condition. According to a meta-analysis, peritoneal dialysis individuals who got ongoing nursing care had less peritonitis than controls. For the experimental group, meta-analysis revealed a reasonable degree of peritonitis (OR: 0.32; 95 percent CI: 0.23,0.44; $P < .01$). According to the findings of the meta-analysis of complications, continued nursing considerably lowers the degree of complications in peritoneal dialysis patients when compared to the control group (OR: 0.35; 95 percent CI: 0.27,0.47; $P < .01$). According to the serum creatinine meta-analysis findings, patients on peritoneal dialysis who continued nursing had significantly lower serum creatinine levels than those in the control group (SMD: -130.06; 95 percent CI: -195.46,-64.64; $P < .01$). Axial length was distributed asymmetrically on the funnel plot. Begg's test, though, revealed no possible publication bias.

Limitations

The limitations of this systematic review are: The overall sample size is not very large. All controlled trials or cohort trials were single-center, and the lack of multi-center studies may have affected the representativeness of the conclusions to some extent. Therefore, we need to view the results of this meta-analysis objectively. Only Chinese and English literature were searched, and no other language literature was , and no other language literature was obtained, and there may be incomplete research inclusion and bias in selection. As a result, you should remain impartial while evaluating some of this Meta analysis's findings.

CONCLUSION

As evidenced by peritonitis, complications, and creatinine, the findings of this study support the possibility that ongoing nursing is beneficial for peritoneal dialysis patients. However, these findings need to be confirmed by additional high-quality research.

DATA AVAILABILITY

The data used to support this study is available from the corresponding author upon request.

CONFLICTS OF INTEREST

The authors declare that they have no conflicts of interest.

FUNDINGS

No funding was received for this study.

REFERENCE

1. Zemedikun DT, Gray LJ, Khunti K, Davies MJ, Dhalwani NN. Patterns of Multimorbidity in Middle-Aged and Older Adults: An Analysis of the UK Biobank Data. *Mayo Clin Proc*. 2018;93(7):857-866. doi:10.1016/j.mayocp.2018.02.012
2. Mahmoodi BK, Matsushita K, Woodward M, et al; Chronic Kidney Disease Prognosis Consortium. Associations of kidney disease measures with mortality and end-stage renal disease in individuals with and without hypertension: a meta-analysis. [published correction appears in *Lancet*. 2012 Nov 10;380(9854):1648]. *Lancet*. 2012;380(9854):1649-1661. doi:10.1016/S0140-6736(12)61272-0
3. Saran R, Robinson B, Abbott KC, et al. US Renal Data System 2019 Annual Data Report: Epidemiology of Kidney Disease in the United States. *Am J Kidney Dis*. 2020;75(1)(suppl 1):A6-A7. doi:10.1053/j.ajkd.2019.09.003
4. Zhang L, Wang F, Wang L, et al. Prevalence of chronic kidney disease in China: a cross-sectional survey. [published correction appears in *Lancet*. 2012 Aug 18;380(9842):650]. *Lancet*. 2012;379(9818):815-822. doi:10.1016/S0140-6736(12)60033-6
5. Yugavathy N, Huri HZ, Kun LS, et al. Clinical and genetic markers of erythropoietin deficiency anemia in chronic kidney disease (predialysis) patients. *Biomarkers Med*. 2020;14(12):1099-1108. doi:10.2217/bmm-2020-0205
6. Teitelbaum I. Peritoneal Dialysis. *N Engl J Med*. 2021;385(19):1786-1795. doi:10.1056/NEJMra2100152
7. Mehrotra R, Devuyst O, Davies SJ, Johnson DW. The Current State of Peritoneal Dialysis. *J Am Soc Nephrol*. 2016;27(11):3238-3252. doi:10.1681/ASN.2016010112
8. Bookvar K, Vladeck BC. Improving the quality of transitional care for persons with complex care needs. *J Am Geriatr Soc*. 2004;52(5):855-856. doi:10.1111/j.1532-5415.2004.52230_15.x
9. Guimei DY, Li C. The application of Orem self-care model in the continuous nursing of chronic renal failure patients with peritoneal dialysis [J]. *Integrative Chinese and Western Medicine Nursing*. 2019;5(02):135-138.
10. Zhen L. Influence of continuous nursing model based on WeChat group on self-management and self-efficacy of peritoneal dialysis patients [J]. *Chinese and Foreign Medical Research*. 2021;19(05):112-115.
11. Zhou X, Aygüli Nasimu, Liu Xinhua. Effect of continuous nursing on the quality of life of patients with continuous ambulatory peritoneal dialysis [J]. *Guizhou Medicine*. 2017;41(11):1215-1216.
12. Cai M, Ou M, Li A. Application of continuous nursing in peritoneal dialysis patients [J]. *Chinese Contemporary Medicine*. 2022;29(08):178-181.
13. Liu X. Observation on the clinical effect of continuous nursing in early peritoneal dialysis patients [J]. *Journal of Bengbu Medical College*. 2018;43(08):1097-1099.
14. Juan S. Effects of continuous nursing on the incidence of peritonitis and quality of life in patients with peritoneal dialysis [J]. *Da Doctor*. 2018;3(08):158-159.
15. Yang Y. Influence of continuous nursing on self-management ability of peritoneal dialysis patients [J]. *Famous Doctors*. 2019;(06):159.
16. Fan G. The effect of continuous nursing on improving the quality of life of home peritoneal dialysis patients [J]. *World Latest Medical Information Digest*. 2019;19(80):335-336.
17. Peng H, Wang J. Application of continuous nursing intervention in home peritoneal dialysis patients [J]. *Shenzhen Journal of Integrated Traditional Chinese and Western Medicine*. 2019;29(02):188-190.
18. Jing L. Influence of continuous nursing mode on nursing effect of continuous peritoneal dialysis [J]. *Heilongjiang Medical Science*. 2022;45(02):108-109.
19. Huang X. Observation on the effect of continuous nursing mode on the nursing effect of continuous peritoneal dialysis [J]. *Knowledge on Prevention and Treatment of Cardiovascular Diseases*. 2020;10(28):59-61.
20. Juan S. Effects of continuous nursing on the incidence of peritonitis and quality of life in patients with peritoneal dialysis [J]. *Da Doctor*. 2018;3(08):158-159.
21. Chen L, Bing Z, Liu J, et al. The role of continuous health education combined with routine nursing in patients with peritoneal dialysis [J]. *Chinese Contemporary Medicine*. 2018;25(02):179-181.
22. Zhao X, Dong Q, Zhao G, et al. Effects of an Omaha system-based continuing nursing program on nutritional status in patients undergoing peritoneal dialysis: a randomized controlled trial. *Int Urol Nephrol*. 2020;52(5):981-989. doi:10.1007/s11255-020-02449-3
23. Li J, Wang H, Xie H, et al. Effects of post-discharge nurse-led telephone supportive care for patients with chronic kidney disease undergoing peritoneal dialysis in China: a randomized controlled trial. *Perit Dial Int*. 2014;34(3):278-288. doi:10.3747/pdi.2012.00268
24. Boulc C, Reider L, Frey K, et al. Early effects of "Guided Care" on the quality of health care for multimorbid older persons: a cluster-randomized controlled trial. *J Gerontol A Biol Sci Med Sci*. 2008;63(3):321-327. doi:10.1093/gerona/63.3.321
25. Boulc C, Karm L, Groves C. Improving chronic care: the "guided care" model. *Perm J*. 2008;12(1):50-54. doi:10.7812/TPP/07-014
26. Leff B, Reider L, Frick KD, et al. Guided care and the cost of complex healthcare: a preliminary report. *Am J Manag Care*. 2009;15(8):555-559.
27. Sylvia ML, Griswold M, Dunbar L, Boyd CM, Park M, Boulc C. Guided care: cost and utilization outcomes in a pilot study. *Dis Manag*. 2008;11(1):29-36. doi:10.1089/dis.2008.11.1723
28. Bielaska-DuVernay C. The "GRACE" model: in-home assessments lead to better care for dual eligibles. *Health Aff (Millwood)*. 2011;30(3):431-434. doi:10.1377/hlthaff.2011.0043
29. Naylor MD, Aiken LH, Kurtzman ET, Olds DM, Hirschman KB. The care span: the importance of transitional care in achieving health reform. *Health Aff (Millwood)*. 2011;30(4):746-754. doi:10.1377/hlthaff.2011.0041

30. Naylor MD, Brooten DA, Campbell RL, Maislin G, McCauley KM, Schwartz JS. Transitional care of older adults hospitalized with heart failure: a randomized, controlled trial. [published correction appears in *J Am Geriatr Soc*. 2004 Jul;52(7):1228]. *J Am Geriatr Soc*. 2004;52(5):675-684. doi:10.1111/j.1532-5415.2004.52202.x
31. Ota KS, Beutler DS, Gerkin RD, Weiss JL, Loli AI. Physician-directed heart failure transitional care program: a retrospective case review. *J Clin Med Res*. 2013;5(5):335-342. doi:10.4021/jocmr1492w
32. Orvik A, Nordhus GE, Axelsson SB, Axelsson R. Interorganizational Collaboration in Transitional Care - A Study of a Post-Discharge Programme for Elderly Patients. *Int J Integr Care*. 2016;16(2):11. Published 2016 May 31.
33. Gong L. Looking at the diversification of community nursing from the perspective of community nursing in Japan [J]. *Journal of Nurse Training*. 1999;(12):41-42.
34. Jaarsma T, Halfens R, Huijter Abu-Saad H, et al. Effects of education and support on self-care and resource utilization in patients with heart failure. *Eur Heart J*. 1999;20(9):673-682. doi:10.1053/euhj.1998.1341
35. Oermann MH, Floyd JA. Outcomes research: an essential component of the advanced practice nurse role. *Clin Nurse Spec*. 2002;16(3):140-144. doi:10.1097/00002800-200205000-00007
36. Stewart S, Horowitz JD. Detecting early clinical deterioration in chronic heart failure patients post-acute hospitalisation-a critical component of multidisciplinary, home-based intervention? *Eur J Heart Fail*. 2002;4(3):345-351. doi:10.1016/S1388-9842(02)00019-3
37. Kelly P, Deane F, Baker A, et al. Correction to: Study protocol the Continuing Care Project: a randomised controlled trial of a continuing care telephone intervention following residential substance dependence treatment. *BMC Public Health*. 2020;20(1):258. Published 2020 Feb 19.
38. Feng L, Ding L, Feng Z, Shen M. Implementation of postpartum continuous nursing and evaluation of nursing effect [J]. *China Continuing Medical Education*. 2020;12(13):173-174.
39. Tang X, Rui Y. Influence of continuous nursing based on WeChat platform on puerperium mood, self-care ability and maternal and infant health status of cesarean section women [J]. *Clinical Medical Research and Practice*. 2020;5(12):181-183.
40. Wei L. Analysis and application of hospital-based and community-based continuous nursing to improve the quality of life of stroke patients [J]. *Psychol Monogr*. 2020;15(10):80.
41. Lan L. Research on the application of continuous nursing in improving the quality of life and psychological status of stroke patients [J]. *Chinese Medicine Guide*. 2020;18(12):269-270.
42. Wu C. Evaluation of the effect of continuous nursing mode on blood sugar control and self-management in patients with type 2 diabetes [J]. *Nurs Res*. 2019;33(14):2518-2520.
43. Yao Linglan, Xu Mingli. The application effect of "diabetes special public account" in continuous nursing and health education for patients with type 2 diabetes [J]. *International Journal of Nursing*. 2020(07):1231-1232-1233-1234-1235.
44. Jing W. Analysis of the effect of continuous nursing on self-care ability and quality of life of elderly patients with chronic diseases [J]. *Capital Food and Medicine*. 2019;26(11):148.
45. Xie Li, Song Lijun, Wan Qiuying, Zheng Han. Research progress on continuous nursing for patients with chronic diseases [J]. *Heilongjiang Science*. 2020,11(04):90-91+94.
46. Wang S. Jinyue, Zhou Jiayi. Evidence-based practice of establishing continuous care for chronic obstructive pulmonary disease [J]. *Chung Hua Hu Li Tsa Chih*. 2009;44(05):431-434.
47. Xu Meili, Wang Shen. Development status and countermeasures of continuous nursing at home and abroad [J]. *PLA Nursing Journal*. 2014, 31(19): 28-30+33.
48. Guo Y, Hou H, Chen W, Liu C, Zeng M. Influence of seamless nursing after-hospital service on glycosylated hemoglobin in patients with diabetes [J]. *Chinese Journal of Practical Nursing*. 2009;(28):29-30.
49. Mao H, Liu X. Discussion on continuous nursing service mode for discharged patients [J]. *Nurs Res*. 2005;(14):1294-1295.
50. Mao H, Yu X, Wang X. Research on continuous nursing service for primipara after discharge [J]. *J Nurs (Luton)*. 2007;(14):73-74.
51. Austin EJ, Neukirch J, Ong TD, et al. Development and Implementation of a Complex Health System Intervention Targeting Transitions of Care from Hospital to Post-acute Care. *J Gen Intern Med*. 2021;36(2):358-365. doi:10.1007/s11606-020-06140-2
52. Murray J, Baxter R, Lawton R, et al. Unpacking the Cinderella black box of complex intervention development through the Partners at Care Transitions (PACT) programme of research. *Health Expect*. 2023;26(4):1478-1490. doi:10.1111/hex.13682
53. Baralić M, Gligorićević N, Brković V, et al. Fibrinogen Fucosylation as a Prognostic Marker of End-Stage Renal Disease in Patients on Peritoneal Dialysis. *Biomolecules*. 2020;10(8):1165. Published 2020 Aug 9. doi:10.3390/biom10081165
54. Su CY, Lu XH, Chen W, Wang T. Promoting self-management improves the health status of patients having peritoneal dialysis. *J Adv Nurs*. 2009;65(7):1381-1389. doi:10.1111/j.1365-2648.2009.04993.x
55. Termorshuizen F, Korevaar JC, Dekker FW, van Manen JG, Boeschoten EW, Krediet RT; NECOSAD Study Group. The relative importance of residual renal function compared with peritoneal clearance for patient survival and quality of life: an analysis of the Netherlands Cooperative Study on the Adequacy of Dialysis (NECOSAD)-2. *Am J Kidney Dis*. 2003;41(6):1293-1302. doi:10.1016/S0272-6386(03)00362-7
56. Crabtree JH, Shrestha BM, Chow KM, et al. Creating and Maintaining Optimal Peritoneal Dialysis Access in the Adult Patient: 2019 Update. *Perit Dial Int*. 2019;39(5):414-436. doi:10.3747/pdi.2018.00232
57. Moncrief JW. The Birth and Development of Continuous Ambulatory Peritoneal Dialysis. *Contrib Nephrol*. 2017;189:85-90. doi:10.1159/000450689
58. Rottenbourg J, Rostoker G. La réalité de la dialyse péritonéale en France : 40 ans après. [The reality on peritoneal dialysis in France: 40years after]. *Nephrol Ther*. 2018;14(7):507-517. doi:10.1016/j.nephro.2018.02.021