# Systematized Postoperative Nursing Visit in Laparoscopic Cholecystectomy: An Integrative Review and Checklist Proposal

Visita de Enfermagem Pós-operatória Sistematizada em Colecistectomia Videolaparoscópica: Uma Revisão Integrativa e Proposta de Checklist

Visita de Enfermería Postoperatoria Sistematizada en Colecistectomía Laparoscópica: Una Revisión Integradora y Propuesta de Lista de Verificación

**RESUMO**

**Objetivo:** Sintetizar as evidências científicas sobre o impacto da visita de enfermagem pós-operatória na segurança e recuperação de pacientes submetidos à colecistectomia videolaparoscópica e elaborar um checklist aplicável à prática clínica, derivado da síntese das evidências. **Método:** Revisão integrativa conduzida nas bases PubMed, LILACS e SciELO, em março de 2025, com estudos publicados entre 2014 e 2024, nos idiomas português, inglês e espanhol. **Resultados:** Dos 81 estudos identificados, 10 compuseram a amostra final. A sistematização da visita de enfermagem mostrou reduzir complicações como infecção de sítio cirúrgico (predominantemente detectada após alta), acelerar a recuperação gastrointestinal, reduzir marcadores de estresse e ansiedade, e aumentar a satisfação do paciente. **Conclusão:** A visita de enfermagem pós-operatória sistematizada é fundamental para desfechos seguros e humanizados. O checklist proposto constitui um produto derivado da revisão, com potencial para aplicação clínica.

**DESCRITORES:** Enfermagem Perioperatória; Colecistectomia Laparoscópica; Período Pós-Operatório; Segurança do Paciente.

**ABSTRACT**

**Objective:** To synthesize scientific evidence on the impact of postoperative nursing visits on the safety and recovery of patients undergoing laparoscopic cholecystectomy and to develop a clinical practice checklist derived from the evidence synthesis. **Method:** An integrative review was conducted in the PubMed, LILACS, and SciELO databases in March 2025, including studies published between 2014 and 2024 in Portuguese, English, and Spanish. **Results:** Out of 81 identified studies, 10 composed the final sample. The systematization of nursing visits was shown to reduce complications such as surgical site infection (predominantly detected after discharge), accelerate gastrointestinal recovery, reduce markers of stress and anxiety, and increase patient satisfaction. **Conclusion:** The systematized postoperative nursing visit is fundamental for safe and humanized outcomes. The proposed checklist constitutes a product derived from the review, with potential for clinical application.

**DESCRIPTORS:** Perioperative Nursing; Cholecystectomy, Laparoscopic; Postoperative Period; Patient Safety.

**RESUMEN**

**Objetivo:** Sintetizar la evidencia científica sobre el impacto de la visita de enfermería postoperatoria en la seguridad y recuperación de pacientes sometidos a colecistectomía laparoscópica y elaborar una lista de verificación aplicable a la práctica clínica, derivada de la síntesis de la evidencia. **Método:** Revisión integradora realizada en las bases de datos PubMed, LILACS y SciELO en marzo de 2025, con estudios publicados entre 2014 y 2024, en idiomas portugués, inglés y español. **Resultados:** De 81 estudios identificados, 10 constituyeron la muestra final. La sistematización de la visita de enfermería mostró reducir complicaciones como la infección del sitio quirúrgico (predominantemente detectada tras el alta), acelerar la recuperación gastrointestinal, reducir marcadores de estrés y ansiedad, y aumentar la satisfacción del paciente. **Conclusión:** La visita de enfermería postoperatoria sistematizada es fundamental para resultados seguros y humanizados. La lista de verificación propuesta constituye un producto derivado de la revisión, con potencial para aplicación clínica.

**DESCRIPTORES:** Enfermería Perioperatoria; Colecistectomía Laparoscópica; Periodo Posoperatorio; Seguridad del Paciente.

**Camila de França Corrêa**
Undergraduate Nursing Student. Integrated Faculty of Amazonia – FINAMA
ORCID: https://orcid.org/0009-0000-9288-8550

**Lídia do Socorro de Souza Cardoso da Silva**
Undergraduate Nursing Student. Integrated Faculty of Amazonia – FINAMA
ORCID: https://orcid.org/0009-0005-7622-6078

**Lucas Monteiro da Trindade**
Master's Degree in Epidemiology and Health Surveillance. Integrated Faculty of Amazonia – FINAMA
ORCID: https://orcid.org/0000-0002-6284-0115

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## INTRODUCTION

Laparoscopic cholecystectomy (LC) is one of the most common abdominal surgical procedures worldwide. Although minimally invasive, it has the potential for postoperative complications such as bleeding, surgical site infection (SSI), and thromboembolic events [1]. In

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this context, postoperative nursing care, especially systematic visits, is a strategic practice for the early detection of complications, promoting comfort, and educating patients about self-care[2].

However, evidence points to a significant gap between the theoretical potential of these visits and their implementation in routine clinical practice. The absence of standardized protocols results in inconsistent assessments, communication failures, and fragmented care, compromising patient safety and the quality of outcomes [3]. Studies such as that by Machado et al. [4] reinforce this concern, demonstrating that complications such as SCI are often diagnosed only after hospital discharge, highlighting the need for active surveillance.

Given this scenario, this study aimed to synthesize the scientific evidence on the impact of postoperative nursing visits on the safety and recovery of patients undergoing laparoscopic cholecystectomy and to develop a checklist applicable to clinical practice, derived from the synthesis of the evidence.

## METHOD

This is an Integrative Literature Review, conducted according to the protocol of Mendes, Silveira, and Galvão [5], which comprises the following steps: development of the guiding question, literature search, data collection, critical evaluation of studies, analysis and synthesis of results, and presentation of the review.

The guiding question was: "What is the impact of postoperative nursing visits on the safety and recovery of patients undergoing laparoscopic cholecystectomy?"

The search was conducted in March 2025 in the PubMed, LILACS, and SciELO databases, using controlled descriptors (DeCS/MeSH) and their synonyms: ("Postoperative Period" OR "Postoperative Care") AND ("Nursing" OR "Perioperative Nursing" OR "Operating Room Nursing") AND ("Laparoscopic Cholecystectomy"), combined with the Boolean operator AND. The time frame was defined as 2014 to 2024.

Original and review articles in Portuguese, English, or Spanish, available in full text, that directly addressed nursing care in the postoperative period of LVC were included. Duplicate articles, articles not available in full text, articles that did not focus on the specific role of nursing, or articles whose population was not adults undergoing LVC were excluded.

Data were extracted using a standardized instrument containing: author, year, objectives, methodology, sample, and results.

As a product of the synthesis and based on the findings, domains were structured that reflected categories of care evidenced in the studies. The items were written in an objective, operational, and clinically applicable manner. The instrument does not constitute formal validation, as it is an applied synthesis of the evidence.

## RESULTS

The initial search of electronic databases resulted in the identification of 81 publications, distributed as follows: SCIELO (23), LILACS (20), PUBMED (38). Filters for full-text availability and languages (English and Portuguese) were applied.

These 81 records were submitted for reading of titles and abstracts, at which point 67 studies were excluded based on the following criteria: lack of free availability of the full text [12], inadequacy to the central theme of the review (37), being narrative reviews (6), newspaper articles [3], or duplicate records between databases [9].

From this screening, 14 articles were selected for full-text reading. After this evaluation, 4 studies were excluded because they did not fully meet the predefined objectives and inclusion criteria.

Table 1 presents a summary of the articles included in the Integrative Review.

**Tabla 1. Bases de datos, estrategias y resultados de las búsquedas. Salvador, BA, Brasil, 2025.**

| Authors/Year | Study Design | Key Findings | Contribution to the Checklist |
|---|---|---|---|
| MACHADO et al., 2019 | Descriptive study | ISC rate of 5.9%, with 100% of cases diagnosed after hospital discharge | Supports the need for post-discharge surveillance and systematic evaluation of the surgical site |
| XU et al., 2020 | Randomized clinical trial | Preoperative visit reduces anxiety and postoperative complications | Reflects the importance of psychological support and communication |
| BARBOSA et al., 2024 | Randomized clinical trial | Clinical benefit in pain control with local anesthesia (p=0.14) | Supports the assessment and management of postoperative pain |
| LAN et al., 2022 | Retrospective study | Reduction in complications (5.75% vs. 14.94%, P=0.0464) and greater satisfaction (94.25% vs. 79.31%, P=0.0036) | Validates individualized nursing and zero-defect approach |
| CHEN et al., 2025 | Cohort study | Significantly lower pain (VAS) on days 3 and 7 (P<0.05) and improved quality of life | Corroborates systematic pain assessment and recovery metrics |


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| | | | |
|---|---|---|---|
| LI et al., 2021 | Retrospective study | Reduction in stress markers, acceleration of gastrointestinal recovery, and improvement in QoL (P<0.05) | Supports systematized care and gastrointestinal assessment |
| ZHANG & ZHANG, 2024 | Interventional study | Lower pain scores (VAS) and improved quality of life (P<0.05) with early nutrition | Supports nutritional guidelines and symptom management |
| BARBOSA et al., 2025 | Integrative review | Summary of the main indications and complications of CVL | Basis for inclusion of common complications in the checklist |
| RAMOS et al., 2021 | Development study | Validated educational manual for patients and family members | Supports health education and use of support material |
| MELLOY et al., 2016 | Observational study | Reduction in hospitalization time and costs with proactive care | Evidence of the cost-effectiveness of nursing interventions. |

Source: Constructed by the authors (2025).

The analysis allowed the impacts of systematic nursing care to be categorized into three areas:

1. **Complication Surveillance and Prevention:** Machado et al. (4) reported an ISC rate of 5.9%, with all cases diagnosed after discharge. Interventions such as systematic nursing (6) were associated with a significant reduction in complications.
2. **Acceleration of Physiological Recovery:** Li et al. (6) demonstrated that systematic care significantly shortened the time to recovery of bowel sounds, first ambulation, and hospital discharge, in addition to reducing stress symptoms.
3. **Psychological Well-Being and Education:** An approach incorporating psychological support and structured education (6,7) showed a significant reduction in anxiety and depression levels and increased patient satisfaction.

As a result of the synthesis of evidence, a structured *checklist* was developed for postoperative nursing visits in patients undergoing laparoscopic cholecystectomy (Figure 1). The instrument was designed to operationalize the main findings of this review in clinical practice, materializing the transition between scientific evidence and patient care.

The patient safety approach begins at the top of the checklist, which includes the date, time of the visit, patient name, hospital record, nurse in charge, and postoperative days (POD). This structure ensures that the assessment is applied to the correct patient at the appropriate clinical moment, in addition to creating an auditable record that strengthens professional responsibility and continuity of care.

The *checklist* is organized into four interdependent categories:

1. **Clinical Safety and Complication Monitoring:** This category incorporates items directly related to complications identified in the literature, such as assessment of the surgical site for early detection of infection [4], assessment of gastrointestinal function [6,13], and prophylaxis of venous thromboembolism [14]. The effectiveness of this active surveillance is supported by studies demonstrating a significant reduction in complications with systematic nursing interventions [9,11,17].
2. **Symptom Control and Comfort:** This includes the systematic assessment of pain [10,12] and nausea, as well as guidance on referred pain, a common phenomenon in the postoperative period of this procedure (10). Robust evidence shows that specific nursing interventions result in significantly lower pain scores and greater comfort in the postoperative period [12,18,22].
3. **Psychological Support and Humanized Communication:** This dimension was included to address the impact on psychological well-being, with items that assess anxiety and communication effectiveness, reflecting the benefits reported by interventions that significantly reduce anxiety and improve patients' emotional comfort [6,9,19,20]. Preoperative education, including through multimedia resources [21], has proven particularly effective in this dimension.
4. **Health Education and Discharge/Follow-up Guidance:** The backbone of humanized care and self-care, this category aims to ensure patient understanding of home care, warning signs, and the use of support materials, as validated by the effective use of educational manuals [7] and telephone interventions [16]. E-health strategies have also shown promise in accelerating recovery and improving adherence to guidelines [23].

The *checklist* is presented in Figure 1.

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**Figure 1. Checklist for Postoperative Nursing Visits in Laparoscopic Cholecystectomy**

**A**

**CATEGORIA 1 - SEGURANÇA CLÍNICA E MONITORIZAÇÃO DE COMPLICAÇÕES**

| Item | Verificação | Sim | Não | N/A | Observações / Ações |
|---|---|---|---|---|---|
| 1.1 | **Estado Hemodinâmico:** PA e FC dentro dos parâmetros de normalidade para o paciente? | □ | □ | □ | PA: x mmHg / FC: ____ bpm |
| 1.2 | **Estado Térmico:** Ausência de febre (T < 37,8°C)? | □ | □ | □ | Temperatura: ____ °C |
| 1.3 | **Sitio Cirúrgico:** Avaliação dos portais. Ausência de sinais flogísticos (hiperemia, edema, secreção)? | □ | □ | □ | *Descrever aspecto:* _____ |
| 1.4 | **Sinais de Alerta para Complicações:** Ausência de dor abdominal intensa e localizada, icterícia ou sangramento ativo? | □ | □ | □ | |
| 1.5 | **Função Gastrointestinal:** Presença de ruídos hidroaéreos? Tolerância à dieta oral? | □ | □ | □ | |
| 1.6 | **Eliminação Vesical:** Diurese presente e adequada? | □ | □ | □ | |
| 1.7 | **Profilaxia de TEV:** Deambulação precoce realizada ou medidas mecânicas em uso (se prescritas)? | □ | □ | □ | |

**B**

**CATEGORIA 2: CONTROLE DE SINTOMAS E CONFORTO**

| Item | Verificação | Sim | Não | N/A | Observações / Ações |
|---|---|---|---|---|---|
| 2.1 | **Avaliação da Dor:** Escala validada utilizada (EVA/NRS). Dor controlada (EVA/NRS ≤ 3)? | □ | □ | □ | **Escala:** ____ / 10 |
| 2.2 | **Manejo da Dor:** Analgesia prescrita é eficaz e administrada conforme necessidade? | □ | □ | □ | |
| 2.3 | **Náusea/Vômito:** Ausência de náuseas ou vômitos persistentes? | □ | □ | □ | |
| 2.4 | **Dor Referida:** Paciente orientado sobre a possibilidade de dor em ombros/ costas (irritação frênica) e sua natureza transitória? | □ | □ | □ | |

**C**

**CATEGORIA 3: SUPORTE PSICOLÓGICO E COMUNICAÇÃO HUMANIZADA**

| Item | Verificação | Sim | Não | N/A | Observações / Ações |
|---|---|---|---|---|---|
| 3.1 | **Estado Ansioso:** Paciente e/ou família demonstram compreensão e tranquilidade acerca da evolução? Ausência de sinais evidentes de ansiedade? | □ | □ | □ | |
| 3.2 | **Comunicação:** Foram oferecidas informações claras sobre a evolução esperada, cuidados no pós-operatório e sinais de alerta? | □ | □ | □ | |
| 3.3 | **Acolhimento:** Oportunidade para esclarecimento de dúvidas foi dada e respondida de forma empática? | □ | □ | □ | |

**D**

**CATEGORIA 4: EDUCAÇÃO EM SAÚDE E ORIENTAÇÕES PARA ALTA/SEGUIMENTO**

| Item | Verificação | Sim | Não | N/A | Observações / Ações |
|---|---|---|---|---|---|
| 4.1 | **Cuidados com os Portais:** Orientação sobre higiene local, manter curativos secos e sinais de infecção foi fornecida e compreendida? | □ | □ | □ | |
| 4.2 | **Atividade Física:** Orientação sobre deambulação, evitar esforços intensos e retorno gradual às atividades foi fornecida? | □ | □ | □ | |
| 4.3 | **Dieta:** Orientação sobre dieta habitual e sinais de intolerância alimentar foi fornecida? | □ | □ | □ | |
| 4.4 | **Medicação:** Esclarecimento sobre esquema analgésico e outras medicações para uso domiciliar foi realizado? | □ | □ | □ | |
| 4.5 | **Sinais de Alerta Pós-Alta:** Paciente e família foram instruídos sobre quando retornar ao serviço (ex.: febre, dor intensa, icterícia, secreção purulenta)? | □ | □ | □ | |
| 4.6 | **Material de Apoio:** Foi utilizado ou oferecido material educativo de apoio (ex.: manual, folheto)? | □ | □ | □ | |

## DISCUSSION

The results of this integrative review demonstrate that the systematization of postoperative nursing visits in laparoscopic cholec=ystectomy (LCE) represents a fundamental pillar for the qualification of care, positively impacting multiple outcomes. The convergence of evidence from national and international studies corroborates the effectiveness of this practice, transcending geographical and cultural barriers.

The high rate of surgical site infection (5.9%) identified by Machado et al. [4], with all cases diagnosed only in the post-discharge period, exposes a critical vulnerability in surveillance systems. This finding highlights the need for active monitoring instruments that extend beyond the hospital environment, with the proposed checklist being a strategic tool for this purpose. The effectiveness of post-discharge follow-up is corroborated by Schulz et al. [16], who demonstrate that telephone interventions reduce factors related to delayed surgical recovery.

In the context of accelerated physiological recovery, the findings of Li et al. [6] on the significant acceleration of gastrointestinal recovery and reduction of stress markers are echoed in multiple studies. Qiu et al. [17] showed that nursing interventions significantly reduce hospitalization time and costs, while Ding [18] proved that rapid recovery care reduces physiological and psychological stress in elderly patients. This evidence converges to demonstrate that standardizing interventions such as early ambulation and encouraging gastrointestinal recovery not only promote comfort but also serve as active strategies for preventing complications.

The impact on psychological well-being is equally crucial. The significant reduction in anxiety and depression observed by Li et al. [6] is consistently validated by other studies. Xu et al. [9] and Sadati et al. [19] demonstrated that preoperative nursing visits significantly reduce presurgical anxiety and postoperative complications. The effectiveness of educational interventions is enhanced by the use of technology, as demonstrated by Togaç et al. [20] with individualized audiovisual education and Sadeghi et al. [21] with multimedia education, reinforcing the importance of adapting communication strategies to contemporary needs.

Patient satisfaction emerges as a sensitive marker of quality of care. The high satisfaction rates (94.25%) reported by Lan et al. [11] with individualized nursing are consistent with the findings of Gao et al. [22] on the positive effects of comfort care on quality of life and satisfaction. This subjective but crucial dimension reflects the effectiveness of the integration between technical competence and relational skills.

The operationalization of the proposed *checklist* represents the practi-


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cal materialization of this evidence, synergistically integrating the technical and human dimensions of care. Its structure, organized into four interrelated domains, not only allows for the standardization of care but also generates auditable records that support continuous quality improvement. The potential of such instruments is amplified by technological innovations, as demonstrated by van der Meij et al.[23] with personalized interventions that accelerate the return to normal activities.

For the application of the checklist, it is suggested that it should be used by nurses and trained staff during the postoperative visit, preferably within the first 24 hours and at the time of discharge, with systematic completion during interaction with the patient and recording in the medical record (electronic or physical), use as an educational and auditing tool, in addition to integration with institutional discharge protocols.

This study is subject to limitations inherent to the integrative review design. The methodological heterogeneity of the primary studies included may influence the generalization of the results. Robust evidence on the cost-effectiveness of the nursing interventions investigated is still incipient, particularly in the national context. Although the findings consistently point to benefits such as reduced hospitalization time, more in-depth economic analyses are imperative to consolidate the value of these interventions and inform resource allocation decisions in clinical practice.

## CONCLUSION

This integrative review demonstrated that systematic postoperative nursing visits in patients undergoing CVL positively impact safety outcomes, accelerate recovery, and promote psychological well-being. The *checklist* developed, based on this evidence, is a potentially viable and strategic tool for bridging the gap between scientific knowledge and healthcare practice.

Future studies are recommended for clinical validation of the instrument among nursing professionals and assessment of its impact on reducing complication rates and hospital readmissions.

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