

CARE TRANSTION IN HOSPITAL DISCHARGE FOR ADULT PATIENTS: INTEGRATIVE LITERATURE REVIEW

Jociele Gheno^{1,2} Alísia Helena Weis²

¹Grupo Hospitalar Conceição. Porto Alegre, Rio Grande do Sul, Brasil. ²Universidade Federal de Ciências da Saúde de Porto Alegre, Programa de Pós-Graduação em Enfermagem. Porto Alegre, Rio Grande do Sul, Brasil.

ABSTRACT

Objective: to summarize and analyze the scientific production on care transition in the hospital discharge of adult patients.

Method: integrative review, conducted from May to July 2020, in four relevant databases in the health area: *Public Medline* (PubMed); Scientific Electronic Library Online (SciELO); Scopus and Virtual Health Library (VHL). The analysis of the results occurred descriptively and was organized into thematic categories that emerged according to the similarity of the contents extracted from the articles.

Results: 46 articles from national and international journals, with a predominance of descriptive/nonexperimental studies or qualitative studies, met the inclusion criteria. Five categories were identified: discharge and post-discharge process; Continuity of post-discharge care; Benefits of care transition; Role of nurses in care transition and Experiences of patients on care transition. Hospital discharge and care transitions are interconnected processes as transitions qualify the dehospitalization process. Different strategies for continuity of care should be adopted, as they offer greater safety to the patient. Studies have shown that nurses play a fundamental role in transitions and, in Brazil, this activity still needs to gain more space. Reduced hospitalizations, mortality, hospital costs and patient satisfaction are benefits of transitions.

Conclusion: care transition is an effective strategy for the care provided to the patient being discharged. It points out the need for integration between the care network and assists services in decision-making about the continuity of care on discharge.

DESCRIPTORS: Care Transition. Discharge from the patient. Continuity of patient care. Health management. Nursing.

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TRANSIÇÃO DO CUIDADO NA ALTA HOSPITALAR DE PACIENTES ADULTOS: REVISÃO INTEGRATIVA DE LITERATURA

RESUMO

Objetivo: sintetizar e analisar a produção científica sobre a transição do cuidado na alta hospitalar de pacientes adultos.

Método: revisão integrativa, realizada de maio a julho de 2020, em quatro bases de dados relevantes na área da saúde: *Public Medline* (PubMed); *Scientific Electronic Library Online* (SciELO); Scopus e Biblioteca Virtual em Saúde (BVS). A análise dos resultados ocorreu de forma descritiva e organizada em categorias temáticas que surgiram conforme a similaridade dos conteúdos extraídos dos artigos.

Resultados: atenderam aos critérios de inclusão 46 artigos, de periódicos nacionais e internacionais, com predomínio de estudos descritivos/não experimentais ou com abordagem qualitativa. Foram identificadas cinco categorias: Processo de alta e pós-alta hospitalar; Continuidade do cuidado pós-alta; Benefícios da transição de cuidado; Papel do enfermeiro na transição de cuidado e Vivências de pacientes sobre a transição de cuidado. A alta hospitalar e as transições de cuidados são processos interligados, pois as transições qualificam o processo de desospitalização. Diferentes estratégias para a continuidade do cuidado devem ser adotadas, pois oferecem maior segurança ao paciente. Estudos mostraram que o enfermeiro tem papel fundamental nas transições e, no Brasil, essa atividade ainda precisa ganhar mais espaço. A redução das reinternações, mortalidade, custos hospitalares e a satisfação dos pacientes são benefícios das transições. **Conclusão:** a transição do cuidado ascende como estratégia eficaz para a qualificação do cuidado prestado ao naciente que está sendo desospitalização. Anonta a necessidade de integração entre a rede assistencial e

ao paciente que está sendo desospitalizado. Aponta a necessidade de integração entre a rede assistencial e auxilia os serviços na tomada de decisão sobre a continuidade do cuidado na alta.

DESCRITORES: Cuidado de transição. Alta do paciente. Continuidade da assistência ao paciente. Gestão em saúde. Enfermagem.

TRANSICIÓN DE LA ATENCIÓN EN EL ALTA HOSPITALARIA PARA PACIENTES ADULTOS: REVISIÓN INTEGRATIVA DE LA LITERATURA

RESUMEN

Objetivo: sintetizar y analizar la producción científica sobre la transición de la atención al alta hospitalaria del paciente adulto.

Método: una revisión integradora, realizada de mayo a julio de 2020, en cuatro bases de datos relevantes en el área de la salud: Public Medline (PubMed); Scientific Electronic Library Online (SciELO); Scopus y Biblioteca Virtual en Salud (BVS). El análisis de los resultados fue descriptivo y organizado en categorías temáticas que surgieron de acuerdo a la similitud de los contenidos extraídos de los artículos.

Resultados: 46 artículos de revistas nacionales e internacionales cumplieron los criterios de inclusión, con predominio de estudios descriptivos / no experimentales o con abordaje cualitativo. Se identificaron cinco categorías: Proceso de alta hospitalaria y posterior al alta; Continuidad de la atención posterior al alta; Beneficios de la transición de la atención"; El papel de la enfermera en la transición de la atención y Experiencias de los pacientes en la transición de la atención. El alta hospitalaria y las transiciones de la atención. Se deben adoptar diferentes estrategias para la continuidad de la atención, ya que ofrecen mayor seguridad al paciente. Los estudios han demostrado que los enfermeros juegan un papel fundamental en las transiciones y, en Brasil, esta actividad aún necesita ganar más espacio. La reducción de los reingresos, la mortalidad, los costos hospitalarios y la satisfacción del paciente son beneficios de las transiciones.

Conclusión: la transición de la atención surge como una estrategia efectiva para calificar la atención brindada al paciente que se encuentra en proceso de deshospitalización. Señala la necesidad de integración entre la red de atención y ayuda a los servicios a tomar decisiones sobre la continuidad de la atención al alta.

DESCRIPTORES: Atención de transición. Alta del paciente. Continuidad de la atención al paciente. Manejo de la salud. Enfermería.



INTRODUCTION

Currently, one of the great challenges facing the demands in the health area is the management of hospital beds. The reduction of hospital stay and readmission rates, which are indicators of hospital performance and quality^{1–2}, is an important strategy for bed management³. In order to improve these indicators, there is a need for interventions that help in the proper organization for discharge, involving multidisciplinary teams, the patient, the family and support networks.

Thus, care transition is a strategy that can improve the reality of health services and their quality indicators. Care transition is defined as the interventions that coordinate patient care throughout their care in health services⁴. Each time the patient is transferred from a team, sector or health environment, a transition is considered, i.e., it can happen between the teams of the same hospital, different hospitals and between hospital teams and Primary Health Care (PHC) or home care. Care transition at discharge is characterized as a set of actions that coordinate and continue the care needed for patients outside the hospital environment⁴.

The participation of nurses in the care transition process to discharge has been growing^{5–6}. The growing and active participation in this process is related to the profile of nurses in activities of planning, organization and provision of comprehensive and safe care, which start from hospitalization and should continue after hospital discharge⁷.

The hospital discharge process is broad and complex. Ideally, discharge planning should start from the moment of hospitalization to ensure that the patient leaves the hospital at the appropriate time and with the proper organization of post-discharge needs⁶. Authors consider that essential components for transition care, which, if followed, avoid poor results, patient and family involvement, communication, collaboration between team members, adequate education for the patient and family, and continuity of care in health services⁵, among others. Thus, the lack of one of the components implies an inefficient transition with unsatisfactory results. When dehospitalization occurs within the expected time, without any complications, an increase in the length of hospital stay is avoided. For this, it is necessary to consider factors that imply discharge, such as the needs of each patient, the structure and organization of the family, and the support of health care networks as fundamental elements to reduce the risk of rehospitalization. In the scenario of hospitalizations, the over 20 years of age population occupies most of the beds with diseases of the circulatory system, digestive tract, injuries from poisoning or external causes, neoplasms and respiratory diseases⁸. The number of hospitalizations in Brazil among this population has increased by approximately 8.7% in the last five years⁸. Chronic conditions such as cancer, cardiovascular disease and diabetes can lead to increased hospital stay and the risk of readmission by 30 days^{9–10}. In addition, prolonged hospitalization time is related to increased chances of readmissions9.

Unplanned hospital readmission within 30 days can be seen as team failures, possibly due to the fact that it was an early discharge or inefficient planning⁶. Spending on unplanned readmission in the United States reached \$15-20 billion a year³. In this country, in 2007, 21.5% of patients were readmitted within 30 days, but these rates fell over the years, reaching 17.8% in 2015¹¹. 30-day readmission surveys conducted in Brazil found rates of 12.4 and 14.2%^{10,12}. It was also identified in another study that adults over 20 years of age have higher rates of rehospitalizations compared to the lower age groups¹⁰.

The reduction in hospitalization time and readmission corroborates the reduction of health expenses and can improve the quality of life (Qol) of patients³. Therefore, care transition is essential to the dehospitalization process and provide a safe discharge to patients.



However, the lack of publications that compiled the different ways of performing the care transition at hospital discharge of adult patients was identified. From this perspective, this study aims to fill this knowledge gap and enhance the knowledge translation process regarding care transition in health services. Thus the question is: what is the scientific production on care transition at hospital discharge for adult patients?.

The aim of the study is to summarize and analyze the scientific production on care transition at hospital discharge for adult patients.

METHOD

This is an integrative literature review conducted from May to July 2020. The following steps were followed in order to carry out this investigation: elaboration of the research question; data collection from the literature search of the studies; categorization of studies; evaluation of studies; data analysis and review presentation¹³.

The main question of the research was: what is the scientific production on the care transition in hospital discharge of adult patients?. For the construction of the question, the PICO strategy was used¹⁴, with P being – adult patients who were discharged from hospital, I – care transition at hospital discharge and O – scientific production on the main care transition strategies on discharge. It is noteworthy that the C element, comparison between intervention or group, was not used due to the type of review.

Studies available in full with free access, published in the last five years were (2015 to 2019), in the following *databases; Public Medline* (PubMed), *Scientific Electronic Library Online* (SciELO), Scopus and Virtual Health Library (VHL) were selected. The descriptors from the Descriptors in Health Sciences (DeCS) and the Medical Subject Headings (MeSH), in English, Portuguese and Spanish, being "transitional care", "patient discharge" and "continuity of patient care", combined with the *Boolean operator* AND were used.

Articles that did not address the adult population in care transition repeated articles, theses, dissertations, experience reports and theoretical studies were excluded. Review articles were included in the search. The delimited selection criteria were the studies that addressed the care transition at hospital discharge for adult patients and the care transition strategies employed in the studies.

An instrument was elaborated for the extraction of study data with the following items: title of the article; author(s); database; periodical; year of publication; objective(s); intervention; outcomes/ conclusions and level of evidence.

To define the level of scientific evidence, the following classification system was used: level I – evidence comes from systematic review, meta-analysis or clinical guidelines from systematic reviews of randomized controlled trials; level II – evidence derived from at least one well-designed randomized controlled trial; level III – evidence obtained from well-designed clinical trials without randomization; level IV – evidence from well-designed cohort and case-control studies; level V – evidence originating from systematic review of descriptive and qualitative studies; level VI – evidence derived from a single descriptive or qualitative study; level VII – evidence from the opinion of authorities and/or report of expert committees¹⁵.

A total of 280 articles were identified and, after applying the inclusion and exclusion criteria, 46 articles were selected for the sample of this review. For the selection of publications, the recommendations of *the Preferred Reporting Items for Systematic Reviews and Meta-Analyses* (PRISMA) were followed, as shown in Figure 1¹⁶.





Figure 1 – Flowchart of selection of studies elaborated from PRISMA orientation. Porto Alegre, Brazil, 2020.

The 46 selected articles were read and analyzed. The summary and critical analysis of the studies were carried out descriptively and organized by content similarities in five thematic categories: Discharge process and post-hospital discharge; Continuity of post-discharge care; Benefits of the care transition; Role of nurses in the care transition and Experiences of patients regarding care transition.

RESULTS

Among the 46 studies selected, the year that obtained the highest number of publications was 2018, with 37% of the studies. The years 2017 and 2016 totaled 22%; 2015 totaled 13% and 2019, 6% of the selected publications. In relation to the journals, 31 journals that published the articles were identified. *The BMC Health Services Research* stands out, with nine articles; JAMA, with four articles; *the Journal of the American Geriatrics Society*, with three articles; and the journals *Age Ageing*, Journal Hospital *of Medicine*, Journal of General Internal Medicine *and Geriatric Nursing* published two articles. All other journals published one article in the period selected for the study.

As for the classification according to the level of evidence (EL),15 most articles were classified as level IV (evidence from a well-designed cohort and case-control study), 41.3% of the total. Among the others, 24% were classified as level VI (evidence from a single descriptive or qualitative study); 21.7% as level II (evidence from at least one randomized controlled clinical trial); 6.5% as level V (evidence presented from systematic review, descriptive and qualitative studies); 4.3% as level I (evidence comes from systematic review, meta-analysis or clinical guidelines from systematic reviews of randomized controlled clinical trials); 2.2% as level VII (evidence derived from the opinion of authorities and/or expert committee opinion) and no article was classified as level III (evidence



derived from well-designed clinical trials without randomization). Thus, it can be concluded that most of the studies included in this review have an intermediate level of evidence.

Among the studies on hospital readmission, some common characteristics among patients were identified. Among the most common pathologies, cardiovascular diseases^{17–21} and Chronic Obstructive Pulmonary Disease (COPD) stand out.21,22 In addition, some articles selected elderly patients^{23–25} and with LACE score (predictive readmission score) in their samples greater than or equal to ten²⁶.

Chart 1 shows the summary of information extracted from the sample articles.

| Authors | Year | NE* | Objective | Outcome/Conclusion |
|--------------------------------------|------|-----|---|--|
| Soto GE, et al. ¹⁷ | 2018 | 4 | Evaluate the impact of implementing a structured transition care pathway involving low-risk cardiac patients at emergency room discharges, revisits and admissions in 30 days. | Increased number of discharges in the emergency room of cardiac patients, cost savings and lower risk of returning to the emergency room among patients receiving transitional care. |
| Garnier A, et al. ¹⁸ | 2018 | 4 | Evaluate the effectiveness of a multidisciplinary transition plan to reduce early readmission among patients with heart failure. | The care transition plan showed no benefits in readmission rates. |
| Cao XY, et al. ¹⁹ | 2017 | 2 | Evaluate the effects of a transition program of partnership between hospital and community among patients with coronary heart disease. | Care transition program achieved significant results in reducing readmission rates, improving the quality of the transition and adhering to the use of medications. |
| Wong FKY, et al. ²⁰ | 2016 | 2 | To analyze the effects of transitional palliative care in patients with end- stage heart failure (HF) after hospital discharge. | Reduction of readmissions and improvement of quality of life among hf patients of the post-discharge palliative program. |
| Hamar B, et al. ²¹ | 2016 | 4 | Evaluate <i>the Care Transition Solution</i> (CTS) as a means of improving quality by reducing avoidable hospital readmissions among patients with readable-sensitive conditions subject to the penalties imposed by the Affordable Care Act. | The implementation of a transition care program has significantly reduced the readmissions of patients diagnosed with COPD, HF, infarction or pneumonia. |
| Aboumatar H, et al. ²² | 2018 | 2 | Evaluate a program that combined transition and long-term self- management support for patients hospitalized due to COPD and their family caregivers. | The program resulted significantly in fewer hospitalizations, emergency room visits and improved health quality. |
| Pauly MV, et al. ²³ | 2018 | 4 | Compare the costs of post-acute care of three care management interventions. | The care transition model can reduce the amount of other post-acute care and the total cost compared to other care models. |
| Reidt SL, et al. ²⁴ | 2016 | 4 | Describe the interprofessional collaborative practice model and compare the results between individuals who received care according to this model and those who received usual care. | The interprofessional collaborative practice model is performed by a geriatric, a nurse and a pharmacist. The actions of this model can decrease hospitalizations and visits to the emergency room within 30 days after discharge. |

Chart 1 - Summary of information extracted from articles. Porto Alegre, Brazil, 2020.



Chart 1 - Cont.

| Authors | Year | NE* | Objective | Outcome/Conclusion |
|---------------------------------------|------|-----|--|---|
| Neighbour BM, et al. ²⁵ | 2016 | 2 | Testing whether a systematic comprehensive geriatric assessment (CGA) intervention followed by the care transition program improved activities of daily living (ADLs) compared to isolated systematic CGA. | The intervention showed no effect on ADLs compared to the isolated systemic CGA. But there was a significant reduction in mortality in one month and six months after admission. |
| Low LL, et al. ²⁶ | 2017 | 2 | Assess whether the new application of the integrated practice unit concept and the virtual ward model can reduce the readmission of patients at higher risk of readmission. | The application of the concept of a practice unit integrated into the virtual ward program resulted in reduced readmissions in patients at higher risk of readmission. Patients were discharged and post-discharge follow-up with calls or visits. |
| Eggen AC, et al. ²⁷ | 2018 | 4 | Provide an appropriate method to systematically evaluate the procedure of hospital discharge of terminal patients that can be implemented in any hospital to analyze the process of hospital discharge. | To improve transitional care, the discharge procedure should include well-structured written and oral transfer, with more emphasis on prior care planning and actual use of medication. |
| Couturier B, et al. ²⁸ | 2016 | 5 | Explore the association between the components of the hospital discharge process, including subsequent continuity of care and patient outcomes in the post-discharge period. | Regardless of the discharge process, this review found no association between hospital discharge and patient health outcome, but addressed the importance of hospital discharge planning. |
| Kable A, et al. ²⁹ | 2015 | 6 | Report to community health professionals, residents and clinicians about the discharge process and transition arrangements for people with dementia and their caregivers. | Described discharge planning and transitional care as a complex process with multiple employees and components. Two themes emerged: barriers to effective planning of discharge of people with disabilities and their caregivers and failures in the process of care transition and the associated results for discharge of people with dementia. |
| Rattray NA, et al. ³⁰ | 2017 | 6 | Investigate barriers and facilitators of effective communication between stroke patients/transient ischemic attack and primary care providers. | Ambiguity about who is being transferred and time pressures in the acute scenario can lead inpatient professionals to give lower priority to discharge communication, leaving outpatient health professionals with poor quality information. Although electronic models have standardized the main components of discharge documentation, opportunities for improvement remain. |

| Authors | Year | NE* | Objective | Outcome/Conclusion |
|---------------------------------------|------|-----|---|--|
| Lindquist LA, et al. ³¹ | 2017 | 7 | Identify best practice recommendations for optimal home transitions. | Presents a set of actionable items that can be implemented in a daily workflow in post-discharge care transitions. The goal of these good practices recommended by consensus is to provide a safe and high-quality transition for patients moving between hospital care and primary care. |
| Stella SA, et al. ³² | 2016 | 4 | Determine whether the treatment of hospital physicians can identify and resolve early discharge problems through a structured telephone call. | The treatment of physicians identified problems in more than half of the patients contacted by telephone shortly after discharge, the highest proportion of which were new or aggravating symptoms. They were able to resolve most of the problems identified through a brief telephone contact without using additional resources. |
| Record JD, et al. ³³ | 2015 | 4 | Explore associations between patient-centered care and patients' perspectives on the quality of transition care – <i>Care Transitions</i> <i>Measure</i> (CTM-3). | Post-discharge telephone call, an element of patient-centered care, was associated with higher CTM-3 scores, which, in turn, demonstrated to decrease the risk of patients performing emergency visits within 30 days after discharge. |
| Hewner S, et al. ³⁴ | 2018 | 4 | Demonstrate the feasibility of implementing the Transition Coordinating Intervention in a primary care environment to reduce hospitalizations by delivering evidence-based clinical decision support to the right person, in the right place, at the right time using health information exchanges. | Positive results with the use of technology. Technology has the potential to support quality improvement processes throughout care by providing relevant and actionable evidence-based information to the right person, location, time, and path when integrated into existing workflows. |
| The S. ³⁵ | 2017 | 4 | Determine whether a pharmacist's telephone follow-up intervention focused on supporting patient medication management is associated with a reduction in readmission rates within 30 days; describe the number and types of interventions of the pharmacist in the care transitions. | Post-discharge pharmaceutical guidance by telephone did not reduce readmission, but was important for patient safety. |
| Phatak A, et al. ³⁶ | 2016 | 2 | Evaluate the impact of pharmacist involvement in care transitions, measured by decreased medication errors and adverse drug events, 30- day readmissions, and visits to the emergency department. | The performance of pharmacists had a positive impact on the reduction or prevention of adverse events with medications, hospital admissions and emergency visits. |

Chart 1 - Cont.

| Authors | Year | NE* | Objective | Outcome/Conclusion |
|---------------------------------------|------|-----|--|--|
| Ballard J, et al. ³⁷ | 2018 | 4 | Report the results of the largest and longest known study to date evaluating the possible reduction in the 30-day readmission rate using Medicare requirements for Transition Care Management (CTM) services in a single practice site and determine how the CTM contributes to reductions in 30-day readmission rates. | This study provides evidence that primary care-based CTM can reduce readmissions by 30 days. |
| Wong S, et al. ³⁸ | 2018 | 6 | Incorporate traditional care strategies into a protocol developed to monitor patients with transcatheter aortic valve (TAVI) implantation after discharge. | The involvement of the post-TAVI advanced practice nurse was essential to ensure the careful assessment and management of the main risks after discharge. Patients followed by the nurse had lower rates of readmission than found in the literature. |
| Wong FK a. Y, et al. ³⁹ | 2015 | 2 | Examine the differential economic benefits of home visits with phone calls and only phone calls in the transient discharge support. | The grouped intervention involving home visits and calls was more effective than just calls in reducing readmissions. However, when the cost factor is included, the complex intervention of the combined use of visits and home connections may not necessarily have the advantage of calls only. |
| Galbraith AA, et al. ⁴⁰ | 2017 | 2 | Assess the impact of an intervention for high-risk patients on health system costs 180 days after discharge. | A post-discharge intervention with community health agents providing transitional care for high-risk patients in a safety environment reduced costs by 180 days for older patients and did not significantly increase overall costs for younger patients. |
| Finlayson K, et al. ⁴¹ | 2018 | 2 | Evaluate the comparative efficacy of transition care interventions in unplanned hospital readmissions within 28 days, 12 weeks and 24 weeks after hospital discharge. | Multifaceted transitional care interventions in hospital and community settings are beneficial, with lower hospital readmission rates, although only in the first 12 weeks. |
| Pacho C, et al. ⁴² | 2017 | 4 | Evaluate a structured multidisciplinary outpatient consultation for elderly and frail patients with HF after discharge; the impact of the consultation intervention on the readmission data. | This intervention contributed to a 50% reduction in the readmission rate for any cause within 30 days of discharge of HF patients. The results with the multidisciplinary outpatient consultation structured in the elderly, fragile population and with comorbidities were better than those of other strategies. |

| Chart | 1 – | Cont. |
|-------|-----|-------|
|-------|-----|-------|

| Authors | Year | NE* | Objective | Outcome/Conclusion |
|--------------------------------------|------|-----|--|---|
| Jackson C, et al. ⁴³ | 2015 | 4 | Identify the ideal time of hospital follow-up for patients with conditions of varying complexity. | The benefit of early outpatient follow-up after hospital discharge varies according to the clinical complexity of the patient. Although 7-day follow-up has been associated with substantially lower readmission rates among patients with greater clinical complexity and higher risk of readmission, most patients do not seem to benefit from very early follow-up. |
| Federman AD, et al. ⁴⁴ | 2018 | 4 | Report the results of the new model of hospital care at home. | Patients who had care at home in the 30 days after discharge from the service had the lowest hospitalization time; the lowest readmission rates, emergency visits, institutionalization and the best service ratings. |
| Low LL, et al. ⁴⁵ | 2015 | 4 | To assess whether the transition home care program operated by the Singapore General Hospital was effective in reducing acute hospital use. | Patients who participated in the home care program during the transition had lower rates of hospital use, with reduced hospitalizations and emergency care. There is growing evidence that supports the effectiveness of multidisciplinary transitional care programs in reducing the use of hospital resources. |
| Ritchie K, et al. ⁴⁶ | 2017 | 6 | Customize the electronic medical records to create a specific interprofessional care plan for dementia patients; use electronic medical records to facilitate a timely transition of information to community health care providers. | Use of the technology, which is an important means to facilitate and inform care, will help the transition of knowledge between the hospital and the community of adults with dementia. |
| Wang QQ, et al. ⁴⁷ | 2018 | 2 | Explore the effects of a mobile home care app with stoma patients who were discharged from the hospital. | Home follow-up through a mobile app can improve the level of psychosocial adjustment, the scale of self-efficacy, and other outcomes related to stoma patients. The application is an effective intervention to support psychosocial adjustment and self- efficacy of stomized patients after discharge. Ensures continuity of care and provides nursing guidance to patients in a timely manner. |
| Barber RD, et al.48 | 2015 | 6 | Provide information on how a social worker can improve the transition experience and health outcomes for the elderly. | The inclusion of social workers in transition care interventions can provide better connections with health services and based on the community, in addition to greater psychosocial support that leads to positive results in sustainable health. |

Chart 1 - Cont.

| Authors | Year | NE* | Objective | Outcome/Conclusion |
|---|------|-----|---|--|
| Toles M, et al. ⁴⁹ | 2016 | 5 | Identify whether transition care interventions, compared to usual care, improved clinical outcomes such as mortality, readmission rates, quality of life or functional status and describe the characteristics of the interventions, resources needed for implementation and methodological challenges. | The results suggest promising but limited evidence that transitional care improves patient clinical outcomes. |
| Kansagara D, et al. ⁵⁰ | 2016 | 1 | Summarize the effects on health and the use of transition care interventions and identify common themes about types of interventions, patient populations or contexts that modify these effects. | There was consistent evidence that improved discharge planning and hospital interventions at home reduced readmissions. |
| The Berre M, et al. ⁵¹ | 2017 | 1 | Determine the efficacy of interventions directed to the transitions from the hospital to primary care to elderly patients with chronic diseases. | Transition care for elderly patients with chronic diseases who were discharged from the hospital to home obtained the best results in reducing mortality and readmissions. |
| Hwang U, et al. ⁵² | 2018 | 4 | Examine the effect of transition care for a nurse in the emergency department. | Patients who received care from transition nurses in the emergency room, had lower hospitalization rates and emergency room visits. |
| Robertson FC, et al. ⁵³ | 2018 | 4 | Establish a transition care program with the objective of reducing the length of stay, improving discharge efficiency and reducing the readmission of neurosurgical patients, optimizing patient education and post-discharge surveillance. | The program was able to reduce the time of hospitalization, readmissions and improved the patient experience and the quality of care. |
| Bindman AB, Cox DF. ⁵⁴ | 2018 | 4 | Investigating whether receiving transitional care was associated with lower subsequent health costs and beneficiaries' mortality in the month following the provision of the service. | Medicare beneficiaries who received transitional care had lower total costs and mortality compared to those who did not receive these services. |
| Heim N, et al. ⁵⁵ | 2016 | 6 | Inform about the development, implementation and evaluation of a regional transitional care program, with the objective of improving the recovery rate of hospitalized and frail elderly patients. | By involving stakeholders in the design and development of the transitional care program, the commitment of health professionals has been guaranteed. Viable innovations in integrated transitional care for frail elderly patients after hospitalization were implemented sustainably within health organizations. |
| Acosta AM, et al. ⁵⁶ | 2018 | 6 | To analyze the activities performed by nurses in the transition from care to patients discharged from the hospital. | It was possible to evaluate the most frequent activities of nurses in the care transition, among them, the main one was education and health. The main difficulty was contact with primary care and follow-up of the post-discharge outcome. |



| Authors | Year | NE* | Objective | Outcome/Conclusion |
|--|------|-----|--|--|
| Weber LAF, et al. ⁵⁷ | 2017 | 6 | To identify nurses' activities in the transition from hospital to home care based on evidence in the literature. | The activities of nurses to develop care coordination in the transition from hospital to home include drug reconciliation, patient and/or caregiver guidance, home follow-up of the patient after hospital discharge, effective communication between the hospital and other health services, and support in the community. |
| Whitehouse CR, et al. ⁵⁸ | 2018 | 4 | To compare the results of elderly with type 2 diabetes mellitus and obesity after participation in a transition care intervention that included self- management education of diabetes and home care. | Rates of rehospitalization and glycemic control were analyzed, but did not have a large decrease, possibly due to the other comorbidities of each patient. |
| Aued GK, et al. ⁵⁹ | 2019 | 6 | Describe the activities developed by liaison nurses for continuity of care after hospital discharge. | Highlights the importance of hospitals appointing a professional to coordinate the hospital discharge process, playing the role of articulator between professionals, between services at different levels of care and advocating for the benefit of the patient. Without coordination actions, it is difficult to promote continuity of care. Suggests the implementation of the position of nurse liaison or a liaison service within the hospital. |
| Costa MFBNA et al. ⁶⁰ | 2019 | 6 | To know the profile and activities performed by the Hospital Nurse of Enlace for the continuity of care in Primary Health Care in Spain. | It is necessary to have capacity as an educator, work as a team and motivation. Activities include availability of resources and experience in the management of care for complex patients and their families. |
| Hestevik CH, et al. ⁶¹ | 2019 | 5 | Integrate current international findings in order to improve the understanding of the experiences of the elderly of adaptation to daily life at home after hospital discharge. | The results emphasize the importance of evaluation and planning, information and education, preparation of the home environment, involvement of the elderly and caregivers and support for self- management in the processes of discharge and follow-up at home. |
| Backman C, et al. ⁶² | 2018 | 6 | Involve the elderly with various chronic conditions and their families in the detailed exploration of their experiences during transitions in health environments and identify potential areas for future interventions. | It is important to strengthen support for care centered on the person and family, involving the elderly and families in their care transitions, providing better support and resources. |



Process of discharge and post-discharge from the hospital

Five articles were grouped on the process of discharge and post-discharge. Three of them addressed the importance of planning for hospital discharge^{27–29}; two articles discussed the difficulty found in this process in relation to high scores^{27,30} and all of them mentioned strategies to improve the dehospitalization process^{27–31}.

Discharge planning should begin from hospitalization and the definition of the patient's diagnosis²⁹ to avoid that failures in the discharge organization can affect the subsequent care necessary for the patient²⁸. Poorly organized discharges impair their quality and put patient safety at risk through adverse events related to medication errors and communication failures^{27–28,30}.

A common difficulty found in the selected studies was with high scores. Typically, they are incomplete^{27,29}, with discrepancies between the care needed and the care provided²⁷ and also with a lack of clarity about the specific and particular needs of each patient at the time of transition²⁹. In a study, 13% of discharge scores analyzed were classified as poor or moderate due to being incomplete²⁷.

Strategies to improve communication at discharge, highlighted in the studies, were verbal communication between hospital teams with the PHC³¹ and the creation of information systems for exchange between levels of health care, facilitating the exchange of information and qualifying the hospital discharge process^{28,30}. The moment of hospital discharge and the transitions of care are complex processes that are interrelated^{27–28}. To improve the dehospitalization and post-discharge process, the researchers suggested the preparation of a care plan; the guarantee of patient safety through the realization of medication reconciliation adjusted to the changes that occurred during hospitalization; the standardization of the discharge process with the elaboration of well-structured discharge notes and the improvement of communication between the different levels of health care^{27–31}.

Continuity of post-discharge care

Among all the articles of the integrative review, 50% of them brought strategies for the continuity of post-discharge care. As strategies, the studies highlighted the post-discharge telephonecalls^{21,26,31-38}, home visits (HVs)^{25–26,37} and also the association of HVs with telephone calls^{20,26,39–41}. Outpatient consultations^{17,31,42–43}, discharge with home care service (SAD) teams^{44–45} and the increasing use of technology^{34,46–47} are other strategies that help discharge and continuity of care.

Telephone calls stand out as the main strategy for care transition found in this review, since 21% of the articles discussed it in their results. Their objectives are to assist in the patient's self-management, to ensure that the care plan is being followed, to ask questions, to identify and solve problems^{26,31–32,34,36–38} and also to verify adherence to medications^{33,35–37}. Most of the selected studies showed positive results with the first calls within 72 hours after discharge^{26,31–32,34,36–38}, but can range from seven to ten days post-discharge^{21,35–36,38}. They can be performed by the multidisciplinary team, however, some articles highlighted the calls made by pharmacists^{35–36} and by physicians and/or residents^{32–33}. The interventions performed by pharmacists resulted in a decrease in adverse events related to medication errors^{35–36}. A study showed that 56% of the patients contacted by telephone presented some symptom or injury after discharge and, of these problems detected, 68% were managed by the doctor during the call, without the need for other care or return to the emergency room³³.

Regarding HVs, the studies indicated that they can be performed up to seven days after discharge, according to the complexity of the patient^{26,37}, and the follow-up time is also defined according to their need, and may happen two to twenty-four weeks after discharge²⁵. During the visits, the teams performed the clinical, social and environmental evaluation of the patient, as well as the drug reconciliation and the guidelines to them and their families^{25–26,37}.



Studies have associated telephone calls and VDs in care transitions and all have had positive results with this association^{20,26,39–41}. Three studies compared the strategy of using the connections with the ^{39–41} DVs with only some post-discharge follow-up⁴¹ or only with telephone calls^{39–40}. The studies that used the two associated strategies for the transition had better results, since they were more effective in reducing rehospitalizations and hospital costs^{39–41}.

Regarding outpatient follow-up of patients, the articles showed that it can be done by physicians or trained nurses^{17,42}. The studies suggested that the first consultation shold be scheduled within seven days after discharge^{17,31,42-43} or before, depending on the severity of the patient³¹. Early follow-up, performed in seven days, was associated with reduced readmissions among patients with greater clinical complexity and higher risk of readmission, while among patients with no or only a chronic or acute condition, early care made no difference in readmissions⁴³.

Home Care Services (HCS), which perform hospital care in the home environment, were cited in two articles^{44–45}. Multidisciplinary teams develop individualized, patient-centered care plans and perform care such as disease monitoring, vital signs, intravenous infusions, wound treatment, education and health^{44–45}. Usually, the first evaluation is performed by the doctor and nurse, who define the need for care by the other professionals of the team⁴⁵. Nurses can visit patients once or more times a day, according to the need for care⁴⁴. These studies had results such as the reduction of rehospitalizations and visits to emergency departments^{44–45}. In addition, the study conducted in a Singapore hospital found overall cost savings of \$4.7 million⁴⁵.

The participation of social workers in the activities of transition care as a member of the multidisciplinary team improves the connections with health services and the community, in addition to providing greater psychosocial support, leading to positive results in the health of patients⁴⁸.

The use of technology to aid continuity of care in post-discharge was highlighted in three studies^{34,46–47}. One of them used big data technological innovation, which automatically alerts patient discharge via *e-mail to* the patient referral service³⁴. The reference team had up to 48 hours after discharge to make the follow-up telephone calls, with social and health assessments³⁴. In another study, an interprofessional care plan was elaborated in the electronic medical records, specific for patients with dementia. The team involved in the care, both from the hospital and the community, should access and maintain it⁴⁶. These two studies, with the help of technology, increased community monitoring and improved communication between health services, reducing gaps in transitions^{34,46}.

Mobile applications can also be used for post-discharge follow-up, as in the study conducted with ostomy patients⁴⁷. Divided into two groups, patients in the control group received routine post-discharge care with outpatient consultations, while the intervention group, in addition to the consultations were monitored at home through a cell phone application. These patients were able to make appointments, ask questions and send photos through the app. The results were better in the intervention group, as the incidence of complications was lower and further decreased over the six-month follow-up in the same group⁴⁷.

Benefits of care transition

In 21 studies, "benefits of the care transition" were found. The main result was the reduction of readmission and emergency room visits^{18–22,24,26,36–37,49–53}. Six articles showed a decrease in mortality and hospital costs^{17,23,25,49,51,54} and three indicated a decrease in adverse events^{30,36,55}. Others discussed the improvement of Qol^{20,22} and patient satisfaction as positive results⁵³. One of the articles addressed the benefits, in general, of the transition⁵⁵ and only one article, a systematic review, found no association between continuity of care and the health implications of patients in the post-discharge period.



This was associated with the heterogeneity of the research results and the limitation of the scientific evidence of the studies²⁸.

Regarding readmissions, the articles compared the groups of patients who received some care transition (intervention group) with patients who did not receive care transition(control) and found significant differences, confirming the benefits of care transition. In the study with patients with chronic diseases, the risk of readmission, in 30 days, was 25% lower in the intervention group²¹; patients with coronary heart disease had a 30-day readmission rate of 5.1% in the intervention group versus 16.1% in the control group and, in 90 days, 8.5% *versus* 20.3% of the control group¹⁹. A study with patients undergoing neurosurgery found readmission rates of 2.5% in the intervention group, while the other group had a readmission rate of 5.8% in 30 days⁵³. In another study with the elderly population, the intervention group had 12.6% of emergency room visits, while the control group had a rate of 24.9% for the same²⁴. The difference was not significant for rehospitalizations only in this study²⁴.

One study found a significantly lower mortality rate, with 1.1% between 31 and 60 days after discharge in the group of patients receiving care transition, while in the control group, this rate was 1.6%⁵⁴. This reduction was also found in the elderly, with mortality rates of 25.2% in the group that received care transition versus 30.9% in the control group²⁵.

Regarding costs, patients who received care transition had significantly lower mean total costs in 31 to 60 days after discharge compared to other patients²⁴. A survey conducted at a Missouri general hospital found a decline in institutional costs of \$300 per heart disease patient who was linked to a care transition program¹⁷.

QoL improvement was identified in two studies^{20,22}. Among patients with COPD, QoL was verified at sixmonths²² and, in the study with palliative patients with Heart Failure (HF), there was still an improvement in symptoms of depression and dyspnea in 90 days of follow-up²⁰. An article highlighted the satisfaction of patients for participating in a program with pre and post-hospitalization guidance, calls and post-discharge consultations⁵³.

The decrease in adverse events was also found as a benefit of care transitions^{30,36,55}. A group of patients who received medication reconciliation by a pharmacist before discharge and post-discharge as well as phone calls, obtained 8% of events related to medications or medication errors, in relation to 12.8% of events found in the group of patients who did not receive medication reconciliation³⁶. Communication failures are also related to adverse events and that is why different forms of communication should be used between health care levels to reduce the risk of adverse events³⁰.

Role of nurses in care transition

Seven articles addressed the role of nurses in care transition. The main activities were related to education and health^{38,56–58} and home follow-up after discharge^{38,52,57–58}. Two studies highlighted nurses as the main articulator among professionals and the different levels of care^{57,59} while one study emphasized the experience and competence of nurses in the care of complex patients and their families⁶⁰.

Health education activities were highlighted, and it was identified that about 60% of nurses always or frequently perform them^{56,} with guidance on medical devices (tubes, drains, dressings), medication administration, food, self-care and information about the disease^{38,56–58.} Drug reconciliation can also be performed by nurses and should be performed on patient admission and discharge^{57.}



Home follow-up after discharge is also one of the activities of care transition nurses performed through HVs or phone calls, which allow evaluations and interventions according to the patient's need and result in more qualified transitions and reduce the risk of readmissions^{38,52,57–58}.

Authors state that care continuity nurses are the main articulators among the different professionals of the teams and also between the levels of health care^{59–60}. They are usually the ones who transfer the information from discharge to health services and this occurs through telephone contact and/or by e-mail^{57,59}, and may occur on the day of discharge or 24 to 48 hours before⁵⁹. One study found that about 52% of nurses in hospital admissions units guide patients to follow-up care with PHC, but more than half of them do not report to the referral team regarding discharge⁵⁶. When there are no defined flows or mechanisms for the transfer of information, many may be lost throughout the service, causing a deficiency in transitions with damage to the patient due to communication failures, increased costs and delays in solving problems⁶⁰.

Among the competencies and skills of nurses who perform care transition activities are teamwork, experience in the treatment of difficult situations, care management for complex patients and their families and knowledge of the health care network for continuity of care⁶⁰.

In some countries, there are nurses who are responsible for coordinating hospital discharge, accompanying the multidisciplinary team in the care provided, establishing the individualized care plan with the patient and family and transferring this information from the hospital to PHC. These nurses are called transition nurses, liaison hospital nurses, case managers or care continuity nurses^{59–60}.

An integrative review identified that more than half of the selected articles showed that discharge planning was carried out by nurses together with the multidisciplinary team, the patient and the family⁵⁷. However, a research conducted in Brazil with nurses from inpatient units, in relation to their activities, showed that discharge planning as a team and the elaboration of a discharge plan are activities which are rarely performed by nurses⁵.

Patient experiences on care transition

Two studies discussed the experiences of patients regarding care transition at discharge, describing complaints and experiences from the patients and their families.

Many reported that discharge was reported on the same day, without notice or prior planning, and the guidelines were also given on the day of discharge^{61–62}. Poorly planned discharges and communication failures cause patients and their families to experience anxiety and insecurity as many will have to face a readaptation period after leaving the hospital, as well as putting the patient at risk for adverse events^{61–62}. Reports on the lack of care coordination after discharge were highlighted, as many patients had difficulties in scheduling appointments and felt the lack of a home follow-up^{61–62}.

Regarding the positive experiences during the transitions from the hospital to the house, one can highlight the satisfaction with home care, which was responsive and personalized⁶². Nurses were also mentioned because they played a significant role in facilitating care transitions, based on the coordination between the different levels of care⁶².



DISCUSSION

Patients who are readmitted frequently have similar profiles with regard to health problems, as found in this integrative review and in the study by Dias¹⁰, in which diseases of the circulatory system stood out, with a readmission rate of 13.7%, behind neoplasms, which have a rate of 19.9%; elderly patients, with a 38.4% of total readmissions, and among all readmitted patients, 47.6% had at least one associated comorbidity and 13.9% had five diagnoses¹⁰. Health teams should be attentive to patients with these profiles as performing care transition can prevent them from returning to the hospital.

Some studies^{63–64} reaffirmed the need for early discharge planning, which should be initiated upon the patient's admission. It is at this moment that all professionals involved in care should evaluate the social and health needs of the patient^{63–64}, which can contribute to the discharge occurring at the planned time.

The transition from hospital to home is a delicate moment, because it is during this period that the patient is more prone to adverse events^{4,6}, which can occur due to medications errors and communication failures. The revision of medications is essential in this dehospitalization process and should be performed at admission and discharge⁶⁵. In addition, patient guidance on the use of medications is also important in order to avoid the risk of adverse events, and should happen throughout hospitalization and not only on the day of discharge.

Regarding the risk of adverse events related to communication, the authors stated that the standardization of discharge notes is important for transitions to be safe, with the purpose of improving continuity of care⁶. The complete communication of this information ensures that the professionals who will attend the patient, when accessing the discharge summary, will understand what is their health condition and what care is needed post-discharge⁶³.

To assist in the process of discharge and post-discharge, the authors suggested the *use of checklists* for qualified discharge in order to ensure the safety of transitions and for continuity of care to be successful⁶⁶. These instruments are tools to systematize work and prevent memory lapses and human errors^{6,66}. The checklist should be part of the care plan, the social situation of the patient, their conditions for self-care, mental status, drug reconciliation, direction and communication to other levels of care⁶⁶.

The discharge process is challenging for the teams, as it requires organization, commitment and multidisciplinary work, in addition, post-discharge is a moment of apprehension for the patient and his/her family members due to the risks of adverse events. Therefore, adequate discharge planning is essential because, in addition to assisting in the work of the teams, it brings benefits and more safety to the patient.

The use of strategies for care continuity provides a transition of safe and quality post-discharge care. Researchers have suggested that telephone calls and HVs are tools that help reduce the demand for care, detecting and treating problems before hospital demand is necessary, and the association of these strategies makes transitions have a greater chance of positive results^{4,63,65}. Thus, it is clear that no isolated care has results as satisfactory as the association of different care. Along with these strategies, post-discharge consultations, focusing on evaluation and rehabilitation, are also crucial for optimal transitions to occur and reduce the risk of readmission⁶⁵.

Furthermore, in relation to strategies for care continuity, the benefits of SAD care were evident in a randomized controlled study that compared patients with homecare with that of hospitalized patients⁶⁷. The results showed that patients with home care had a 38% lower average cost, with fewer requests for laboratory tests and images; they had a readmission rate of 7%, while in the group of hospitalized patients, this rate was 23%⁶⁷.



The use of technology in health services has gained space and has great potential to contribute to the qualification of care and communication between the hospital and the community. Researchers concluded that telemonitoring helps health teams supervise patients' self-management after discharge, seeking better results for their health⁶⁸. Thus, in the care transitions, the use of technology is seen as a promising method to improve the quality of the transition from hospital to home, providing the exchange of information between the different health care levels⁶⁸.

With all this, it can be seen that care continuity at discharge can be performed in different ways and the definition of which care strategy will depend on the needs of the patient after hospital discharge.

Care transition has several benefits, including the reduction of readmissions and emergency room visits, as well as the reduction of mortality and hospital costs. Some factors that influence readmission may not be under hospital control, as the patient's reality after discharge is an important determinant. Thus, care transition interventions, which begin in the hospital environment, are essential and need to be successful in order to help reduce readmission⁶⁵.

One study identified, for each avoided readmission, a reduction of U\$5,652.00 in costs, confirming that the transitions contribute to the reduction of hospital costs⁶⁹. This decrease in health expenditures is probably related to the fact that these patients visit emergencies less and are also less readmitted because they are monitored after discharge by teams prepared for this activity.

The implementation of a care transition program, in which patients received guidance and drug reconciliation during hospitalization and discharge, improved care and, consequently, patient satisfaction⁶⁹. In addition, it resulted in increased compliance with post-discharge basic care, thus decreasing readmission by 30 days to⁶⁹ and reinforcing the positive results of the transition.

In view of all this, it is evident that care transition has several benefits, both for health services, with the reduction of expenses, and for patients, who have less need to seek hospital care, have less risks of adverse events and can improve quality of life.

Authors stated that nurses are qualified to perform educational actions to promote health⁷⁰ and during these moments, in addition to educating, it is necessary to detect the characteristics of the patient and family and collect information about their previous situation and the resources available⁶⁴. Nurses are seen as the professionals who provide more complex care orientations to patients such as relief surveys, ostomies and extensive dressings⁶⁵.

The activities of nurses in care transitions begin at admission and should continue postdischarge. The knowledge of nurses in relation to the health care network is essential for referral and bonding after discharge to be guaranteed, because the patient and the family can have doubts, uncertainties and fears, and the support of the network is fundamental for the continuity of care⁷¹.

The creation of a tool to systematize hospital discharge, such as a continuity report, emphasizing the preparation that the patient had for discharge and that can be used as a care guide to be consulted at home, can be an effective strategy for the implementation of post-discharge care^{6,64}. The elaboration of this type of tool requires collaboration and interdisciplinary work^{6,64} and, often, nurses are the coordinator of this activity^{6,64}. This is already a reality in many countries and is related to the skills of nurses, who are recognized as an articulating link between patients and other professionals in the care team, as well as among the team's own professionals⁷.

It is known that, in Brazil, the process of care transition to dehospitalization is still gaining strength, while in other countries there are already nurses coordinating the activity. Authors stated that the dedication of nurses in many administrative activities compromises the full execution of nursing care⁷, which may affect their participation in the care transition process from to dehospitalization. Thus, the nurses' attributions need to be reorganized and their participation in the discharge planning needs to be expanded and, preferably, exclusive, in order to improve the care transitions, ensuring patient safety after leaving the hospital.



Complaints regarding the time of discharge and care transition are common when patients and family members are questioned about this process. However, positive experiences are also reported.

During discharge planning, patient and family involvement is essential for its success. The complete communication of the information, with adequate education and health guidelines during hospitalization, contributes to patient safety, avoiding adverse events after discharge⁷⁰.

Among the positive experiences, we can highlight the satisfaction with home care and the fundamental role of nurses in care transition activities. This is because home care offers special and individualized care to the patient⁶³ and the knowledge of the care network of the nurse, facilitates and improves care continuity⁷¹. It is also perceived how much the care transition process to discharge still has flaws and knowing the experiences of patients and their families can enable the identification and search for the reduction of these issues.

This study has some limitations, among them, the choice for an adult age group, which limited the discussion about care transition of children and adolescents, and the identification of the type of methodology used in some selected articles.

CONCLUSION

The study provided knowledge about the scientific production related to the care transition in the hospital discharge of adult patients.

From the synthesis and analysis of knowledge on the subject, it was found that hospital discharge and care transitions are broad and complex processes that are interconnected. It was identified that there are different strategies for the continuity of post-discharge care, which must be adopted, as it offers safety as well as many other benefits to the patient and health services. In addition, it was possible to recognize that the nurse has a fundamental role in transition activities and, in Brazil, however, it should be expanded, with nurses working exclusively in teams dedicated to care transition.

The study provides support for decision-making on care transition activities, both in the hospital and PHC, as well as the need for integration between the care network.

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NOTES

CONTRIBUTION OF AUTHORITY

Study design: Gheno J, Weis AH.Data collection: Gheno J.Data analysis and interpretation: Gheno J.Discussion of results: Gheno J.Writing and/or critical review of the content: Gheno J, Weis AH.Review and final approval of the final version: Weis AH.

CONFLICT OF INTEREST

There is no conflict of interest.

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CORRESPONDING AUTHOR

Jociele Gheno pita.gheno@hotmail.com

