# Evaluation of Pharmacist-Initiated Discharge Medication Reconciliation and Patient Counseling Procedures in the Emergency Department

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## Main Information

**Primary registry identifying number**
LBCTR2023095432

**Protocol number**
PIDMR3

**MOH registration number**

**Study registered at the country of origin**
Yes

**Study registered at the country of origin: Specify**

**Type of registration**
Retrospective

**Type of registration: Justify**
LBCTR website was not accessible

**Date of registration in national regulatory agency**

**Primary sponsor**
None

**Primary sponsor: Country of origin**
None

**Date of registration in primary registry**
19/03/2024

**Date of registration in national regulatory agency**

**Public title**
Evaluation of Pharmacist-Initiated Discharge Medication Reconciliation and Patient Counseling Procedures in the Emergency Department

**Acronym**

**Scientific title**
Evaluation of Pharmacist-Initiated Discharge Medication Reconciliation and Patient Counseling Procedures in the Emergency Department

**Acronym**

**Brief summary of the study: English**

This was a randomized controlled study that included adult patients discharged from the ED at the Lebanese American University Medical Center – Rizk Hospital (LAUMC-RH) with at least one discharge medication during the period of data collection from December 2021 to April 2022. The control group consisted of patients receiving the standard of care, while the intervention group was counseled at discharge by a pharmacy resident. The intervention group received follow-up calls at days 3, 14, and 30, while the control group wasonly followed-up with telephone calls on day 30 post-discharge. The pharmacy resident conducted the follow -up phone calls. Additionally, the pharmacy resident identified discrepancies that were reported to and discussed withthe prescribing physician and an intervention was performed if needed. The primary endpoint was the number of unintended medication discrepancies identified by the pharmacy resident that are categorized as: omission, commission, different dose/route/frequency, or different medication ordered. The secondary endpoints included the occurrence of ADEs, composite endpoint of re-admissions and ED visit at day 30, and patient satisfaction.

**Brief summary of the study: Arabic**

هذه دراسة شملت مرضى بالغين خرجوا من قسم الطوارئ في المركز الطبي بالجامعة اللبنانية الأمريكية – مستشفى رزق (LAUMC-RH) مع
2022. إلى أبريل 2021دواء واحد على الأقل للخروج خلال فترة جمع البيانات من ديسمبر
تتألف المجموعة من المرضى الذين يتلقون مستوى الرعاية، في حين تم تقديم المشورة لمجموعة التدخل عند الخروج من قبل أحد المقيمين
، في حين تمت متابعة المجموعة الضابطة فقط من خلال مكالمات هاتفية30 و14 و3الصيدلية. تلقت مجموعة التدخل مكالمات متابعة في الأيام
بعد الخروج من المستشفى. أجرى مقيم الصيدلية مكالمات هاتفية للمتابعة. بالإضافة إلى ذلك، حدد الطبيب المقيم في الصيدلية30في اليوم
.التناقضات التي تم الإبلاغ عنها ومناقشتها مع الطبيب الموصوف وتم إجراء التدخل إذا لزم الأمر
،كانت نقطة النهاية الأولية هي عدد التناقضات غير المقصودة في الأدوية التي حددها طبيب الصيدلية والتي تم تصنيفها على النحو التالي: الإغفال
ونقطة النهاية المركبة لإعادة ،ADEs أو العمولة، أو جرعة/طريق/تكرار مختلف، أو طلب دواء مختلف. وشملت نقاط النهاية الثانوية حدوث
.، ورضا المرضى30القبول وزيارة قسم الطوارئ في اليوم

**Health conditions/problem studied: Specify**

Medication reconciliation upon discharge from the emergency department

**Interventions: Specify**

Pharmacist-Initiated Discharge Medication Reconciliation and Patient Counseling Procedures

**Key inclusion and exclusion criteria: Inclusion criteria**

Participants were eligible if they met the following inclusion criteria: adult patients (≥18 years old) who were discharged from the ED with at least one newly prescribed discharge medication.

**Key inclusion and exclusion criteria: Gender**

Both

**Key inclusion and exclusion criteria: Specify gender**

**Key inclusion and exclusion criteria: Age minimum**

18

**Key inclusion and exclusion criteria: Age maximum**

100

**Key inclusion and exclusion criteria: Exclusion criteria**

Key exclusion criteria consisted of patients who were admitted from ED to LAUMCRH as inpatients, transferred to another hospital, or did not provide consent to participate in the study.

**Type of study**

Interventional

**Type of intervention**

Educations programs

**Type of intervention: Specify type**

N/A

**Trial scope**

Safety

**Trial scope: Specify scope**

N/A

**Study design: Allocation**

Randomized controlled trial

**Study design: Masking**

Open (masking not used)

**Study design: Control**

N/A

**Study phase**

N/A

**Study design: Purpose**

Health services research

**Study design: Specify purpose**

N/A

**Study design: Assignment**

Parallel

**Study design: Specify assignment**

N/A

**IMP has market authorization**

**IMP has market authorization: Specify**

**Name of IMP**

**Year of authorization**

**Month of authorization**

**Type of IMP**

**Pharmaceutical class**
N/A

**Therapeutic indication**
N/A

**Therapeutic benefit**
Reduction of reconciliation errors

**Study model**
N/A

**Study model: Explain model**
N/A

**Study model: Specify model**
N/A

**Time perspective**
N/A

**Time perspective: Explain time perspective**
N/A

**Time perspective: Specify perspective**
N/A

**Target follow-up duration**

**Target follow-up duration: Unit**

**Number of groups/cohorts**

**Biospecimen retention**
None retained

**Biospecimen description**
N/A

**Target sample size**
100

**Actual enrollment target size**

**Date of first enrollment: Type**
Actual

**Date of first enrollment: Date**
01/12/2021

**Date of study closure: Type**
Actual

**Date of study closure: Date**
30/05/2022

**Recruitment status**
Complete

**Recruitment status: Specify**

**Date of completion**
30/05/2022

**IPD sharing statement plan**
Yes

**IPD sharing statement description**

Data available upon request

**Additional data URL**

**Admin comments**

**Trial status**

Approved

## Secondary Identifying Numbers

No Numbers

## Sources of Monetary or Material Support

No Sources

## Secondary Sponsors

No Sponsors

## Contact for Public/Scientific Queries

| Contact type | Contact full name | Address | Country | Telephone | Email | Affiliation |
|---|---|---|---|---|---|---|
| Public | Elsy Ramia | Lebanese American University - Byblos | Lebanon | 03-167962 | elsy.ramia@lau.edu.lb | Lebanese American University |
| Scientific | Elsy Ramia | Lebanese American Univeristy - Byblos | Lebanon | 03-167962 | elsy.ramia@lau.edu.lb | Lebanese American University |

## Centers/Hospitals Involved in the Study

| Center/Hospital name | Name of principles investigator | Principles investigator speciality | Ethical approval |
|---|---|---|---|
| Lebanese American University Medical Center Rizk Hospital | Dr. Elsy Ramia | Pharmacy Education | Approved |

## Ethics Review

| Ethics approval obtained | Approval date | Contact name | Contact email | Contact phone |
|---|---|---|---|---|
| Lebanese American University- University Medical Center Rizk Hospital | 17/09/2021 | Ms. Karmen Baroudi | karmen.baroudy@lau.edu.lb | 03953388 |

## Countries of Recruitment

| Name |
|---|
| Lebanon |

## Health Conditions or Problems Studied

No Problems Studied

## Interventions

| Intervention | Description | Keyword |
|---|---|---|
| Medication Reconciliation and Discharge Counseling | Patients were randomly assigned to either the control group or the intervention group with a 1:1 allocation, by block randomization using a block size of 4. Patients in the control group received the standard of care provided by the ED staff (physicians, medical residents, and/or nurses) upon admission and discharge whereby patients only received a prescription of the newly prescribed medications at the ED, with no formal medication reconciliation done. Patients in the intervention group received a pharmacist-conducted medication reconciliation and discharge counseling by the pharmacy resident. Prior to discharge from the ED, the pharmacy resident also documented any unintended medication discrepancies detected, and reported it to the prescribing physician. Interventions were made to the medical team and changes were done as needed. The pharmacy resident conducted follow-up telephone interviews with all patients after ED discharge to collect relevant patient outcome measures: day 30 in the control group and days 3, 14, and 30 in the intervention group. The resident addressed drug-related questions and referred medical concerns to the prescribing physician. Patients had the option to withdraw consent at any time during the study. | Medication Reconciliation, Counseling, Pharmacist |

## Primary Outcomes

| Name | Time Points | Measure |
|---|---|---|
| the number of unintended medication discrepancies identified by the pharmacy resident categorized as: omission, commission, different dose/route/frequency, or different medication ordered. | at day 30 post discharge | the number of unintended medication discrepancies identified by the pharmacy resident categorized as: omission, commission, different dose/route/frequency, or different medication ordered as analyzed by the pharmacy resident. |

## Key Secondary Outcomes

| Name | Time Points | Measure |
|---|---|---|
| the composite endpoint of hospital readmission, ED visits, and physician contact | at 30 days post-discharge | Number of hospital readmission, ED visits, and physician contact as reported by the patient |

## Trial Results

**Summary results**

Among 81 patients, 42 (52%) patients were randomly assigned to the intervention group, and 39 (48%) patients to the control group. At day 30, The mean number of medication discrepancies was significantly lower in the intervention group (p = .000). 63.6% of patients in the control group had at least one medication discrepancy identified. The most common type of discrepancy was drug commission and drug omission; they mostly occurred in the control group and this difference was statistically significant. 10 patients from the control group reported concerns on day 30, as compared to none from the intervention group (p = 0.003). Overall, patients from the intervention group had a better understanding of their medications that was statistically significant.

**Study results globally**

**Date of posting of results summaries**

**Date of first journal publication of results**

**Results URL link**

**Baseline characteristics**

**Participant flow**

**Adverse events**

**Outcome measures**

**URL to protocol files**