ISRCTN11642788 https://doi.org/10.1186/ISRCTN11642788

Does the introduction of pharmacy technician support during nursing medication rounds in hospital wards help reduce the number of omitted medication doses in a NHS hospital in England?

Submission date
15/10/2015

Recruitment status
No longer recruiting

Registration date
19/10/2015

Overall study status
Completed

Last Edited
21/08/2020

Condition category
Other

[X] Prospectively registered
[_] Protocol
[_] Statistical analysis plan
[X] Results
[_] Individual participant data

Plain English summary of protocol

Background and study aims
Omitted medication doses, that is prescribed medicine that has not been given to a patient at the time that their next dose is due, are commonly seen in UK hospitals. These omitted doses can and do lead to harm for patients, particularly if medicines involved are 'critical' in that they require timely and regular administration to be effective, such as antibiotics and drugs to treat epilepsy. The aim of this study is to find out whether introducing a pharmacy technician to support nurse drug administration rounds in a NHS hospital in England can reduce the number of omitted doses when compared to wards where this technician support is not provided.

Who can participate?
Registered pharmacy technicians, medical staff and nursing stuff working in participating hospital wards.

What does the study involve?
Four pairs of medical, surgical and/or specialty wards are randomly selected to take part, and one ward within each pair is randomly selected to receive pharmacy technician support. The study hospital uses electronic recording of prescribing and drug administration, and the data used to compare the number of omitted doses and number of doses due to be given to patients on the wards. Trained pharmacy technicians visit the chosen wards on weekdays over 1 month to help them administer and document drug administration. The proportion of omitted doses as well as dose omissions involving 'critical' medicines are then compared between the wards with technician support and those without to see if they are reduced. Pharmacy staff, medical staff and nurses involved in the study are also asked their views on how well they think the added support works and if they can suggest any improvements to support possible wider roll-out in the future.

What are the possible benefits and risks of participating?
Whilst there are no direct benefits to health care staff who participate in this study, they may be given the opportunity to reflect on their own practice to identify new ways to work more closely with other health care professionals to deliver integrated patient care.

Where is the study run from?
Salford Royal NHS Foundation Trust (UK)

When is the study starting and how long is it expected to run for?
October 2015 to September 2016

Who is funding the study?
United Kingdom Clinical Pharmacy Association (UKCPA) and Pharmacy Research UK (PRUK)

Who is the main contact?
Dr Richard Keers

Contact information

Type(s)
Scientific

Contact name
Dr Richard Keers

ORCID ID
https://orcid.org/0000-0001-7854-8154

Contact details
Room 1.185, Stopford Building
Manchester Pharmacy School
Oxford Road
The University of Manchester
Manchester
United Kingdom
M13 9PL

Additional identifiers

Protocol serial number
2

Study information

Scientific Title
Evaluation of pharmacy TECHnician supported MEDication administration rounds (TECHMED) on reducing omitted doses: a randomised controlled trial and process evaluation in a university teaching hospital.

Acronym

TECHMED

Study objectives
The aim of this research study is to conduct a randomised controlled trial (RCT) to evaluate the effect of introducing pharmacy TECHnician supported MEDication administration rounds (TECHMED) to reduce the frequency of omitted doses at a NHS hospital in England.

Ethics approval required
Old ethics approval format

Ethics approval(s)
The University of Manchester: University Research Ethics Committee 2, 26/11/2015, ref: 1550

Primary study design
Interventional

Study design
Single-centre randomised controlled trial.

Study type(s)
Other

Health condition(s) or problem(s) studied
Omitted doses of medications occurring on inpatient hospital wards.

Interventions
This randomised controlled trial involves a control and intervention arm and will be divided into three phases – pre-intervention/baseline, intervention (where intervention wards receive the TECHMED intervention but the control wards do not) and post-intervention. The pre- and post-intervention phases will involve no TECHMED support on the intervention or control wards, and will last 1 month with the intervention phase also lasting 1 month.

Trained pharmacy technicians already employed by the study hospital will perform the TECHMED intervention. These trained technicians will accompany nursing staff on medication administration rounds on weekdays during a 1 month intervention period.

During the medicines administration rounds, pharmacy technicians will accompany nurses and directly support them during this process, helping to source medications and solve medicines administration challenges to promote timely and safe administration of medicines.

Intervention Type
Other

Primary outcome(s)
Rate of all omitted doses, measured using extracted prescribing and medicines administration data from electronic inpatient record systems at the study hospital. Data will be extracted following completion of each 1 month phase of the study.

Key secondary outcome(s)

1. Rate of preventable omitted doses (PrOD)
2. Rate of all omitted doses of critical list medications
3. Rate of preventable omitted doses of critical list medications

Completion date
30/09/2016

Eligibility

Key inclusion criteria
Techmed RCT:
1. AFC Band 4/5 professionally registered pharmacy technicians employed by the study hospital who were interested in delivering the TECHMED service and who have drug accuracy checking qualifications and experience of ward work
2. Wards with similar characteristics suitable for randomisation who are interested in taking part, with senior nursing and individual ward manager approval
3. All regular and stat scheduled doses of medication to be given via any route of administration on the chosen study wards.

Process evaluation:
1. AFC Band 4/5 pharmacy technicians responsible for delivering TECHMED services
2. Professionally registered nursing staff of any grade employed by hospital site predominantly on the intervention wards who work directly with TECHMED pharmacy technicians to deliver the service
3. Professionally registered medical, nursing and pharmacy staff of any grade/level of experience employed on the intervention ward(s) who have experienced indirect contact with TECHMED components (e.g. dispensary staff receiving new orders from TECHMED technicians, ward based nursing/medical/pharmacy staff who respond to queries raised by the technicians /nurses)

Participant type(s)
Health professional

Healthy volunteers allowed
No

Age group
Adult

Sex
All

Key exclusion criteria
Techmed RCT:
1. Inpatient wards which cannot be paired and therefore pooled in the randomisation sampling process (e.g. single units with no similar ward like intensive care, medical admissions)
2. Outpatient environments within study hospital
3. Any inpatient wards which do not utilise electronic prescribing and drug administration systems
4. Pharmacy technicians who are not AFC pay scale band 4/5 or not employed by study hospital

5. Pharmacy technicians without drug accuracy checking qualifications and prior experience of ward work
6. Pharmacy technicians not professionally registered with General Pharmaceutical Council (GPhC)
7. When required PRN doses of medication on the study wards

Process evaluation:
1. Staff not employed on the intervention ward(s)
2. University students (e.g. nursing students)
3. Patients and their relatives/friends/representatives
4. Health care support staff such as physiotherapists, dieticians, SALT, social workers, ward clerks, support workers, occupational therapists, phlebotomists (i.e. not pharmacy/nursing /medical)

Date of first enrolment
01/12/2015

Date of final enrolment
31/05/2016

Locations

Countries of recruitment
United Kingdom

England

Study participating centre
Salford Royal NHS Foundation Trust
Stott Lane
Salford
United Kingdom
M6 8HD

Sponsor information

Organisation
The University of Manchester, Faculty of MHS Administration

ROR
https://ror.org/027m9bs27

Funder(s)

Funder type
Not defined

Funder Name
United Kingdom Clinical Pharmacy Association (UKCPA) and Pharmacy Research UK (PRUK)

Results and Publications

Individual participant data (IPD) sharing plan

IPD sharing plan summary
Not expected to be made available

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article	results	22/05/2019	21/08/2020	Yes	No