There is a lack of information about patient satisfaction with bedside storage of drugs. Researchers evaluated inpatients’ experiences of a new medicines service.

**Inpatients’ attitudes to a personalised drug service**

In this article...
- Details of the Making the Most of your Medicines service
- Positive and negative views of the service
- Shortcomings in bedside locker design

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NHS Greater Glasgow and Clyde’s Making the Most of Your Medicines service involves a more patient-centred approach to inpatient medication administration. A study explored patients’ knowledge, experiences and views of the service.

In 2002, NHS Greater Glasgow and Clyde introduced the Making the Most of Your Medicines service. This was in response to the Right Medicine strategy (Scottish Executive Health Department, 2002). This emphasised the need for a modernised, patient-centred partnership approach, with pharmacists working with healthcare teams and patients, to ensure medicine administration systems are as effective and safe as possible. Within acute adult hospital care this includes the use of patients’ own drugs (PODs) if suitable during their hospital stay, and the supply of individually labelled medicines, which can be used to provide patients’ discharge medications at ward level.

The aim of the service is to eliminate waste by using PODs, reduce patients’ exposure to risk by removing unsuitable PODs, and reduce waiting times for discharge prescriptions to be dispensed from hospital pharmacies. Another medium to long-term aim of the strategy is to move towards self-administration of medication by inpatients where appropriate.

**How the new service works**

The Making the Most of your Medicines service delivers PODs to the ward. These are checked and administered from the patient’s individual locked bedside medicine cabinet. The patient’s primary registered nurse administers the medicines observing the Nursing and Midwifery Council’s (2007) medicines management standards.

Standard operating procedures are in place including: gaining patient consent to assess PODs; using and disposing of PODs; stocking medicine lockers; and ordering non-stock medicines.

**Background**

Focus groups with 10 registered nurses and four registered midwives from three wards explored their views of the new medicines service. Three focus groups were held: one on an orthopaedic ward (n=5); one on a neurosurgical ward (n=5); and one on a maternity ward (n=4).

Nurses acknowledged the benefits of the service, such as not having to stock unnecessary drugs and quicker patient discharge. However, some thought the new system increased workloads. While there is clinical and technical pharmacy support, nurses are more involved in checking PODs, stocking medicine lockers and assembling discharge medications. Participants also identified a need for training in assessing PODs and assembling discharge medications, for

**5 key points**
1. The Right Medicine Strategy in Scotland aims to ensure patients’ medications are managed as safely and effectively as possible
2. Greater Glasgow Health Board introduced the service in 2002
3. Research shows patients value more personalised medication administration systems
4. The majority of adult inpatients prefer their drugs to be stored in a bedside locker rather than on a drug trolley
5. Patients may lose bedside storage space if lockers are used, and they may be difficult to access
such as dealing with discontinued medica-
tion in the interview was assured.

clarity of responsibility and for procedures
such as dealing with discontinued medica-
tions administration of medications is concerned, Manias et al (2004)
found patients who self-administered were generally more satisfied with their overall
care and the discharge process compared with those who did not self-administer.

A review in England of patients’ views about the process of administration of
medicines in the acute mental health set-
ting (Duxbury et al, 2009) found patients valued having things explained and having
their opinion sought. They wanted better
information and communication, and a
less regimented and more individualised
medications administration system. This is not surprising given the outdated prac-
tice of mental health patients queuing for their medications.

While there are clear differences in the
clinical environments and dynamics
between acute mental health and acute gen-
eral care, what these patients wanted and
valued are what the Standards for Medicines
Management (NMC, 2007) and the NMC code
of conduct (NMC, 2008) describe. These
require nurses to treat patients as
individuals, collaborate with those in their
care, provide information and education
about medications, and understand their
effectiveness and side-effects.

Study aims
The primary aim was to explore patients’
knowledge, experiences and views of the
medicines service in adult acute inpatient
wards where the system was established.
We also aimed to determine whether patients had a preference for the medicines
service or the conventional drug trolley.

Ethical approval was not considered
necessary as this was a service review. No
patient data was identified and anonymity
and confidentiality for voluntary participa-
tion in the interview was assured.

Literature review
There is sparse information about patient
satisfaction or experience with bedside
storage of their medications.

A Canadian study in an acute hospital
explored the efficiency and safety of a
locked bedside medicine cupboard com-
pared with the conventional trolley (Ben-
nett et al, 2006). This qualitative and quan-
titative study was conducted in two 24-bed
acute medical wards. Its findings support
decentralised medication delivery systems
for both patient and nurse satisfaction,
because nurses check medication in
patients’ rooms (rather than in hallways),
which enables more nurse-patient time.
Patient teaching is easier to undertake in a
more private environment at the bedside,
which may facilitate personalised discus-
sion about specific medications.

A study in a rehabilitation setting within
NHS Lothian explored patients’ opinions
pre- and post-implementation of a system
similar to Making the Most of Your Medi-
cines (referred to as one-stop dispensing)
and a self-medication scheme (Gibson and
Rankine, 2006). Most patients were more
satisfied with their new bedside medicine
lockers (86%), using their own PODs (73%)
and being able to ask more questions when
nurses administered their medications
from the bedside medicine locker (71%).

Where self-administration of medica-
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Study method
A semi-structured patient questionnaire
was used as a guide to interview a conveni-
ence sample of patients in seven medical
inpatient wards where the medicine ser-
vice was established. Staff identified
patients who should not be approached on
clinical grounds. A total of 41 patients were
invited to be interviewed and 40 (98%) con-
ented. Participant responses were tran-
scribed. The interviewer was a registered
nurse independent of the project.

The bedside medicine cabinets in use
were either a metal white locker top (WLT)
(Fig 1) or an integrated locker (IL) type (Fig
2). The WLT was positioned on the top
front surface of the locker, occupying one
third of the surface; the IL was integrated
within half of the upper section of the
locker. Both were locked and the master
keys were held by the registered nurse.
Both systems reduced the locker space
available to patients for their belongings.
Most were emergency admissions. While
only seven participants were aware of the
service, 15 of the 37 participants who were
on medications pre-admission brought
some or all of their medications.

Results
A thematic analysis of interview notes was
used to identify the key themes. Our quan-
titative findings are presented in Table 1,
and the qualitative findings are presented
as quotes and themes.

Previous experience of drug trolleys
A total of 37 participants had previous
experience of the drug trolley system; only
two preferred the trolley. One, an ex-NHS
employee, felt the trolley was “tidier” and
the other felt the new system was a “hin-
drance”, because his chair had to be moved
to access the locker. Overall, 32 partici-
ants, including three who had no trolley
experience, expressed a preference for the
new service with six having no preference.
Participants preferred the service for three
main reasons, “safety”, “security” and “it
was better for staff”.

Safety
Seventeen participants felt the new system
was safer for patients because it should
reduce medication mistakes. They were
more confident that only their drugs were
in their own medicine cabinet:

”...This is much better they’re not hunting
Two identified previous delayed discharges

other lockers or cupboards to get them. Often not in the locker and that staff went to
Six participants identified that tablets were

not very secure and could be broken into, prefer to have the key. Another felt it was

not open the drug locker and said he would
nurses access.

they must move or be moved to allow the
space available to patients. If patients are
medicine cabinets reduced the locker
space for their possessions. Both types of
the medicine locker and lack of locker

were safe and secure beside them.

were happier that their own medications
essment of this new system. Participants
were safe and secure beside them.

It is reassuring that participants’ expe-
riences and views of the service were
largely positive. The only negative aspect
was the reduced locker space. The inter-
viewer observed nurses getting drugs from
both types of lockers and neither appeared
ideal. Patients and furniture required
moving, nurses had to bend to access the
ILs and, with both locker types, staff had
limited surface space to align the drug
chart to check and sign medications. Some
nurses continued to use the drug trolley as
a work surface to place the drug chart. No
other comparative studies were found that
identified similar logistical problems
accessing the bedside lockers.

The most positive aspect for patients is
the new service is viewed as safer, in that
they feel fewer mistakes can be made. Better
security for medications was also a per-
ceived positive feature for seven partici-
pants. Emphasis is placed in standard oper-
ating procedures and NMC (2007) standards
for medicines management that PODs,
including controlled drugs, remain
patients’ property and must not be removed
without their permission.

Despite the space and stocking issues, most participants (32 out of 34) who
expressed a preference between the con-
ventional drug trolley and medicines ser-
vice, preferred the latter. It would be ben-
eficial to patients and staff to source a more
appropriate combined personal and drug
bedside locker for future use. For example,
a combined personal locker and medicine
cabinet system that would allow the bed-
side locker to be moved with the patient if
required. Future self-administration would
be enabled with patients holding a key or
swipe card.

Conclusion

The majority of participants preferred the medicine service to the conventional drug
trolley. The only reservations and dislikes were the reduced space they had on top of
or inside their bedside locker owing to the
location of their medicine cabinet.

Recommendations

Further work should be undertaken in
respect of nursing workload. Patient satis-
faction with the service should continue to
be part of the monitoring process. Patients’
views on future self-medication in hos-
pital should be sought, including their
understanding of the purpose of self-med-
ication and possible decisions they may be
faced with. It would also be beneficial to
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References

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patients and nurses about the administration of

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Scottish Executive Health Department (2002) The
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<table>
<thead>
<tr>
<th>TABLE 1. PATIENT CHARACTERISTICS, LOCKER TYPE AND PREFERENCE</th>
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<tbody>
<tr>
<td>Patient characteristic</td>
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<tr>
<td>------------------------</td>
</tr>
<tr>
<td>Male (average age 64)</td>
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<tr>
<td>Female (average age 65)</td>
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<tr>
<td>Average length of stay</td>
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<tr>
<td>White locker top (WLT) at bedside</td>
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<tr>
<td>Integrated locker (IL) at bedside</td>
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<tr>
<td>Aware of medicines service pre-admission</td>
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<tr>
<td>Previous drug trolley experience</td>
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<tr>
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<td>No preference</td>
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about the trolley... you know the medicines are yours... works really well.”

“It’s very clever, the old trolley had too many drugs and they all looked the same.”

Security

Seven participants felt the system was more secure from theft, and other patients:
“No one else can get at it.”

“It’s much better under lock and key... think it’s great, the old system was open to theft.”

Advantages for nursing staff

Seven participants perceived the new system as better for nursing staff. This was
because they felt nurses would not make mistakes and it reduced their workload by
eliminating trips to the drug trolley:
“New system is more ideal for nurses as tablets don’t get mixed up.”

Concerns

Seven participants disliked the position of the medicine locker and lack of locker
space for their possessions. Both types of medicine cabinets reduced the locker
space available to patients. If patients are seated in front of their bedside lockers,
they must move or be moved to allow the nurses access.

One participant was concerned he could not open the drug locker and said he would
prefer to have the key. Another felt it was not very secure and could be broken into,
but added that nor was the trolley.

Problems encountered

Six participants identified that tablets were often not in the locker and that staff went to
other lockers or cupboards to get them. Two identified previous delayed discharges
with the medicine service, when new drugs were prescribed pre-discharge.

Suggestions

Five participants said they would prefer to have the WLT cabinet relocated. Two said
they would prefer to have the key and take their own medications; one of these also
felt nurses should be allowed to borrow drugs from other lockers.

One participant said she would prefer her name on the locker top cabinet. She
was concerned that if lockers were moved and her locker was changed with another,
then there may be the possibility of being given the wrong medication. One partici-
pant suggested emphasising the need to bring in medications with notices in GP
surgeries.

Discussion

This evaluation provides an opportunity to embed patients’ views in the wider imple-
mentation of this new system. Participants were happier that their own medications
were safe and secure beside them.

It is reassuring that participants’ expe-
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largely positive. The only negative aspect
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