Antiretroviral drug wastage in a teaching hospital's sexual health and infectious diseases clinics

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BACKGROUND

Antiretroviral therapy (ART) is expensive. Increasing demands on clinicians and departments to provide care with serious resource constraints have resulted in a shift from prescribing ART based on national guidelines (BHIVA, 2012), to protocols agreed locally and regionally with particular focus on minimising cost. Drug wastage is a significant, often unnecessary, drain on resources. We set out to quantify ART wastage in our cohort of HIV patients managed by the sexual health and infectious diseases units in a large city centre teaching hospital.

METHODS

Pharmacy records were interrogated to identify all ART prescriptions from 1st April 2013 to 31st October 2014 inclusive. A total of 950 patients were receiving ART within our centre. We calculated how much each patient should have received relative to their appointments and prescriptions in an 18 month period. Case notes, clinic letters and discussion with specialist nurses were used to determine reasons for excess dispensation in those identified to have more than the expected amount of ART. Two groups were analysed: **'switch'** and **'stable'**.

A health economist was invited to inspect and advise on the methods, results and recommendations.

STABLE

FURTHER METHODS

- No switch in therapy
- Monitored over 18 months
- Censored at 12 months (quantity of tablets known at this point)
- 12 month stock reviewed
- Expected maximum 15 month (3 extra) allowed

RESULTS

- 18 months supply given in 1 year in 13 patients
- 2 years supply given in 1 year in 10 patients
- Wastage total: £56,231

CONCLUSIONS

- Lots of partial adherence
- Complex regimens associated with wastage
- OD regimens associated with less wastage

SWITCH

FURTHER METHODS

- Switch in therapy between 1st April 2013 and 31st October 2014
- Reason for switch determined
- Nature of regimen switched to and from (single- [STR] or multiple tablet regimen [MTR], once daily [OD] or twice daily [BD])
- Amount (and cost) of drug wasted estimated

RESULTS

-134 switches of therapy analysed amongst 122 patients

-Most common reasons for switch were tolerability (27%), resistance (17%), simplification (16%) and toxicity (14%) [Figure 1]

- Most switches were to OD regimens (76%), though not as many as expected to STRs (31%) [Figure 2]
- Wastage total: £1,289,747

CONCLUSIONS

- Massive wastage of drugs at the time of switch occurs
- The majority of switches are for reasons that shouldn't prompt wastage of the previous regimen, for example tolerability (27%), simplification (16%) and proprietary to generic (6%)

Figure 1: Switch Reason (n=134)

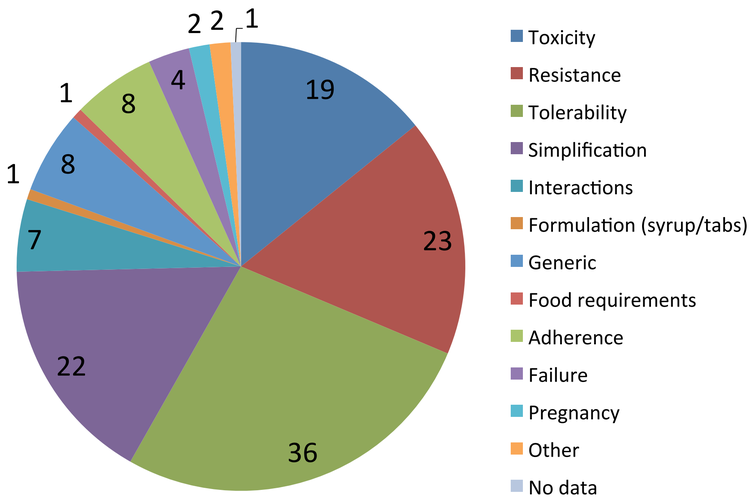

Figure 2: Switch regimens

Switch type	No
BD to BD	12
BD to MTR OD	17
BD to STR	9
MTR OD to STR	21
MTR OD to BD	15
MTR OD to MTR OD	32
STR to STR	12
STR to MTR OD	11
STR to BD	5
TOTAL SWITCH	134
TOTAL TO OD REGIMEN	102
TOTAL TO STR	42

ESTIMATED COST OF ARV WASTAGE OVER 12 MONTHS:

STABLE: £56,231

SWITCH: £1,289,747

TOTAL: £1,345,978

RECOMMENDATIONS TO REDUCE WASTAGE

1. Pill count by text/Patients Know Best
2. Medicines reconciliation by technician 6-monthly
3. Appointment date to be given to pharmacy
4. Avoid complex regimens
5. If *ad hoc* attendance, 1 month maximum prescription
6. Poster in clinic with list prices of ARVs to make patients aware
7. Dosette box in selected patients
8. Community nurse support of complex patients
9. Patient activation questionnaire
10. Tolerability/simplification: no switch until end of existing ARV stock (resistance/toxicity allowed immediate switch)
11. Use more generics
12. Only 1 month issued for all new ARV prescriptions

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REFERENCE

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