PHARMACIST DELIVERY OF ANTIMICROBIAL STEWARDSHIP TO HOME IV PATIENTS: A QUALITATIVE STUDY

Lisa McAllister, B.Sc.(Pharm); John Groumoutis, B.Sc.(Pharm), ACPR; Edith Blondel-Hill, MD, FRCP(C); Piera Calissi, B.Sc.(Pharm), PharmD, FCSHP

Background

- **Home IV:** effective & convenient treatment option for delivery of parenteral antimicrobials without hospitalization & is provided by community and regional hospitals within IH
- **Antimicrobial Stewardship (AMS):** coordinated interventions designed to optimize antimicrobial use
- AMS principles must be balanced with convenience, ease of administration & tolerability in Home IV
- Identification of enablers & barriers to hospital pharmacists providing AMS to Home IV patients will help inform quality improvement initiatives by IH Antimicrobial Stewardship

Objectives

1. Determine pharmacists' perceived enablers & barriers in providing AMS to Home IV in regional & community hospitals
2. Identify areas of improvement for applying AMS to Home IV
3. Describe pharmacists' understanding of AMS & how it can be applied to Home IV

Methods

Study Design:
- Prospective, descriptive, qualitative design

Setting & Sampling:
- EKH, KBH, KLH, PRH, VJH
- Purposive sampling

Data Collection:
- 30 minute, 1:1 semi-structured interviews

Data Analysis:
- Microsoft Teams video recordings transcribed verbatim
- Open, inductive coding and thematic analysis using Nvivo R1

Measures for Methodological Rigor:
- Transcripts coded twice & independent coding of first 2 interviews for agreement

Interior Health

UBC

Results – 5/8 eligible sites (62.5%) participated in interview

Table 1. Participant Demographics (n=11)

Category	Characteristic	Result n (%)
Sites	EKH	4 (36)
	KBH	2 (18)
	KLH	1 (9)
	PRH	2 (18)
	VJH	2 (18)
Hospital Experience (yrs)	1-10	5 (45)
	11-20	3 (27)
	21-30	1 (9)
	>35	2 (18)
Home IV Experience (yrs)	1-5	5 (45)
	6-10	2 (18)
	11-15	2 (18)
	16-20	1 (9)
	>20	1 (9)
Highest Education	B.Sc. (Pharm)	2 (18)
	Entry PharmD	1 (9)
	ACPR	8 (73)

Figure 1. Pharmacist Confidence in AMS Activities

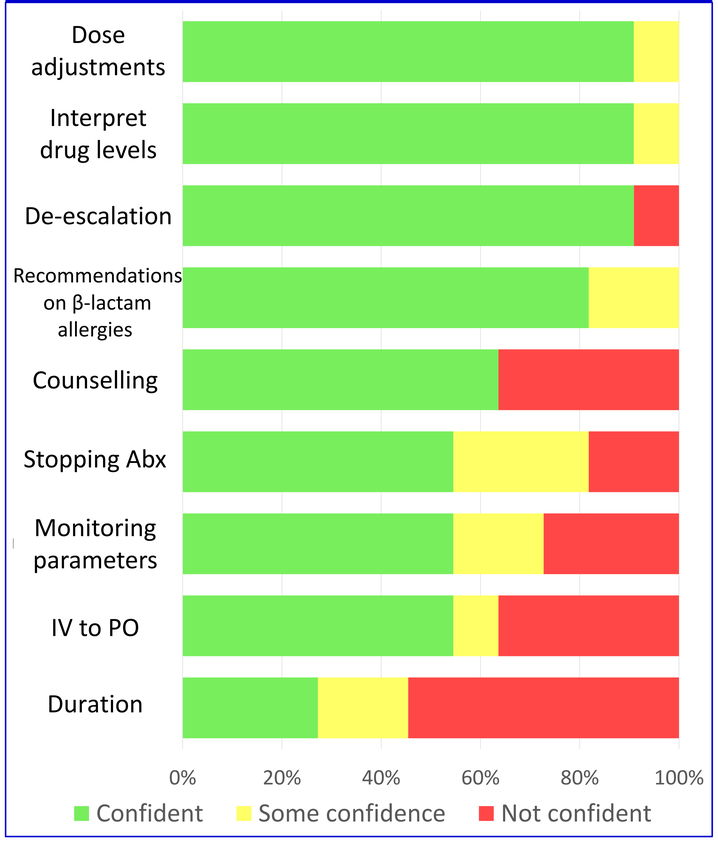

Table 2. Perceived Enablers

Theme	Statement
Understanding of AMS & impact	*AMS is using appropriate antibiotics, at the appropriate time, with the appropriate duration to prevent resistance and side effects and to hopefully help the patient.* (RPh 1)
Resources & sources of information	*I use guidelines and references to help me assess drug therapy, interactions and adverse effects. The thing that helps me provide antimicrobial stewardship is having information about the patient too.* (RPh 6)
Access to prescribers	*Having a local MRP as opposed to locums or out of town specialists can help us provide stewardship because if we have recommendations or need to talk to someone it's someone local that we can get a hold of and that knows the patient.* (RPh 11)

Table 3. Perceived Barriers

Theme	Statement
Communication & information issues	*We don't have local Infectious Disease, so if we can't see a consult or more detailed workup then we might just get the Home IV prescription on our desk. If the patient was seen at an outpatient clinic, there's no access to that information.* (RPh 11)
Lack of pharmacist inclusion & role clarity	*I feel we are often not part of the decision making at the start of therapy. Unless we're the clinical pharmacist on the unit and the patient is admitted for a while.* (RPh 6)
Minimal monitoring & follow up	*We should be following up on the labs that are ordered. We should be counseling the patients before they go home. We should be more involved with the follow up in terms of duration of therapy. There's no follow up to see if the patient fell through the cracks or if they are clinically improved.* (RPh 4)
Patient & infection specific issues	*When we're dealing with a challenging patient with complex issues and a complex living situation then we have to come up with creative alternatives that might not be your number one choice of antimicrobial.* (RPh 3)
Environment	**Sub-theme**	
	Lack of Home IV structure & policies	*I think if our program was more clearly outlined and structured, like whose roles are what. Like a policy and procedure because there's a lot of wasted time figuring out what's going on and I find that makes it harder to provide good care.* (RPh 2)
	Time, workload & priorities	*We're not set up to have a specific amount of time assigned to Home IV therapy. It kind of gets done off the side of our desk.* (RPh 5)
	Rural sites	*The rural sites are the most challenging because can't go and look at the patient at all. You have nothing to go by other than what you see on the computer screen.* (RPh 9)

Table 4. Suggested Interventions

Pharmacist ID and AMS education
Multidisciplinary Home IV teams
Access to information & communication of treatment plan
Policies, procedures & standardization
Patient education resources
Designated Home IV pharmacist role
Home IV order forms
Medication pick up days & monitoring schedule
AMS checklist for reviewing orders

Home IV home intravenous therapy, **AMS** antimicrobial stewardship, **EKH** East Kootenay Hospital; Cranbrook, BC (Regional), **KBH** Kootenay Boundary Hospital; Trail, BC (Regional), **KLH** Kootenay Lake Hospital; Nelson, BC (Community), **PRH** Penticton Regional Hospital; Penticton, BC (Regional), **VJH** Vernon Jubilee Hospital; Vernon, BC (Regional), **Abx** antibiotics, **PO** oral, **RPh** Pharmacist

Discussion

Strengths:
- Exceeded expected number of interviews
- Transcripts coded twice and sample of 2 transcripts independently coded
- Pharmacist perspectives represented from variety of sites over a large geographic area

Limitations:
- No parallel coding
- No participants from 3 eligible sites
- Data saturation not met

Conclusions:
- Identified **enablers**, **barriers** and **suggested interventions** for future quality improvement initiatives to enhance AMS delivery to Home IV
- Assessed **pharmacist confidence** in specific AMS activities to focus interventional efforts