Appendix 1 (part 1 of 8): Rubric for competency assessment of pharmacists prescribing and managing vancomycin therapy

Empiric Dosing Phase

Pharmacist:
Patient's ward: Critical Care/Non–Critical Care/Outpatient/Home IV
Time of prescribing: M–F 8–4:30/M–F 4:30–8:30/Weekend or Stat

	Pts	Yes	No	Data	Error	OP
Did the pharmacist document the indication for vancomycin use?	2			Indication: Or No indication, vancomycin stopped	not assessed	
Did the pharmacist select the appropriate trough level? *See page E44 of this appendix for trough level indications.*	4			Target trough:	☐ too high ☐ too low	
Did the pharmacist correctly choose to either order or not order a loading dose? *See page E44 of this appendix for LD indications.*	4			LD (if ordered):	☐ not required but ordered ☐ not ordered but required	
If LD ordered, was the loading dose correct?	4			☐ N/A (no LD required) Correct dose: 25 mg × _____kg × 1 dose to nearest rounded 250 mg (Max 2.5 g) =	☐ too high ☐ too low	
Did the pharmacist order the correct maintenance dose?	8			Correct dose: 15 mg × _____kg rounded to nearest 250 mg (Max 2 g) =	☐ too high ☐ too low	
Did the pharmacist order the correct interval? *See page E44 of this appendix for interval selection table.*	8			SCr = CrCl = Correct interval:	☐ too frequent ☐ too infrequent	
Did the pharmacist correctly identify nephrotoxic risk factors? *See last page of this appendix for list of factors.*	2 ea.			Nephrotoxic risk factors: ☐ SCr ≥ 100 µmol/L ☐ ≥ 100kg or morbidly obese ☐ Concurrent nephrotoxins ☐ Hypotension due to septic shock, on vasopressors ☐ Target trough 15–20 mg/L ☐ Daily dose ≥ 4g	☐ present and not documented ☐ risk factor documented not in procedure ☐ not present but documented	
Did the pharmacist order a baseline renal panel?	2			☐ N/A (already had baseline SCr 7 days prior to vanco initiation)	☐ was not done but required ☐ unnecessarily done	
Was the correct frequency of SCr monitoring ordered? *See last page of this appendix for selection criteria.*	2			Frequency of SCr: Or ☐ N/A (already ordered)	☐ too frequent ☐ too infrequent	
Did the pharmacist correctly identify if/when a trough level will be required? *See last page of this appendix for level indications.*	2			☐ no level required Or Level planned (day of therapy): Indication for level:	☐ no level planned but required ☐ level planned but not required ☐ level planned too soon ☐ level planned too late	

Supplementary material for Tangedal K, Bolt J, Len S, Bell A. Baseline competency assessment of pharmacists prescribing and managing vancomycin therapy in the Regina Qu'Appelle Health Region. *Can J Hosp Pharm.* 2017;70(5):335-42.

Appendix 1 (part 2 of 8): Rubric for competency assessment of pharmacists prescribing and managing vancomycin therapy

Follow-Up Phase—Serum Creatinine

Pharmacist:
Patient's ward: Critical Care/Non–Critical Care/Outpatient/Home IV
Time of prescribing: M–F 8–4:30/M–F 4:30–8:30/Weekend or Stat

	Pts	Yes	No	N/A	Data	Error	OP
Did the patient's SCr increase 25% or 50% greater than baseline? (Baseline =)						☐ baseline not documented	
If 25% decrease: Did the pharmacist order a vanco level within 24 h?	4					☐ Did not order level ☐ Level ordered too late	
If decrease due to rehydration: Did the pharmacist shorten the dosing interval to an appropriate interval based on new CrCl?	4					☐ Did not shorten interval ☐ Interval too short ☐ Interval too long	
If 25% increase: Did the pharmacist order another renal panel within 24 h (inpatients) or 48 h (outpatients)?	4				☐ already ordered	☐ panel ordered too late	
If 25% increase: Did the pharmacist order a vanco level within 24 h?	4					☐ Did not order level ☐ Level ordered too late	
If SCr continued to increase, did the pharmacist notify the prescriber (chart note) and document in the chart?	4					☐ prescriber not notified/ no documentation	
If SCr continued to increase, did the pharmacist order daily renal panels?	4				☐ already ordered	☐ daily renal panels not ordered	
Once SCr stabilized, did the pharmacist go back to normal (2–3× weekly) SCr monitoring?	1				☐ already ordered	☐ SCr monitoring not decreased	
If 50% increase: Did the pharmacist contact the prescriber and document in the chart?	4					☐ prescriber not notified/ no documentation	

Follow-Up Phase—Duration

Pharmacist:
Patient's ward: Critical Care/Non–Critical Care/Outpatient/Home IV
Time of prescribing: M–F 8–4:30/M–F 4:30–8:30/Weekend or Stat

Did the pharmacist document expected duration of therapy by day 5 of therapy?	4				☐ no duration documented but addressed by pharmacist	☐ Did not document duration	

Supplementary material for Tangedal K, Bolt J, Len S, Bell A. Baseline competency assessment of pharmacists prescribing and managing vancomycin therapy in the Regina Qu'Appelle Health Region. *Can J Hosp Pharm.* 2017;70(5):335-42.

Appendix 1 (part 3 of 8): Rubric for competency assessment of pharmacists prescribing and managing vancomycin therapy

Follow-Up Phase—Trough Levels

Pharmacist:
Patient's ward: Critical Care/Non–Critical Care/Outpatient/Home IV
Time of prescribing: M–F 8–4:30/M–F 4:30–8:30/Weekend or Stat:

	Pts	Yes	No	N/A	Data	Error	OP
Was the level ordered indicated (i.e. as reference in empiric stage)? *See last page of this appendix for level indications.*	4				☐ level not ordered by pharmacist	☐ Level ordered but not required ☐ Level not ordered but required	
Was the level ordered at the right time (day and dose)? *See last page of this appendix for level indications and timing.*	4				☐ level not ordered by pharmacist	☐ level ordered for wrong day/dose ☐ level not ordered 30 min prior to dose	
Did the pharmacist document that the level was drawn correctly or not? (30 min prior to next dose) *If level was correctly drawn, continue to applicable category below.*	2				☐ Level drawn correctly ☐ Level not drawn correctly	☐ Not acknowledged by pharmacist ☐ Not drawn correctly but recorded that it was	
Within range:							
Did the pharmacist document this with a chart note?	4					☐ Pharmacist did not acknowledge level	
Did the pharmacist indicate when or if another level will be required?	2					☐ Did not plan for next level ☐ Next level too soon ☐ Next level too late	
Supratherapeutic (20–25 mg/L):							
Did the pharmacist contact the prescriber and was it documented in the chart?	4					☐ Pharmacist did not contact prescriber/ no documentation	
Did the pharmacist extend the interval to put the level within range?	4					☐ Interval too long ☐ Interval too short	
Did the pharmacist indicate that a level will be required before the next 3rd or 4th dose?	4					☐ Did not plan for next level ☐ Next level too soon ☐ Next level too late	
Did the pharmacist order repeat SCr within 24 h?	4				☐ already ordered	☐ Did not order SCr ☐ SCr ordered too late	

Supplementary material for Tangedal K, Bolt J, Len S, Bell A. Baseline competency assessment of pharmacists prescribing and managing vancomycin therapy in the Regina Qu'Appelle Health Region. *Can J Hosp Pharm.* 2017;70(5):335-42.

Appendix 1 (part 4 of 8): Rubric for competency assessment of pharmacists prescribing and managing vancomycin therapy

	Pts	Yes	No	N/A	Data	Error	OP
Supratherapeutic (>25 mg/L)							
Did the pharmacist contact the prescriber and was it documented in the chart?	4					☐ Pharmacist did not contact prescriber/ no documentation	
Did the pharmacist write an order to hold vanco until further notice?	4					☐ Pharmacist did not write hold order	
Did the pharmacist order a repeat level in 24 h?	4					☐ Did not order level ☐ Level ordered too late ☐ Level ordered too early	
Did the pharmacist order repeat renal panel within 24 h?	4				☐ already ordered	☐ Did not order SCr ☐ SCr ordered too late	
24 h later: if SCr is stable (< 25% increase) did the pharmacist order an interval based on estimated half life?	4					☐ Did not estimate half life	
For stable SCr, did the pharmacist indicate that a level will be required 30 min prior to the 3rd or 4th dose?	4					☐ Did not plan for next level ☐ Next level too soon ☐ Next level too late	
For stable SCr, did the pharmacist order 3x weekly renal panels?	4				☐ N/A, already ordered	☐ Ordered renal panels too frequently ☐ Ordered renal panels too infrequently	
For stable SCr, did the pharmacist decrease to 2x weekly renal panels after two consecutive therapeutic trough levels?	1				☐ N/A, already ordered	☐ Did not decrease renal panels	
24 h later: if SCr continues to rise did the pharmacist order daily vancomycin levels and daily renal panels?	4				☐ renal panel already ordered	☐ Did not order daily level ☐ Did not order daily renal panel	
For unstable SCr and daily monitoring of levels, when the level dropped below 15 mg/L did the pharmacist order 15 mg × kg × 1 dose?	4					☐ Ordered dose too early ☐ Did not order dose ☐ dose ordered too high ☐ dose ordered too low	
Subtherapeutic							
Did the pharmacist decrease the interval to an appropriate interval?	4					☐ interval not changed ☐ interval too short ☐ interval not short enough	
Did the pharmacist correctly estimate the new trough level based on the new interval and document it in the chart?	4					☐ did not estimate trough/ not documented ☐ incorrectly estimated trough	
Did the pharmacist indicate that a level will need to be ordered after the 3rd or 4th dose?	4					☐ Did not plan for next level ☐ Next level too soon ☐ Next level too late	
If levels are continually below target, did the pharmacist contact the prescriber to make alternate plans?	4					☐ Pharmacist did not contact prescriber	

Supplementary material for Tangedal K, Bolt J, Len S, Bell A. Baseline competency assessment of pharmacists prescribing and managing vancomycin therapy in the Regina Qu'Appelle Health Region. *Can J Hosp Pharm.* 2017;70(5):335-42.

Appendix 1 (part 5 of 8): Rubric for competency assessment of pharmacists prescribing and managing vancomycin therapy

	Pts	Yes	No	N/A	Data	Error	OP
Empiric Dosing Phase—*Acute Renal Failure*							
Pharmacist: Patient's ward: Critical Care/Non–Critical Care/Outpatient/Home IV Time of prescribing: M–F 8–4:30/M–F 4:30–8:30/Weekend or Stat							
Did the pharmacist document the indication for vancomycin use?	2				Indication: Or ☐ No indication, vancomycin stopped	☐ not assessed	
Did the pharmacist correctly identify nephrotoxic risk factors? *See last page of this appendix for list of factors.*	2 ea.				Nephrotoxic risk factors: ☐ SCr ≥100 µmol/L ☐ ≥100kg or morbidly obese ☐ Concurrent nephrotoxins ☐ Hypotension due to septic shock, on vasopressors ☐ Target trough 15–20 mg/L ☐ Daily dose ≥ 4 g	☐ present and not documented ☐ risk factor documented not in procedure ☐ not present but documented	
Did the pharmacist select the appropriate trough level?	4				Target trough: 15–20 mg/L	☐ too high ☐ too low	
Did the pharmacist correctly order a loading dose?	4				Correct dose: 25 mg × _____kg × 1 dose to nearest rounded 250 mg (Max 2.5 g) =	☐ too high ☐ too low	
Did the pharmacist order a serum vanco level with morning blood work?	4						
Did the pharmacist write order stating pharmacists will dose daily based on daily level?	8						
Follow-Up Phase—*Acute Renal Failure Not on HD or CRRT*							
Pharmacist: Patient's ward: Critical Care/Non–Critical Care/Outpatient/Home IV Time of prescribing: M–F 8–4:30/M–F 4:30–8:30/Weekend or Stat							
Did the pharmacist re-dose the patient when random serum level was less than 15 mg/L?	4					☐ too early ☐ too late	

Supplementary material for Tangedal K, Bolt J, Len S, Bell A. Baseline competency assessment of pharmacists prescribing and managing vancomycin therapy in the Regina Qu'Appelle Health Region. *Can J Hosp Pharm.* 2017;70(5):335-42.

Appendix 1 (part 6 of 8): Rubric for competency assessment of pharmacists prescribing and managing vancomycin therapy

Follow-Up Phase—*Acute Renal Failure on HD or CRRT*							
Pharmacist: Patient's ward: Critical Care/Non–Critical Care/Outpatient/Home IV Time of prescribing: M–F 8–4:30/M–F 4:30–8:30/Weekend or Stat							
	Pts	Yes	No	N/A	Data	Error	OP
Did the pharmacist correctly decide when to re-dose the patient based on the daily serum level? *See HD and CRRT dosing table on last page of this appendix.*	4					☐ dose required but not given ☐ dose not required but given	
If the patient was given a dose, was it the correct amount? *See HD and CRRT dosing table on last page of this appendix.*	4					☐ too high ☐ too low	
Did the pharmacist discontinue daily levels once the patient's dialysis schedule was stable for 96 h or the patient left ICU?	4					☐ daily levels continued	
Did the pharmacist change to chronic hemodialysis dosing once the patient's dialysis schedule was stable for 96 h or the patient left ICU?	4					☐ did not change ☐ dose too low ☐ dose too high	
Follow-Up Phase—*Acute Renal Failure, Duration*							
Pharmacist: Patient's ward: Critical Care/Non–Critical Care/Outpatient/Home IV Time of prescribing: M–F 8–4:30/M–F 4:30–8:30/Weekend or Stat							
Did the pharmacist document expected duration of therapy by day 5 of therapy?	4				☐ no duration documented but addressed by pharmacist	☐ Did not document duration	
Empiric Dosing Phase—*Chronic Renal Failure*							
Pharmacist: Patient's ward: Critical Care/Non–Critical Care/Outpatient/Home IV Time of prescribing: M–F 8–4:30/M–F 4:30–8:30/Weekend or Stat							
Did the pharmacist document the indication for vancomycin use?	2				Indication: Or ☐ No indication, vancomycin stopped	☐ not assessed	
Did the pharmacist correctly identify nephrotoxic risk factors? *See last page of this appendix for list of factors.*	2 ea.				Nephrotoxic risk factors: ☐ SCr ≥ 100 µmol/L ☐ ≥ 100 kg or morbidly obese ☐ Concurrent nephrotoxins ☐ Hypotension due to septic shock, on vasopressors ☐ Target trough 15–20 mg/L ☐ Daily dose ≥ 4 g	☐ present and not documented ☐ risk factor documented not in procedure ☐ not present but documented	
Did the pharmacist select the appropriate trough level?	4				Target trough: 15–20 mg/L	☐ too high ☐ too low	

Supplementary material for Tangedal K, Bolt J, Len S, Bell A. Baseline competency assessment of pharmacists prescribing and managing vancomycin therapy in the Regina Qu'Appelle Health Region. *Can J Hosp Pharm.* 2017;70(5):335-42.

Appendix 1 (part 7 of 8): Rubric for competency assessment of pharmacists prescribing and managing vancomycin therapy

	Pts	Yes	No	N/A	Data	Error	OP
Did the pharmacist correctly order a loading dose?	4				Correct dose: 25 mg × _____ kg × 1 dose to nearest rounded 250 mg (Max 2.5 g) =	☐ too high ☐ too low	
Did the pharmacist order a maintenance dose of vancomycin in the last hour of each dialysis session?	4						
Was the maintenance dose calculated correctly?	8				< 75 kg 500 mg × 1 ≥ 75 kg 750 mg × 1	☐ too high ☐ too low	
Follow-Up Phase—*Chronic Renal Failure*							
Pharmacist: Patient's ward: Critical Care/Non–Critical Care/Outpatient/Home IV Time of prescribing: M–F 8–4:30/M–F 4:30–8:30/Weekend or Stat							
Did the pharmacist order a serum level because the patient was not improving?	4						
Was level ordered for pre-dialysis?	4					☐ too early ☐ too late	
Did the pharmacist document that the level was drawn correctly or not? (prior to dialysis)	4				☐ Level drawn correctly ☐ Level not drawn correctly	☐ Not acknowledged by pharmacist	
Based on the serum level, did the pharmacist correctly modify the dose? *See last page of this appendix for dose modification table.*	4					☐ too high ☐ too low	
Follow-Up Phase—*Chronic Renal Failure, Duration*							
Pharmacist: Patient's ward: Critical Care/Non–Critical Care/Outpatient/Home IV Time of prescribing: M–F 8–4:30/M–F 4:30–8:30/Weekend or Stat							
Did the pharmacist document expected duration of therapy by day 5 of therapy?	4				☐ no duration documented but addressed by pharmacist	☐ Did not document duration	

Target Trough Levels:

- 10–15 mg/L in all patients except those indicated below
- 15–20 mg/L to improve penetration in patients with renal failure (acute or chronic); bacteremia, meningitis, endocarditis, osteomyelitis, HAP, and deep seated infections caused by MRSA; HAP regardless of organism; meningitis regardless of organism

Loading Dose:

- Required in patients with: renal failure (acute or chronic), target trough 15–20 mg/L, patients with high anticipated Vd (serious burns, fluid overload)
- Dose is 25 mg/kg × 1 dose (Max 2.5 g) rounded to nearest 250 mg

Maintenance Dose Interval Selection:

CrCl (mL/min)	Target Trough 10–15	Target Trough 15–20
80 or greater	q12h	q 8h
60–79	q 16h or q 18h	q 12h
40–59	q 24h	q 16h or q18h
20–39	q 36h	q 24h
Less than 20	LD ×1 then as per levels	

Note: q16h should be chosen before q18h.

Supplementary material for Tangedal K, Bolt J, Len S, Bell A. Baseline competency assessment of pharmacists prescribing and managing vancomycin therapy in the Regina Qu'Appelle Health Region. *Can J Hosp Pharm.* 2017;70(5):335-42.

Appendix 1 (part 8 of 8): Rubric for competency assessment of pharmacists prescribing and managing vancomycin therapy

Nephrotoxic Risk Factors:
- Preexisting renal dysfunction (baseline SCr >100 µmol/L)
- Weight 100 kg or greater or morbidly obese (>190% over IBW)
- Concurrent nephrotoxic agents
- Scenarios which affect kidney function (hypotension due to septic shock, on vasopressors)
- Target trough 15–20 mg/L
- Daily doses totaling 4 g or more

Creatinine Monitoring Frequency Criteria:
- Baseline (if more than a week from last SCr reported) and twice weekly, unless more than one risk factor for nephrotoxicity then three times weekly

Indications for Empiric Serum Trough Levels:
- Level required 30 min before the 4th dose in patients where serum creatinine may be a poor predictor of kidney function (low muscle mass, CF)
- Level required 30 min before a dose between day 3 and 4 in patients with risk factors for nephrotoxicity and therapy is anticipated to go longer than 5 days
- Inpatients (with stable renal function): level required 30 min before a dose in 5 to 7 days after the start of therapy in all patients where therapy is anticipated to go longer than 5 days
- Outpatients (with stable renal function): weekly with SCr
- If SCr increases/decreases 25% or more from baseline: within 24 h

Indications for Follow-Up Serum Trough Levels:
- If prior level is supratherapeutic but < 25 mg/L, next level to be drawn after next 3rd or 4th dose

Acute Renal Failure HD and CRRT Dosing Table

Level	HD	CRRT
< 15 mg/L	< 75 kg: 750 mg × 1 ≥ 75 kg: 1 g × 1	Re-dose with 20 mg/kg × 1
15–20 mg/L	If HD expected in the next 24 h: < 75 kg: 500 mg × 1 ≥ 75 kg: 750 mg × 1	15 mg/kg × 1
> 20 mg/L	No dose	No doses

Chronic Renal Failure Dose Modification Table

Serum level:	Dose modification:
< 15 mg/L	Increase dose by 250 mg
15–20 mg/L	No change
> 20 mg/L	Decrease dose by 250 mg

Abbreviations:
CF = cystic fibrosis, CrCl = creatinine clearance, CRRT = continuous renal replacement therapy, HAP = hospital-acquired pneumonia, HD = hemodialysis, IBW = ideal body weight, LD = loading does, MRSA = methicillin-resistant *Staphylococcus aureus*, N/A = not applicable, OP = off-protocol, Pts = points, SCr = serum creatinine, Vd = volume of distribution.

Supplementary material for Tangedal K, Bolt J, Len S, Bell A. Baseline competency assessment of pharmacists prescribing and managing vancomycin therapy in the Regina Qu'Appelle Health Region. *Can J Hosp Pharm.* 2017;70(5):335-42.

Appendix 2 (part 1 of 3): Errors documented during assessment of pharmacist competency in prescribing and managing vancomycin therapy*

Category	Error	Count (*n* = 386)
Empiric phase (*n* = 156 episodes, *n* = 140 errors)		
Indication documented	Not assessed	7
Selecting trough	Nothing specified	7
	Too low	3
	Too high	0
Choosing to order LD	Not ordered but required	3
	Not required but ordered	1
LD ordered	Too high	1
	Too low	3
MD ordered	Not selected/ordered	1
	Too high	3
	Too low	2
Interval ordered	Too infrequent	5
	Too frequent	4
Nephrotoxic risk factors	Present and not documented	28
	Documented but not present	1
	RF documented not in procedure	1
Baseline renal panel ordered	Not done but required	1
	Unnecessarily done	0
Serum creatinine monitoring	Not ordered	3
	Too frequent	8
	Too infrequent	6
Future trough levels	No level planned but required	40
	Level planned too soon	4
	Level planned too late	8
Follow-up phase: SCr (*n* = 35 episodes, *n* = 15 errors)		
25% decrease in SCr: trough level ordered	Did not order level	2
	Level ordered too late	0
25% decrease in SCr due to rehydration: dosing interval change	Did not shorten interval	0
	Interval too short	0
	Interval too long	0
25% increase in SCr: repeat renal panel	Ordered too late	4
25% increase in SCr: trough level ordered	Did not order level	4
	Level ordered too late	0
25% increase in SCr: notifying prescriber if continuing to increase	Prescriber not notified/no documentation	2
25% increase in SCr: ordering daily renal panels for continually increasing SCr	Not ordered	0
25% increase in SCr: returning to 2–3 times weekly renal panels once stable	Not decreased	0
50% increase in SCr: contact prescriber	Prescriber not notified/no documentation	3
Follow-up phase: duration (*n* = 42 episodes, *n* = 15 errors)		
Documenting expected duration by day 5 of therapy	Did not document/address duration	15

Supplementary material for Tangedal K, Bolt J, Len S, Bell A. Baseline competency assessment of pharmacists prescribing and managing vancomycin therapy in the Regina Qu'Appelle Health Region. *Can J Hosp Pharm.* 2017;70(5):335-42.

Appendix 2 (part 2 of 3): Errors documented during assessment of pharmacist competency in prescribing and managing vancomycin therapy*

Category	Error	Count (*n* = 386)
Follow-up phase: trough levels (*n* = 224 episodes, *n* = 180 errors)		
Level ordered indication	Level ordered but not required	6
	Level not ordered but required	0
Level timing	Level ordered for wrong day/dose	27
	Level not ordered for 30 min before dose	0
Documentation of level drawn correctly	Not acknowledged by pharmacist	37
	Not drawn correctly but recorded as it was	0
*Within-range levels (*n = *60 episodes,* n = *22 errors)*		
Documentation with chart note	Did not acknowledge level	2
	Did not accept as within range and adjusted interval	1
Planning for future trough levels	Did not plan for next level	17
	Next level too soon	2
	Next level too late	0
*Supratherapeutic level (≤ 25 mg/L) (*n = *22 episodes,* n = *40 errors)*		
Contact prescriber	Did not contact prescriber/no documentation	14
Extending interval	Interval too long	1
	Interval too short	0
Planning for next level	Did not plan for next level	5
	Next level too late	10
	Next level too soon	0
Repeating SCr within 24 h	Did not order repeat SCr	10
	SCr ordered too late	0
*Supratherapeutic level (> 25 mg/L) (*n = *20 episodes,* n = *32 errors)*		
Contact prescriber	Did not contact prescriber/no documentation	11
Writing order to hold vancomycin	Did not write hold order	5
Repeating level within 24 h	Did not order level	4
	Level ordered too early	1
	Level ordered too late	1
Repeating SCr within 24 h	Did not order SCr	1
	Ordered too early	0
	Ordered too late	0
SCr stable: ordering interval based on half life	Did not estimate half life	3
SCr stable: planning for next level	Did not plan for next level	1
	Next level too late	2
	Next level too early	0
SCr stable: ordering 3× weekly renal panels	Ordered too frequently	1
	Ordered too infrequently	2
SCr unstable: ordering daily levels and SCr	Did not order daily level	0
	Did not order daily SCr	0
SCr unstable: re-dosing when level < 15 mg/L	Ordered dose too early	0
	Did not order dose	0
	Dose too high	0
	Dose too low	0

Supplementary material for Tangedal K, Bolt J, Len S, Bell A. Baseline competency assessment of pharmacists prescribing and managing vancomycin therapy in the Regina Qu'Appelle Health Region. *Can J Hosp Pharm.* 2017;70(5):335-42.

Appendix 2 (part 3 of 3): Errors documented during assessment of pharmacist competency in prescribing and managing vancomycin therapy*

Category	Error	Count (*n* = 386)
*Subtherapeutic (*n = *12 episodes,* n = *16 errors)*		
Decrease interval	Interval not changed	1
	Interval too long	1
	Interval too short	0
Estimating new trough	Did not estimate new trough/not documented	8
Planning for next level	Did not plan for next level	2
	Next level too late	4
	Next level too early	0
Continually below target; contact physician	Did not contact prescriber/no documentation	0
Acute renal failure: empiric phase (*n* = 26 episodes, *n* = 29 errors)		
Indication documented	Not assessed	1
Nephrotoxic risk factors	Present and not documented	16
	Documented but not present	0
	RF documented not in procedure	0
Selecting trough	Nothing specified	2
	Too low	2
	Too high	0
LD ordered	Too high	1
	Too low	2
Level with morning blood work	Not ordered	0
Order stating daily dosing by pharmacist	Not written	5
Acute renal failure: follow-up, not on HD/CRRT (*n* = 8 episodes, *n* = 0 errors)		
Re-dosing when level < 15 mg/L	Dosed too early	0
	Dosed too late	0
Acute renal failure: follow-up, HD/CRRT (*n* = 12 episodes, *n* = 0 errors)		
Deciding when to re-dose	Required but not done	0
	Done but not required	0
Correct dose	Too high	0
	Too low	0
Acute renal failure: follow-up duration (*n* = 4 episodes, *n* = 3 errors)		
Documented duration by day 5	Did not document/address duration	3
Chronic renal failure: empiric phase (*n* = 3 episodes, *n* = 3 errors)		
Indication documented	Not assessed	0
Nephrotoxic risk factors	Present and not documented	3
	Documented but not present	0
	RF documented not in procedure	0
Selecting trough	Nothing specified	0
	Too low	0
	Too high	0
LD ordered	Too high	0
	Too low	0
MD ordered	Not ordered	0
MD correct	Too high	0
	Too low	0
Chronic renal failure: follow-up (0 episodes)		
Chronic renal failure: follow-up duration (*n* = 1 episode, *n* = 1 error)		
Documenting expected duration by day 5 of therapy	Did not document/address duration	1

CRRT = continuous renal replacement therapy, HD = hemodialysis, LD = loading dose, MD = maintenance dose, RF = renal failure, SCr = serum creatinine.

*Errors are based on the rubric for competency assessment (see Appendix 1).

Supplementary material for Tangedal K, Bolt J, Len S, Bell A. Baseline competency assessment of pharmacists prescribing and managing vancomycin therapy in the Regina Qu'Appelle Health Region. *Can J Hosp Pharm.* 2017;70(5):335-42.