



Peninsula Health

Non-Specialised Pharmacists' Understanding of Sepsis and Septic Shock



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Bottom Line

- ✓ Non-specialised pharmacists' understanding of sepsis is **SUBOPTIMAL**
- ✓ There are significant **knowledge deficits**
- ✓ Pharmacists with > 3 months ICU experience had better knowledge
- ✓ Pharmacists will **benefit from** at least 3 months structured rotations in ICU
- ✓ Pharmacists review patients regularly & their knowledge of sepsis provides an additional safety-net for early recognition

Introduction

- Significant proportion of patients are admitted to ICU with severe sepsis and septic shock each year.
- Substantial consumption of healthcare resources.
- Pharmacists review patients regularly.

Aim

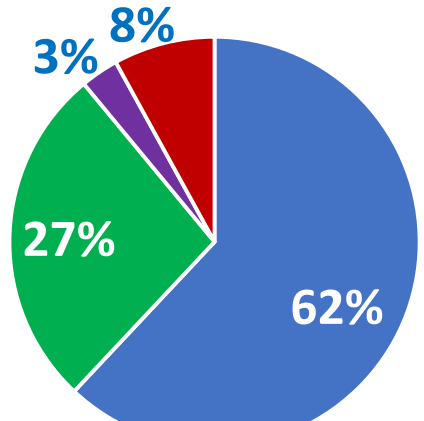
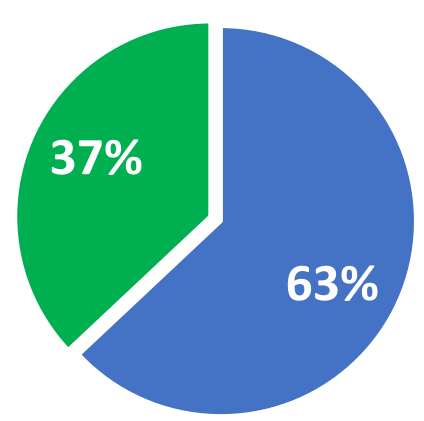
To investigate ward pharmacists' understanding of severe sepsis and septic shock and it's management

Methods

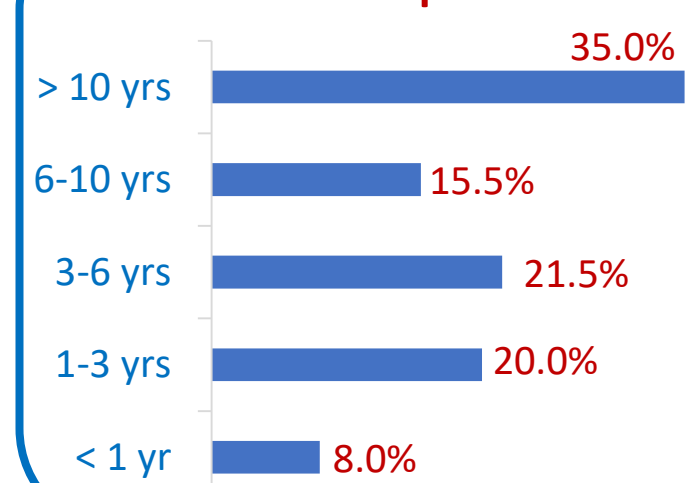
- **Study Design:** Prospective pre-course survey
- **Participants:** Registrants were pharmacists who attended a 2-day Society of Hospital Pharmacists of Australia General Medicine Pharmacists' symposium (Sept 2016). They answered the survey on a voluntary basis.
- **Tool Used:** SurveyMonkey®
35 questions overall, 27 on sepsis
- **Purpose:** To explore 3 key concepts

A:	Fundamentals of sepsis
B:	Basics of circulatory consequences of severe sepsis and septic shock
C:	Principles of managing septic shock

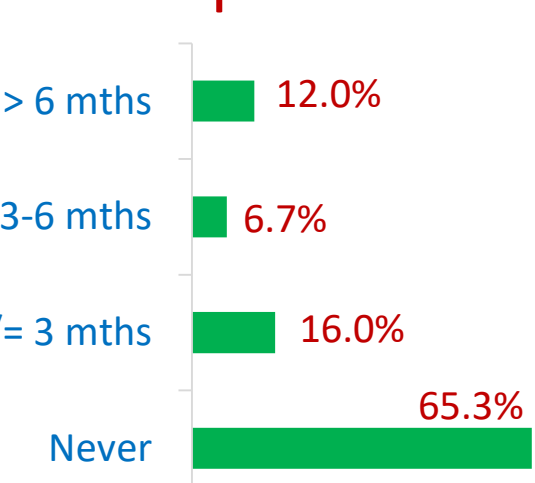
Survey response Place of employment



Years of Experience

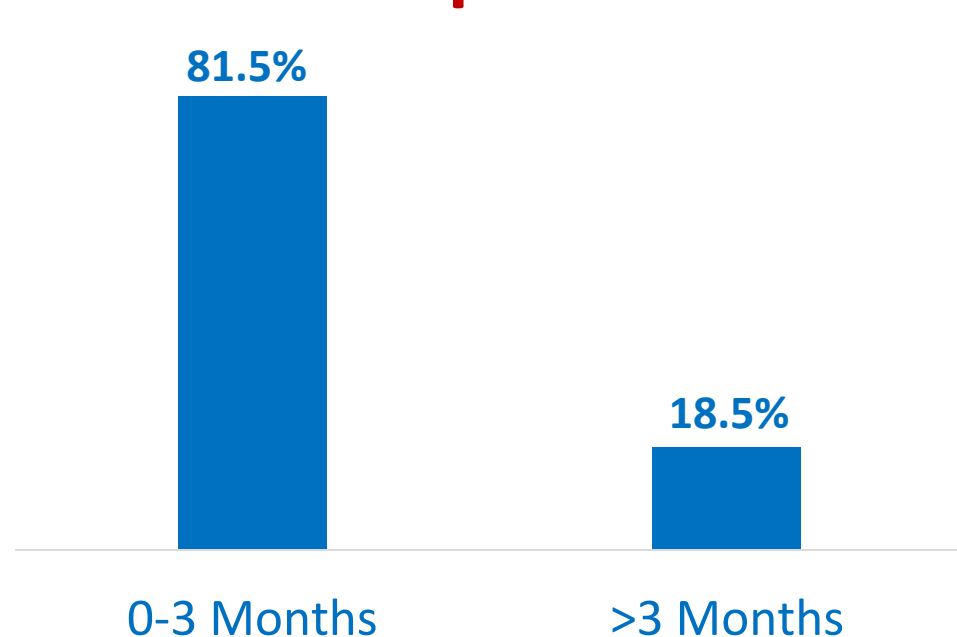


ICU Experience



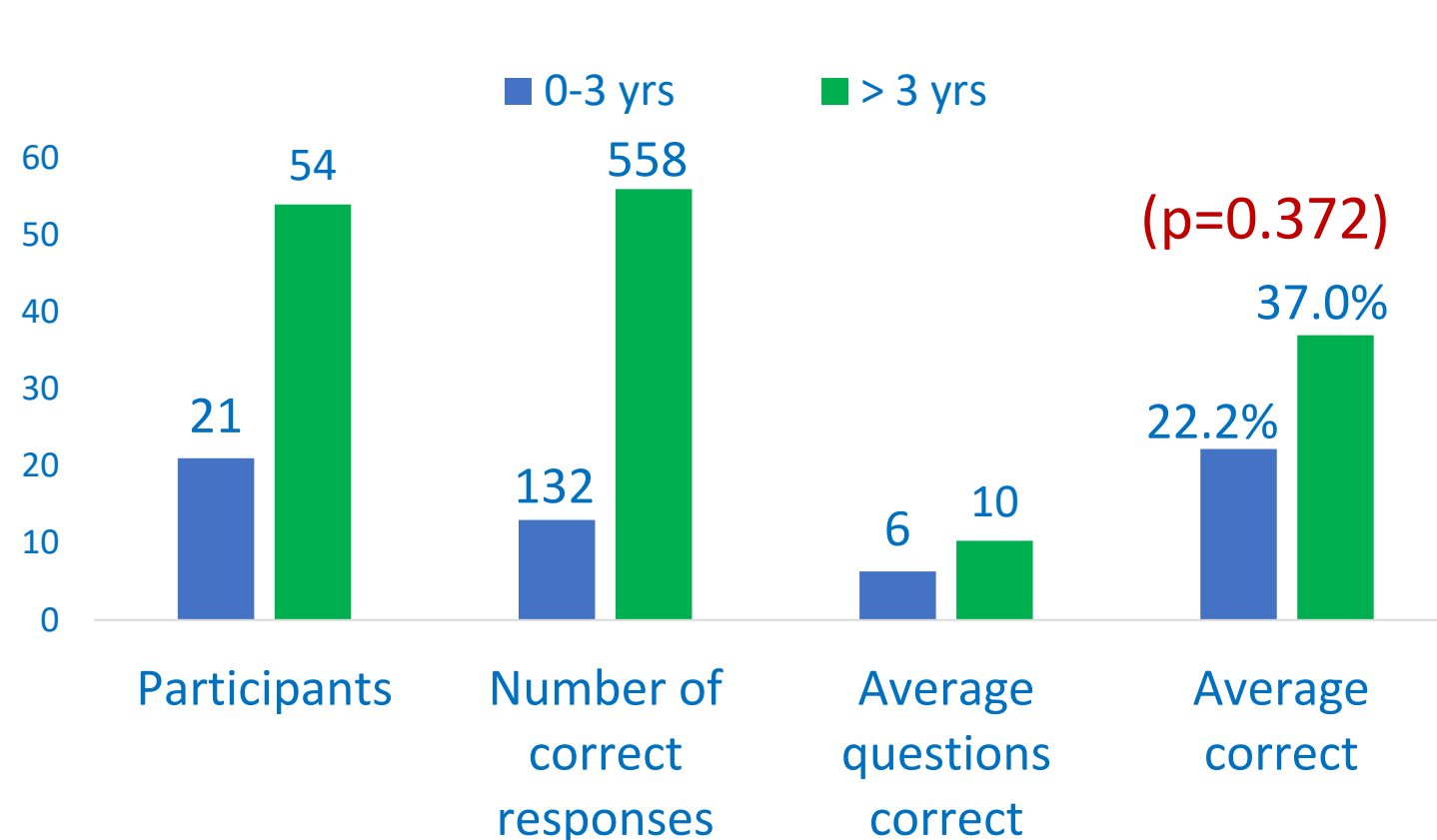
Results and Discussion

ICU Experience



		(n=27)	p value
Mean correct answers ± SD		9.2 ± 5.1	
Range of correct answers		0 - 23	
Overall average correct answers		34.1%	p<0.001
Overall average unsure answers		51.2%	

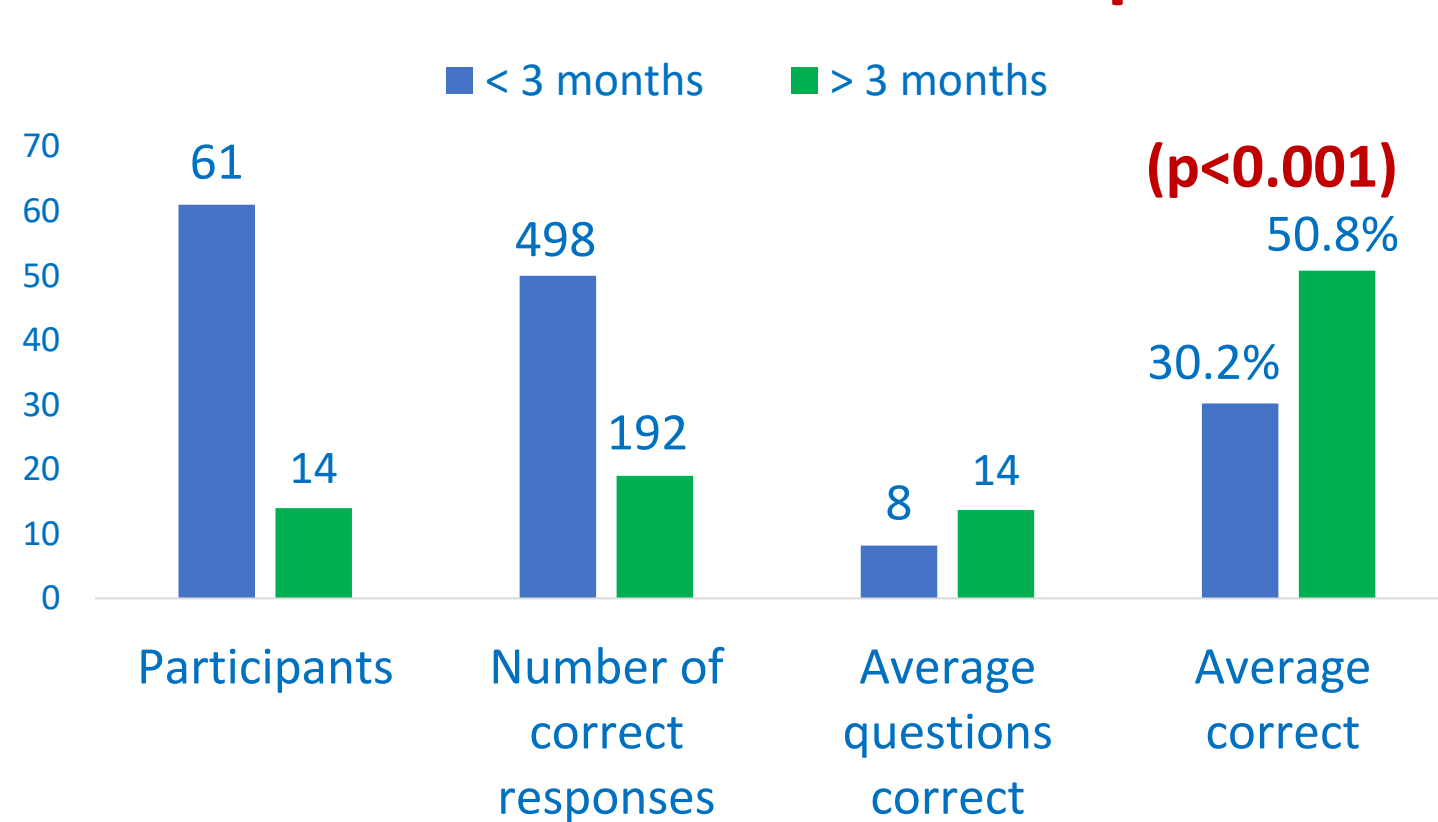
Years of Practice as Pharmacists (0-3 years vs. > 3 years)



Analysing the Key Concepts - A, B & C

		Total Score	Av correct (%)
A	< 3 years	57	34%
	> 3 years	207	48%
B	< 3 years	6	4%
	> 3 years	75	20%
C	< 3 years	69	27%
	> 3 years	276	43%

Pharmacists with ICU Experience (0-3 months vs. > 3 months)



Analysing the Key Concepts - A, B & C

		Total Score	Av correct (%)
A	< 3 months	201	41%
	> 3 months	63	56%
B	< 3 months	45	9%
	> 3 months	36	32%
C	< 3 months	252	52%
	> 3 months	93	83%

Knowledge of Drugs in Sepsis

12 Questions

- Very poor knowledge
- Better with ICU Experience

	Years of Practice		ICU Experience	
	0-3 yrs	> 3 yrs	0-3 mo	> 3 mo
Participants	21	54	61	14
Av no. of correct responses	0.3	1.9	1	3.5
Average Correct	3%	16%	8%	29%

Recommendations to improve knowledge deficit

- ICU rotation for > 3 months
- Structured rotational program with specified learning goals
- Active participation in ward rounds
- Mini-CEX & other Continuing Education programs
- Active learning, e.g. creating guidelines
- Participation in journal club meetings

Strength of Study

- ✓ Good response rate to the survey (63%)

Limitations of Study

- ✗ Small cohort with ICU exposure ≥ 3 months (n=14)
- ✗ Symposium had a biased sample of Gen Med pharmacists (specialist ICU pharmacists less likely to attend)
- ✗ Data limited by input of unsure responses which could not be clarified

Conclusion

- ✓ Non-specialised pharmacists' understanding of sepsis and it's management is suboptimal
- ✓ There are significant knowledge deficits
- ✓ Knowledge better in pharmacists with ICU experience

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