



INTRODUCTION

- Pregnant patients may experience critical illness due to complications of the pregnancy itself or other conditions.
- Management of critically ill pregnant patients requires sophisticated medical interventions and critical care support.
 - May take place in a labour and delivery unit, attached obstetric critical care unit, or general intensive care unit.
- Critical care utilization by obstetric patients in Canada is variable by province and region¹:
 - Only 67% of pregnant patients who died were admitted to an ICU.¹
 - ICU utilization is less common in rural areas.¹
- It is unclear whether variability in ICU admission rates is reflective of the access to these units or other factors.

OBJECTIVES

- To assess the availability of and access to critical care resources in obstetric centres across Ontario.

METHOD

- Identified the 80 active obstetric centres in Ontario.
- Emailed physician and/or nursing leaders of each centre to request study participation.
- Data were collected using the platform SurveyMonkey® and analyzed descriptively.
- Classified sites as urban, rural, or remote rural using the 2021 Index of Remoteness and Asad's classification.

RESULTS

Responses from 44 of the 80 units (55% response rate): 29 urban sites, 13 rural sites, and 2 remote rural sites.

ICU Transfer & Transport

16 (62%) transferring sites indicated a transfer time of ≥ 1 hour or distance of ≥ 75 km.

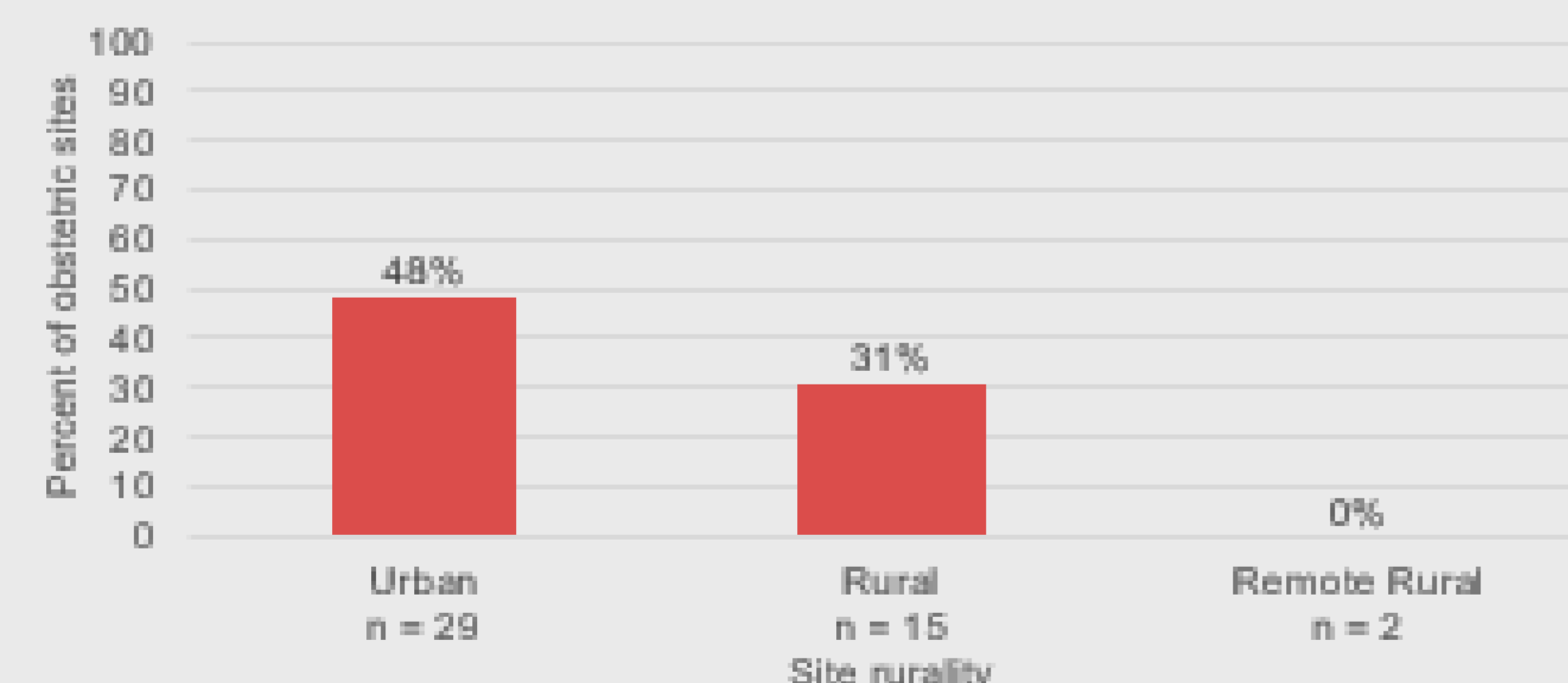


Fig. 1: Proportion of sites with on-site ICU

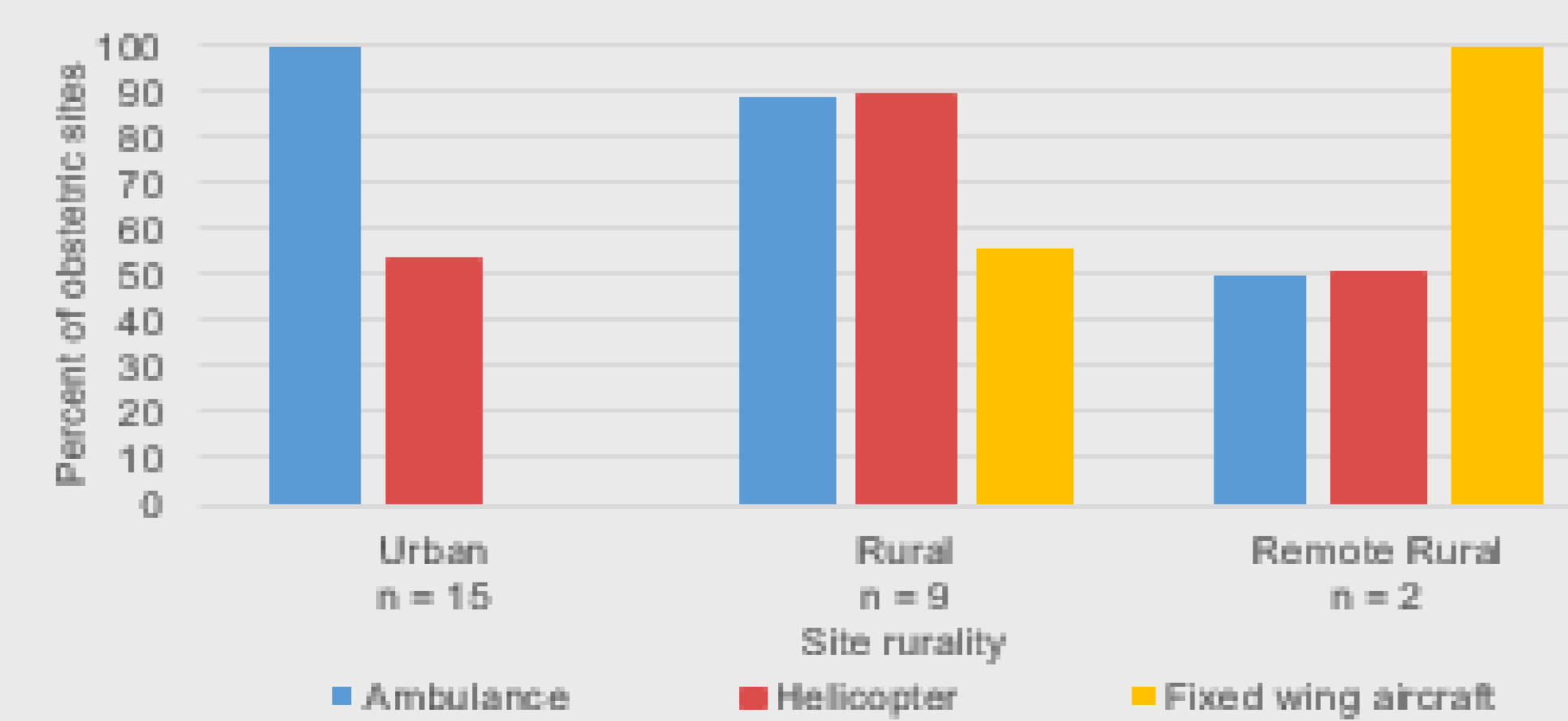


Fig. 2: Mode of transport to ICU at facilities without on-site ICU by rurality.

Specialty Support

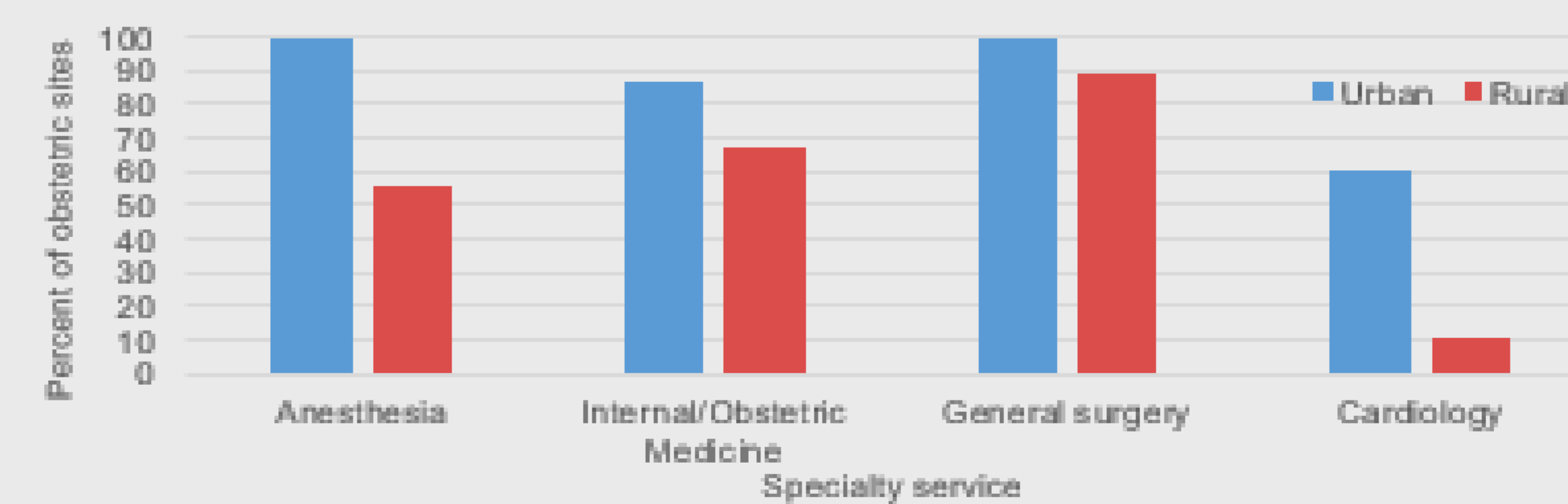


Fig. 3: Availability of specialty services for support or consult at facilities without on-site ICU.

- Massive transfusion protocol was available in 97% of urban vs. 67% of rural sites.
- Cesarean delivery was unavailable at one rural centre, requiring transfer out.

Laboratory & Imaging Tests

Table 1: Laboratory and imaging services availability, by rurality

	Urban n = 29	Rural n = 13	Remote Rural n = 2
Laboratory			
Routine lab work	29 (100%)	13 (100%)	2
Coagulation testing	28 (97%)	12 (92%)	2
Microbiology	24 (83%)	9 (69%)	1
Thromboelastography	7 (24%)	1 (8%)	0
Imaging			
X-ray	29 (100%)	13 (100%)	2
CT scan	28 (97%)	12 (92%)	1
Obstetric ultrasound	27 (93%)	13 (100%)	1
Non-obstetric ultrasound	25 (86%)	12 (92%)	2
Echocardiography	23 (79%)	10 (77%)	0
MRI	20 (69%)	3 (23%)	0
Interventional radiology	15 (52%)	4 (31%)	0

CONCLUSION

- Urban-rural disparities in critical care service access; potentially valuable procedures and tests are not universally available.
- Potential areas for improvement of care in resource-limited obstetric centres include:

- Improved supportive care, e.g.
- access to cardiology
- access to interventional radiology
- access to broader use of thromboelastography
- Optimized inter-facility transport
- Early identification of critical illness

ACKNOWLEDGEMENTS

ENL was supported by a Sinai Health Department of Medicine summer research studentship.

REFERENCES

- 1 Aoyama K, Pinto R, Ray JG, et al. Variability in intensive care unit admission among pregnant and postpartum women in Canada: a nationwide population-based observational study. *Crit Care*. 2019;23(1):381. Published 2019 Nov 27. doi:10.1186/s13054-019-2660-x

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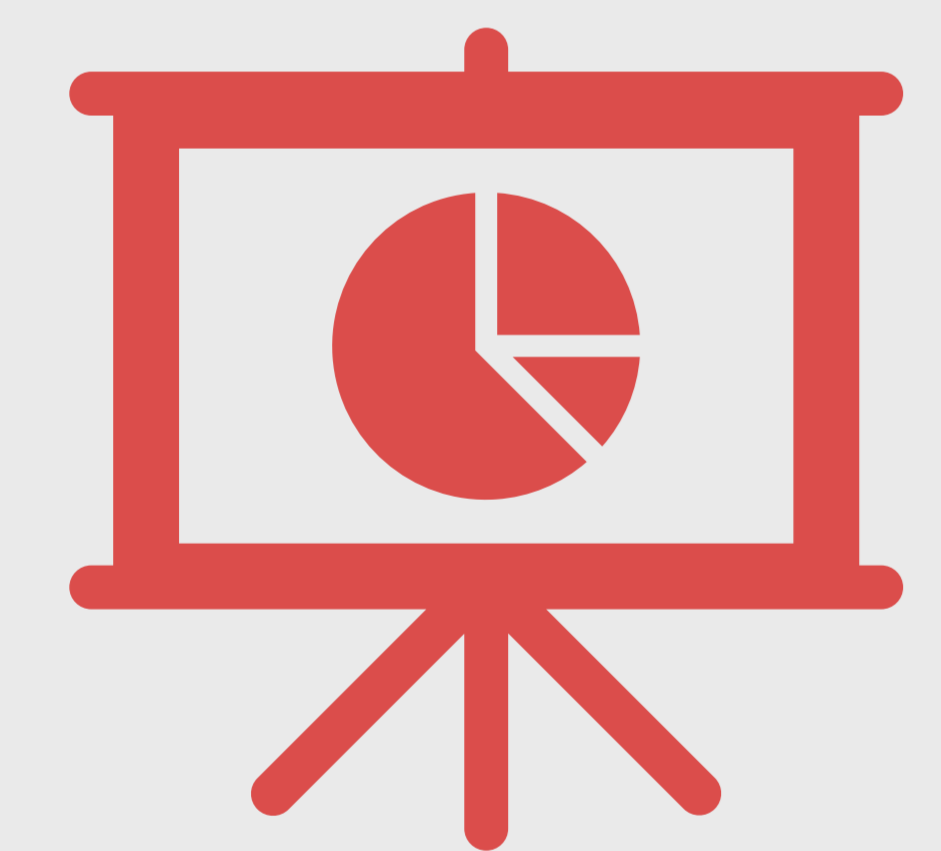
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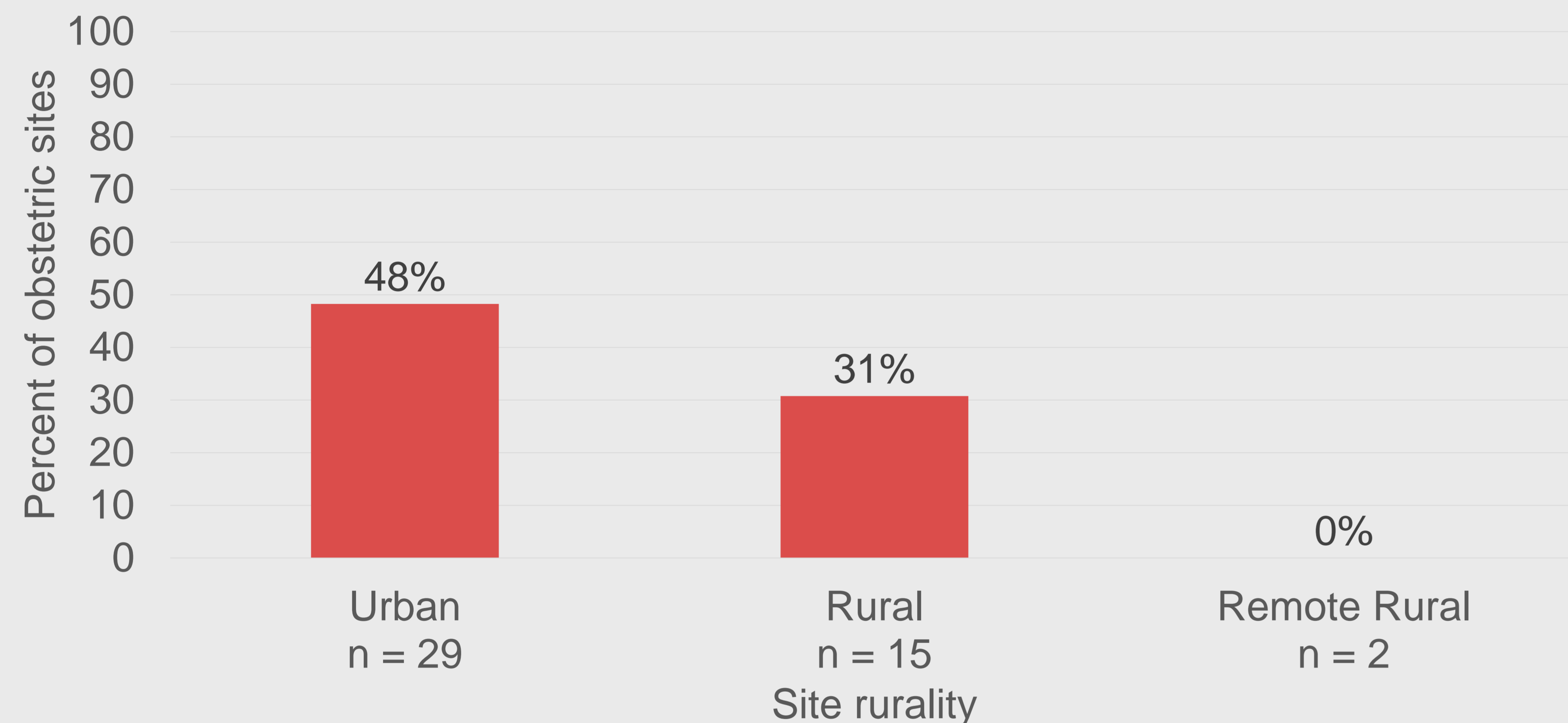


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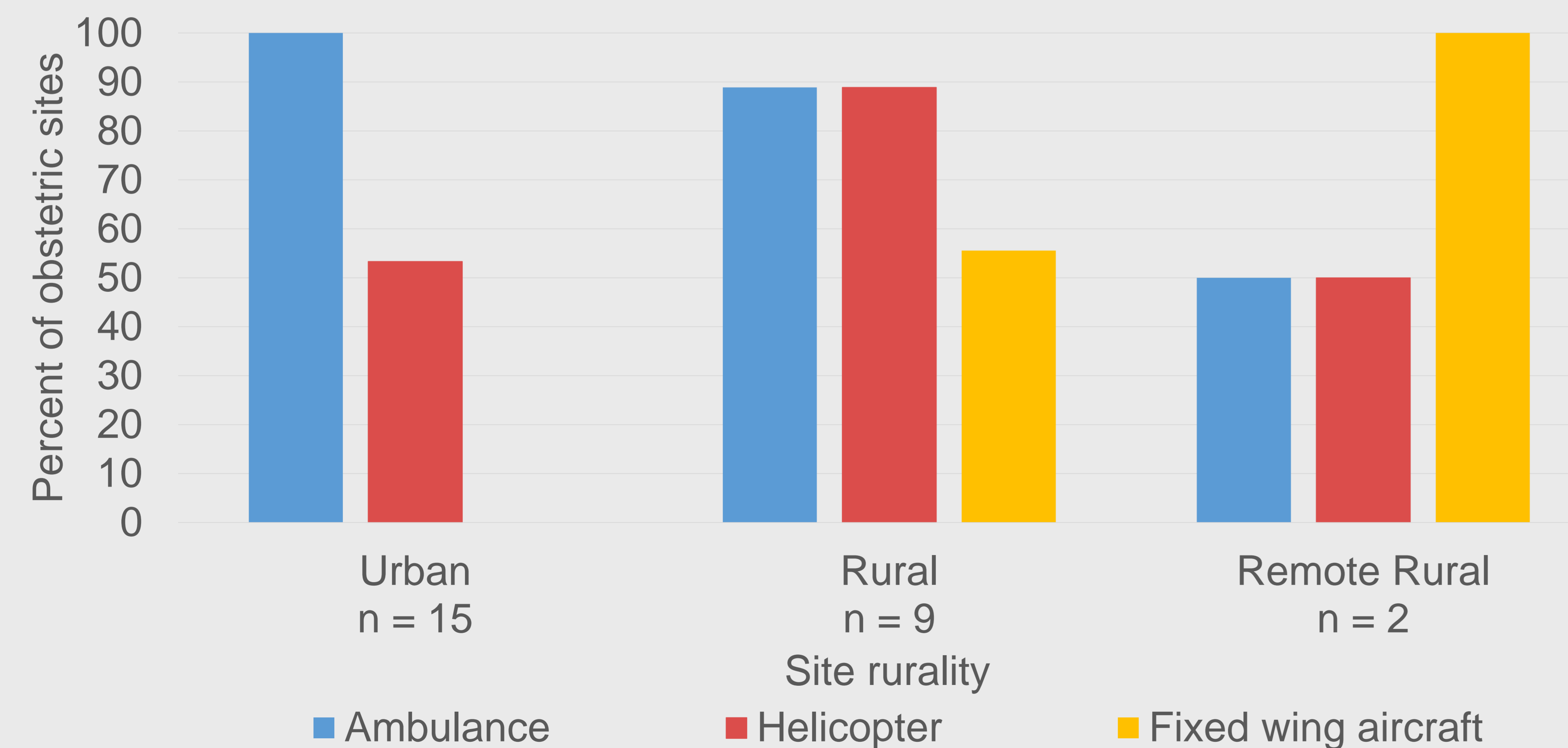


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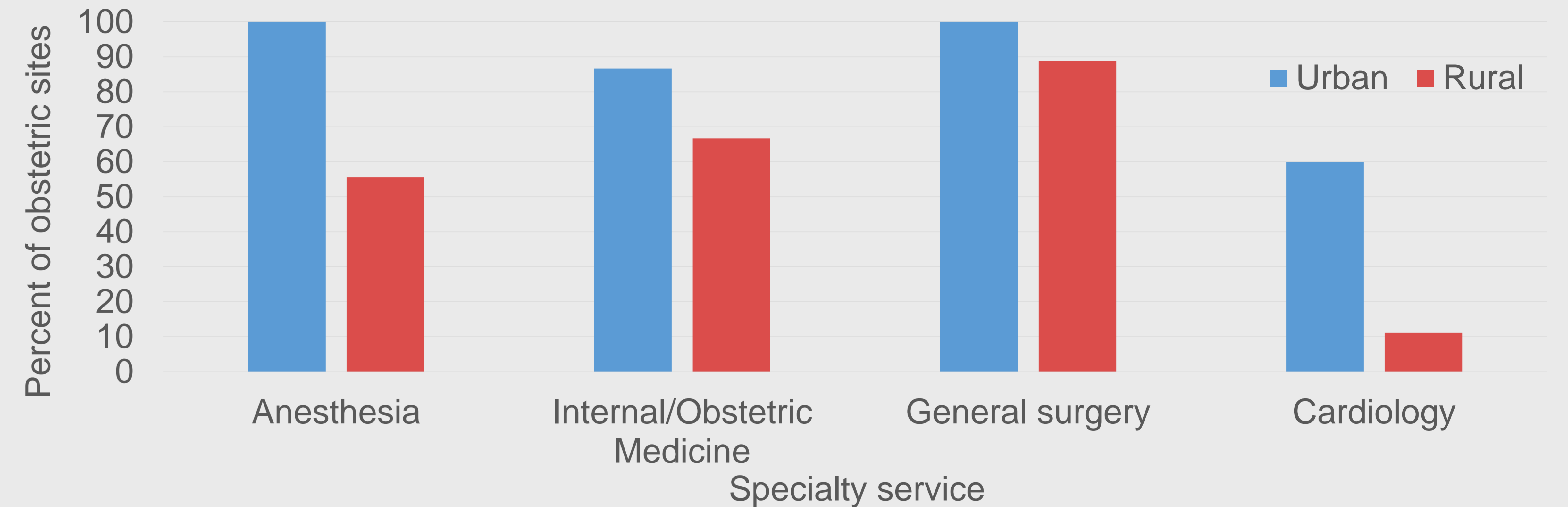


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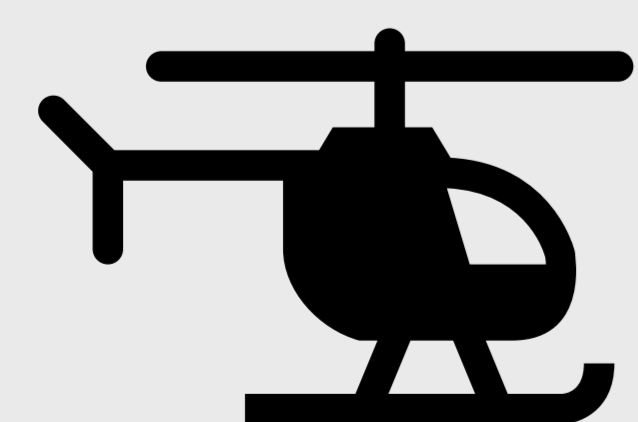
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Early identification of critical illness

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