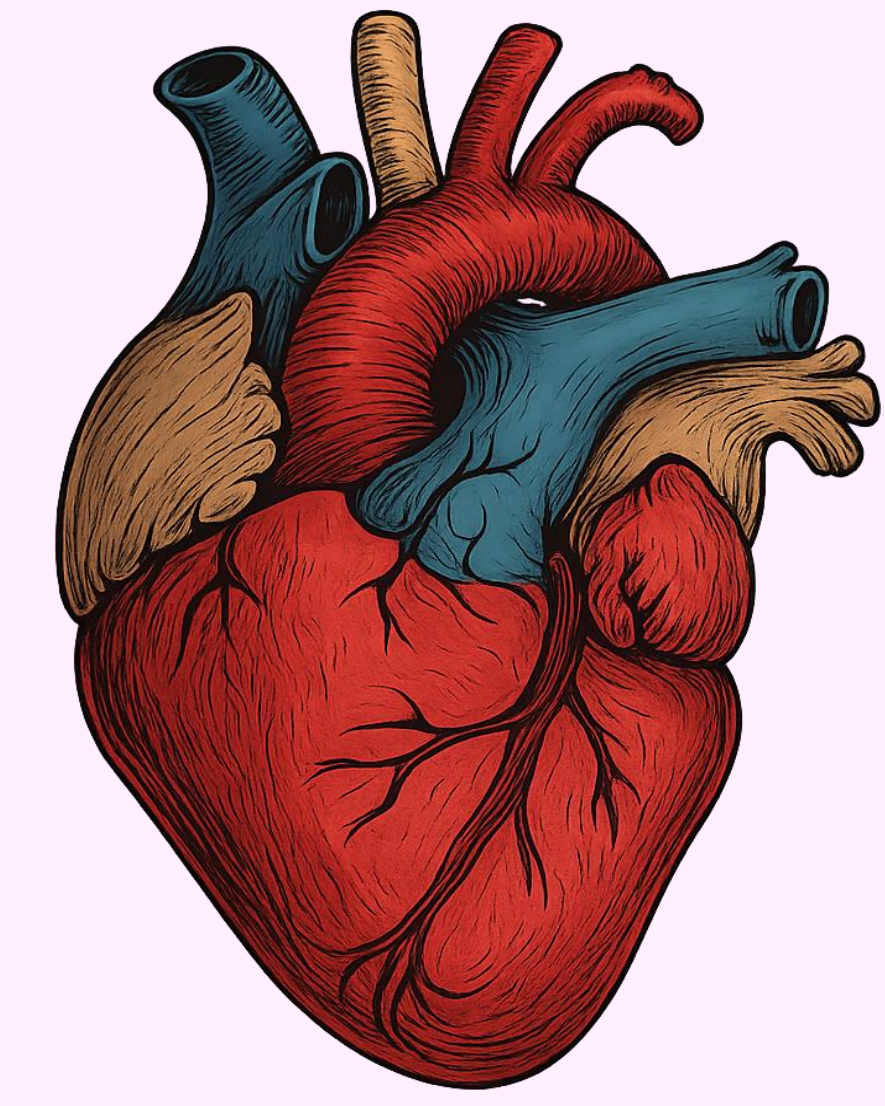


# SWIFT Survey: Non-cardiac Surgery for Children with Congenital Heart Disease

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Risk perception and surgical urgency influences perioperative decision-making in the congenital heart disease patient cohort and varies with healthcare setting.



## FICTIONAL CASE:

8-year-old girl  
Tetralogy of Fallot, repaired in infancy.

Last cardiology review (5 months ago):  
incompetent pulmonary valve on echo, normal  
exercise tolerance, no regular medications.  
No other information currently available.

Requires manipulation under anaesthesia  
(MUA) of a displaced wrist fracture (no  
neurovascular compromise) at your hospital out  
of hours.

## 1. INTRODUCTION

- Children with congenital heart disease (CHD) may present for elective and emergency non-cardiac surgery, posing unique anaesthetic challenges.
- Evidence for classifying these cases remains limited, enabling under- or overestimation of risk.

## 2. METHODS

- To evaluate anaesthetists' perception on disease severity, overall risk and perioperative management of children with CHD undergoing non-cardiac surgery, an electronic survey (QR code below) of the fictional case of a child with repaired Tetralogy of Fallot requiring wrist manipulation under anaesthetic was distributed nationally through PATRN and APAGBI memberships.
- Respondents were asked to apply the NSQIP Paediatric classification to the case.

## 3. RESULTS

- Amongst 155 respondents, 32% (n=50) correctly classified the case as 'major', with 61% (n=94) considering it 'minor' and 7% (n=11) 'unsure'.
- High risk was more frequently reported by respondents from non-specialist hospitals, while those from paediatric centres predominantly indicated low or intermediate risk (Figure 1).
- Of those who deemed the case low-risk, 61% (n=34) would proceed without further investigation/discussion and 54% (n=30) considered the case suitable for a non-specialist centre. In contrast, all high-risk respondents recommended further review, with only 1 respondent supporting management outside a specialist centre.
- Given the case of a hypothetical 'high-risk' cardiac child needing urgent surgery (neurovascular compromise), 7% (n=12) would proceed without further checks, and 18% (n=28) deemed it safe to proceed in a non-specialist centre (Figure 2).

## 4. DISCUSSION

- Clinicians in non-specialist hospitals appeared more cautious than those from paediatric centres, more frequently opting for further review and management in a specialised healthcare setting.
- Surgical urgency in a 'high-risk' case prompted a multidisciplinary approach.
- Resources varied amongst respondents' workplaces, with formal pathways absent for specialised services (Figure 3).
- Limited NSQIP accuracy could indicate potential for targeted CHD education.

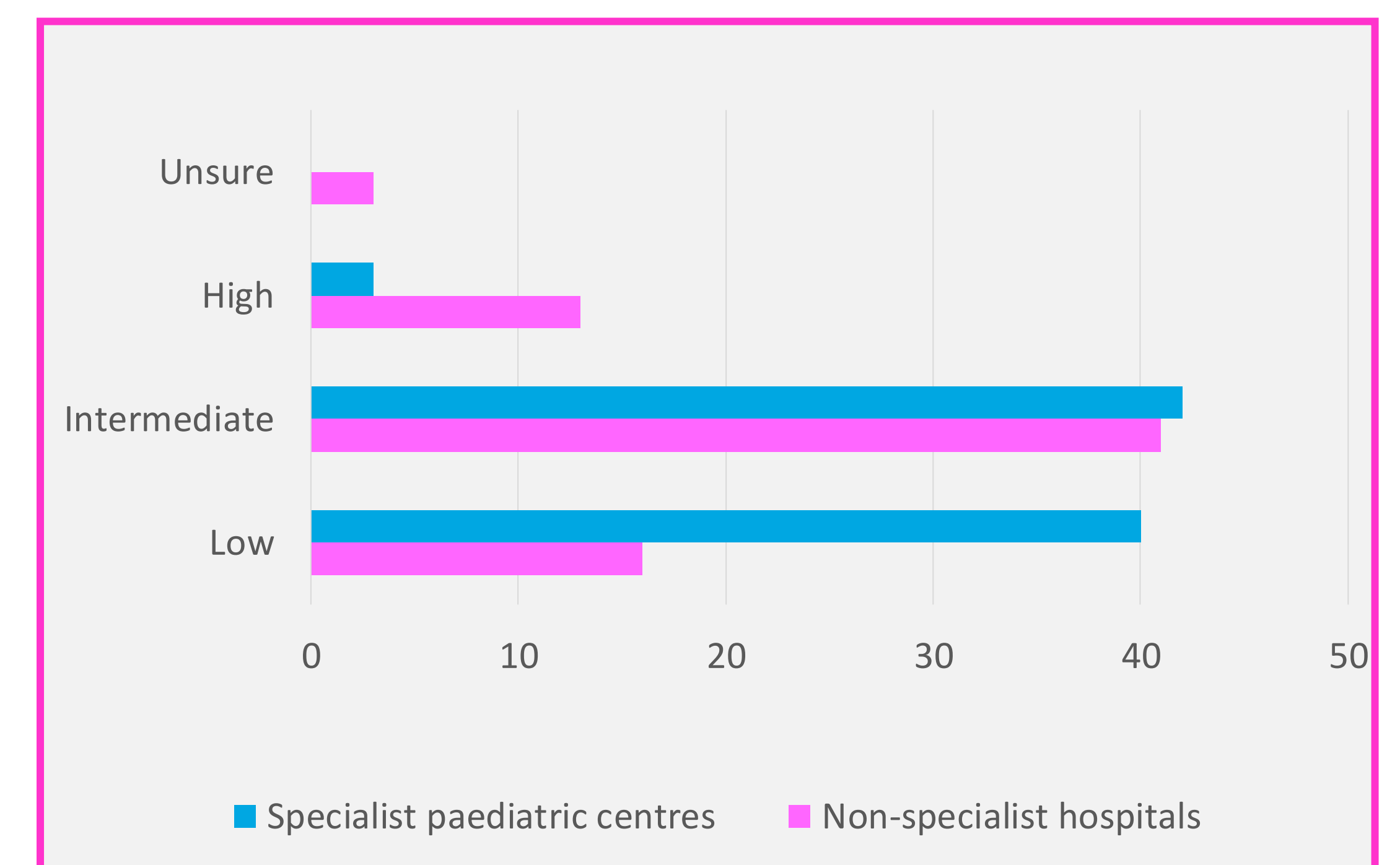


Figure 1: Comparing risk perception of fictional case between respondents from non-specialist and specialist paediatric centres.



Figure 2: Heatmap demonstrating the combination of most common responses in the perioperative management of the 'high-risk' child with neurovascular compromise.

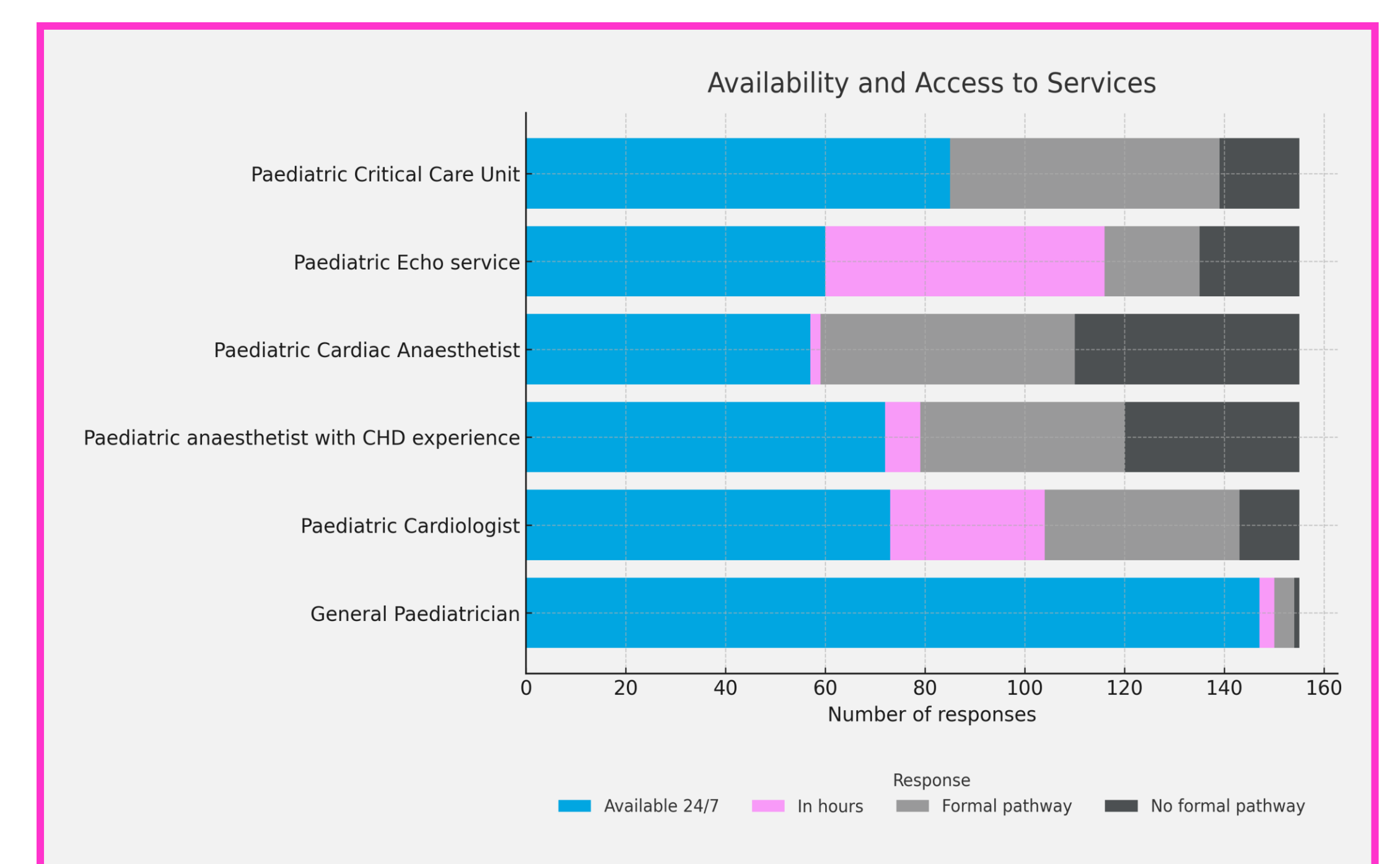


Figure 3: Resource availability in respondents workplace

### References

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