

Cytomegalovirus infection during pregnancy: cross-sectional survey of knowledge and prevention practices of healthcare professionals in French-speaking Switzerland

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Introduction

➤ > 400 congenital CMV infections / year, including > 40 symptomatic infection at birth of whom 60% will develop permanent sequelae 1,2.

Although no vaccine is currently available, it is nevertheless known that:

- Preventive hygiene measures ↓ maternal infections up to 50% 3,4.
- Pregnant women's preventive behavior has often been correlated with CMV healthcare knowledge 5.
- Literature highlights major gaps in women and healthcare professionals' knowledge of CMV 6,7.
- 🇨🇭 recommendations: systematic prevention and information about the possibility of serological screening in early pregnancy 4.

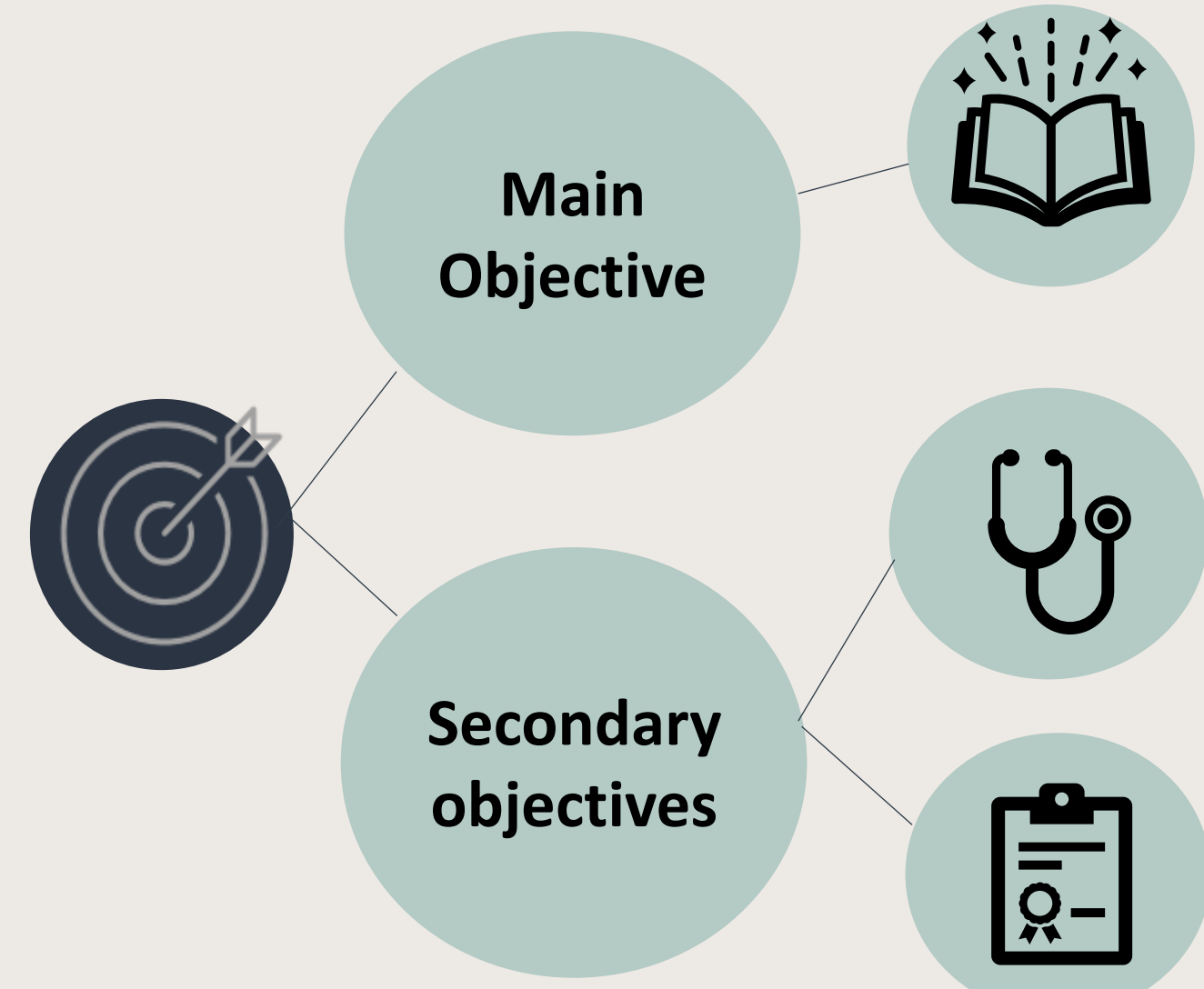
Objectives

Investigate the CMV knowledge and prevention practices of healthcare professionals directly involved in pregnant women's care and determine the socio-demographic factors that influence them.

Method

OVERVIEW

A cross-sectional survey conducted in French-speaking Switzerland between October 2022 and May 2023. Data were collected via an anonymous 41-item questionnaire.



KNOWLEDGE

Assessing the general CMV knowledge of professionals.

PRACTICE ATTITUDE

Assessing the practice attitudes of professionals (prevention and screening).

RECOMMENDATIONS

Assessing knowledge and adherence to the national recommendations.

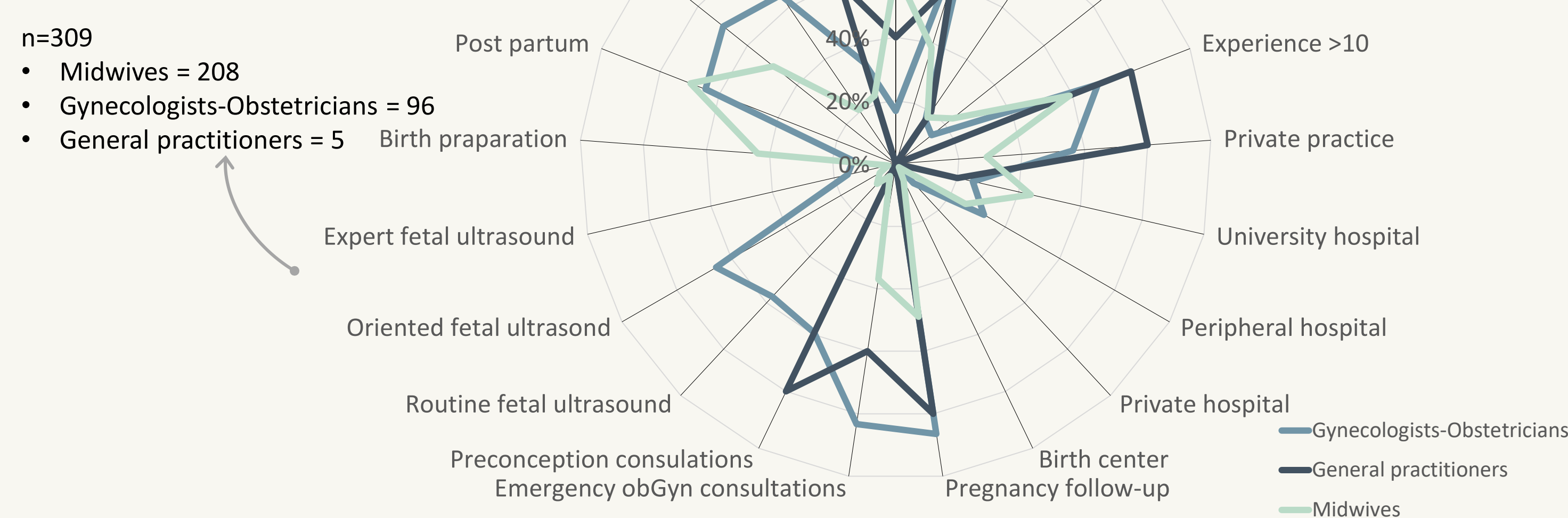
SCORES

Scores were generated from the results of the participants to compare the 3 outcomes:

- 📖: score out of 42 points: 1 point per correct answer.
- 🩺: score out of 4 points 1 point awarded to each good practice according to current recommendations.
- 📋: score out of 7 points: 1 point awarded to each answer matching national recommendations.

Results

FIGURE 1: Participants' characteristics



KNOWLEDGE RESULTS

FIGURE 2: Knowledge of the transmission routes

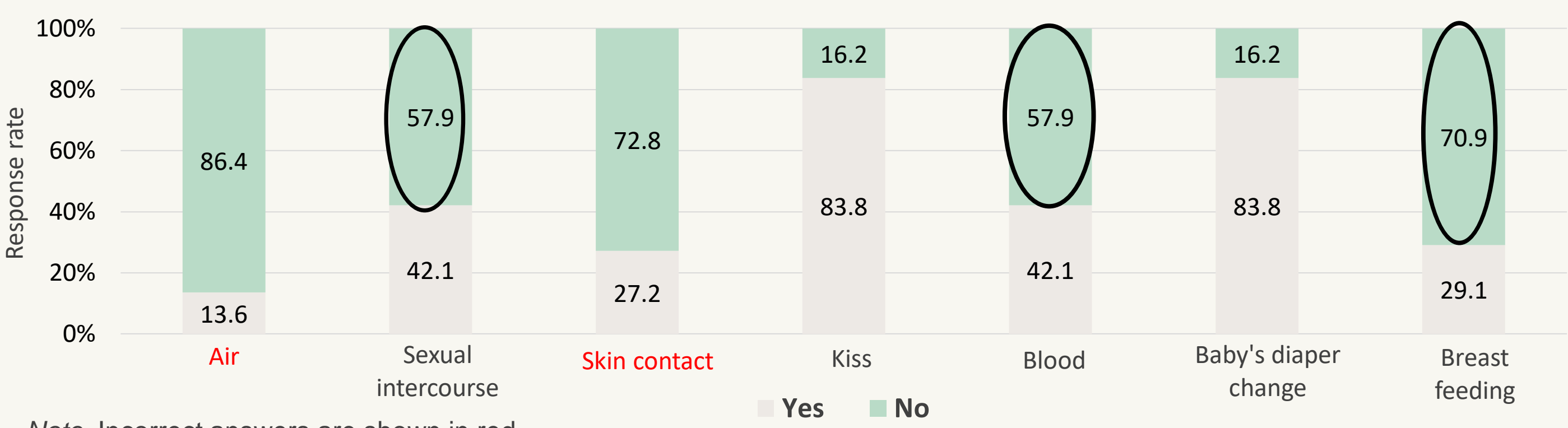
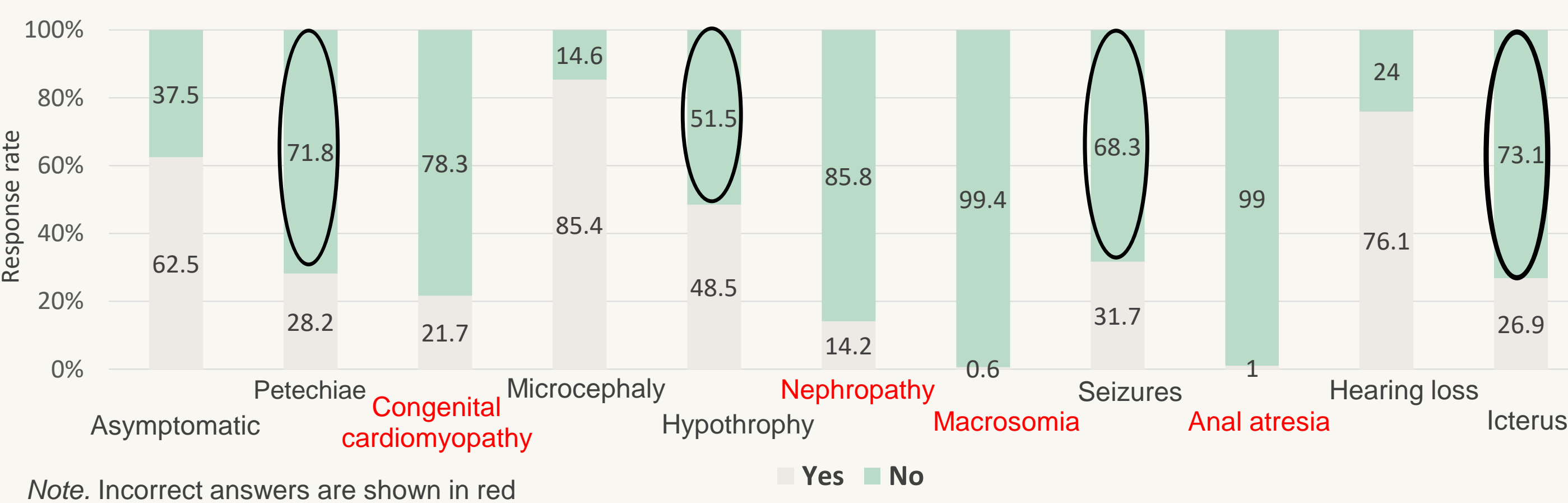


FIGURE 3: Awareness of possible clinical signs in infected neonates



Discussion



↑ knowledge is related with specific factors that could help target professionals in need of further CMV training. Indeed, a recent study showed that over 80% of healthcare professionals reported never having received CMV training 8.

- Continuous and accessible CMV training ↑ CMV knowledge and confidence among professionals.



1/3 of participants still not provide systematic prevention, partly due to a lack of knowledge. The heterogeneity of serological screening results reflects the situation in 🇨🇭 (81% screening in Geneva vs. 17% in Zürich) 9.

- The need to harmonize practices and improve knowledge of CMV to offer women not only equity in care, but also a consistent, high-quality range of care.



Swiss evidence for CMV recommendations range from Ib IIa to IIb, and don't include a recommendation grade (A-B-C) → May be considered too weak by some professionals → explain the lack of interest in recommendations and the disparity in practices application.

- Pursue research into CMV prevention, screening and management to ↑ the level of evidence on which future guidelines will be based.

WHAT CAN I DO TO IMPROVE MY CMV KNOWLEDGE?

Factors linked to a better knowledge of CMV are not related to the profession, but to post-graduate training, symposia and courses on the topic. Being aware of national recommendations enrolling in training courses, gathering information and continuing education are the best ways to develop your knowledge of the virus and consequently your practice attitude.

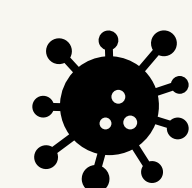
Good knowledge of national recommendations

Positive influence on overall knowledge of CMV

Positive influence on the practice attitude of professionals



88.4% (237/309) knew the existing correlation between gestational age at time of infection and severity of fetal infection.



72.2% (223/309) of participants knew the possibility of congenital infection if reinfection or reactivation of the virus.



67% (207/309) were unaware of the existence of treatment to decrease the risk of maternal-fetal transmission and to improve neonatal prognosis.

PRACTICE ATTITUDE RESULTS

- Provide systematic prevention: 63% (190/300).
- First reason advanced to not providing prevention was lack of virus knowledge in 23.6% (26/110).

FIGURE 4: Systematic prevention

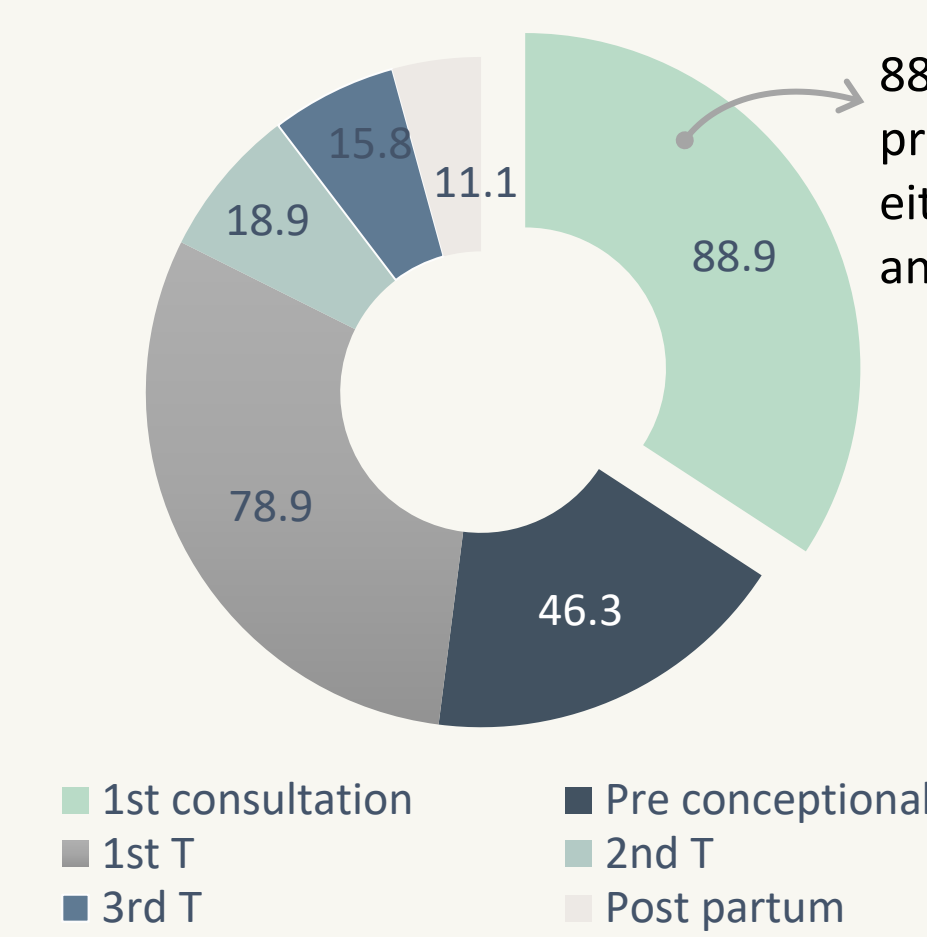
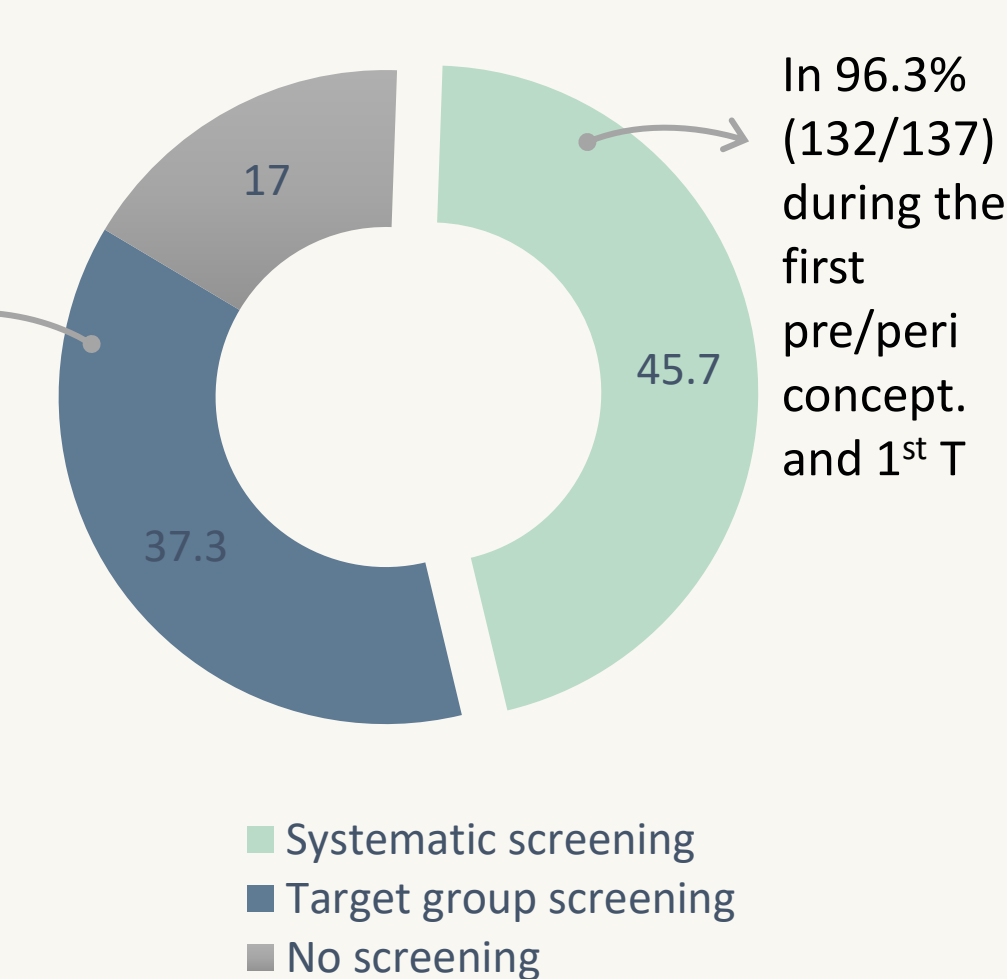


FIGURE 5: Screening



RECOMMENDATIONS RESULTS

- A total of 62% (181/292) of participants were aware of existing national recommendations.
- Preventive recommendations were the best known (93.2%, 138/148).
- Screening recommendations (population & timing) were the least known (70.3%, 104/148).
- Recommendations related to antenatal treatment to ↓ risk of vertical transmission (49.3%, 73/148) and ↑ neonatal outcome (48.7%, 72/148) showed major gaps.

FACTORS INFLUENCING OUTCOMES

- ↑ score of 📖: ↑ education, practising ultrasound and preconception consult., attending symposia, recent training on CMV.
- ↑ score for 🩺: ObGyn, ↑ education, pregnancy follow-up, attending symposia.
- ↑ score of 📋: ↑ education, working in a university center, attending symposia.

Conclusion

- There is significant gaps in CMV knowledge among French-speaking Swiss healthcare professionals as well as heterogeneity of practices and lack of awareness of national recommendations to enable optimal patient management.
- Identification of factors playing a role in ↑ knowledge and practices provides a solid basis for future research.
- Facilitate access of healthcare providers to specific training as well as standardizing practices should be a national priority to ↑ awareness among pregnant women and ↓ the burden of congenital CMV infections.
- Supporting the development of solid national guidelines to ↑ patient care.

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