



# A Survey Evaluation of South Dakota Parent and Medical Provider Knowledge of Congenital Cytomegalovirus, Its Long Term Health Effects, and Methods for Minimizing Exposure

L. Felicia Reimann, B.S. & Jessica Messersmith, Ph.D.

Department of Communication Sciences and Disorders  
University of South Dakota

## Introduction

Despite its prevalence, knowledge and awareness of congenital cytomegalovirus (cCMV) is lower than any other childhood condition (Doutre, Barrett, Greenlee, & White, 2016).

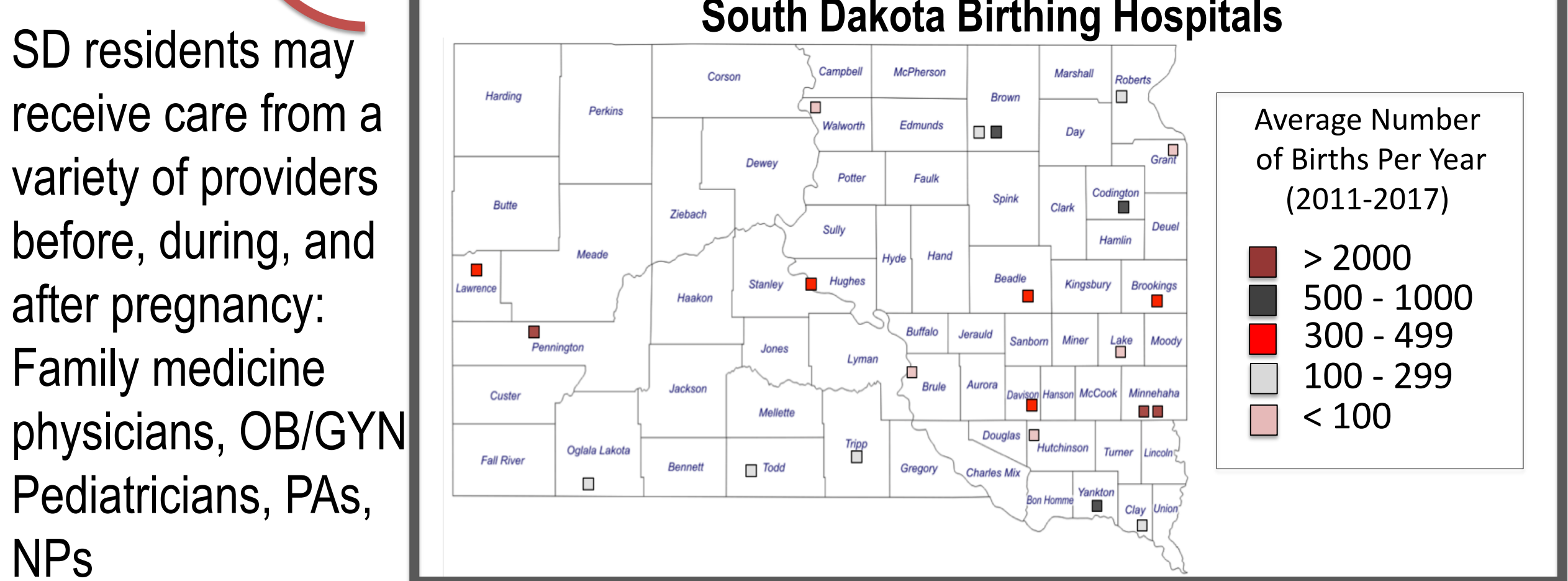


OB/GYNs have been shown to have limited knowledge about how CMV is transmitted and measures pregnant women can take to protect themselves.<sup>1</sup>

cCMV legislation is variable. Some states require screening for cCMV at birth and education. Others require screening or education. Additional states have proposed legislation.<sup>3</sup>

The public health impact of cCMV is substantial and is a world-wide issue due to its prevalence and resultant sequelae.<sup>2</sup>

cCMV legislation in South Dakota is not likely. Therefore, SD residents may be more reliant on medical providers to be aware of, understand the health effects of, and educate patients about cCMV.



SD residents may receive care from a variety of providers before, during, and after pregnancy: Family medicine physicians, OB/GYN, Pediatricians, PAs, NPs. Currently, one SD hospital has a protocol for cCMV screening after a baby receives a referral on their UNHS.

## Research Questions & Method

**Question 1**  
What knowledge do parents of children born after April 29, 2013 and medical providers, have of cCMV?

**Question 2**  
Does knowledge related to cCMV vary across domains (sequelae & means for minimizing exposure)?

**Question 3**  
Is there a difference in knowledge of cCMV between parents of children born after April 29, 2013 and medical providers?

**Question 4**  
Is there a difference in knowledge of cCMV between parents of children born after April 29, 2013 who gave birth in large birthing facilities as compared to those who gave birth in small birthing facilities?

**Question 5**  
Is there a difference in knowledge between parents whose infant was born in a birthing facility that has a screening protocol for cCMV for a no pass on a UNHS compared to those whose infant was born in a birthing facility that has no protocol?

**Method: Online Survey**

**South Dakota Medical Providers**

**Survey Questions:**

- Title / Experience
- Location of practice
- Who they care for (mothers / infants / both)
- Counseling practices
- Knowledge

Link distributed via social media and email

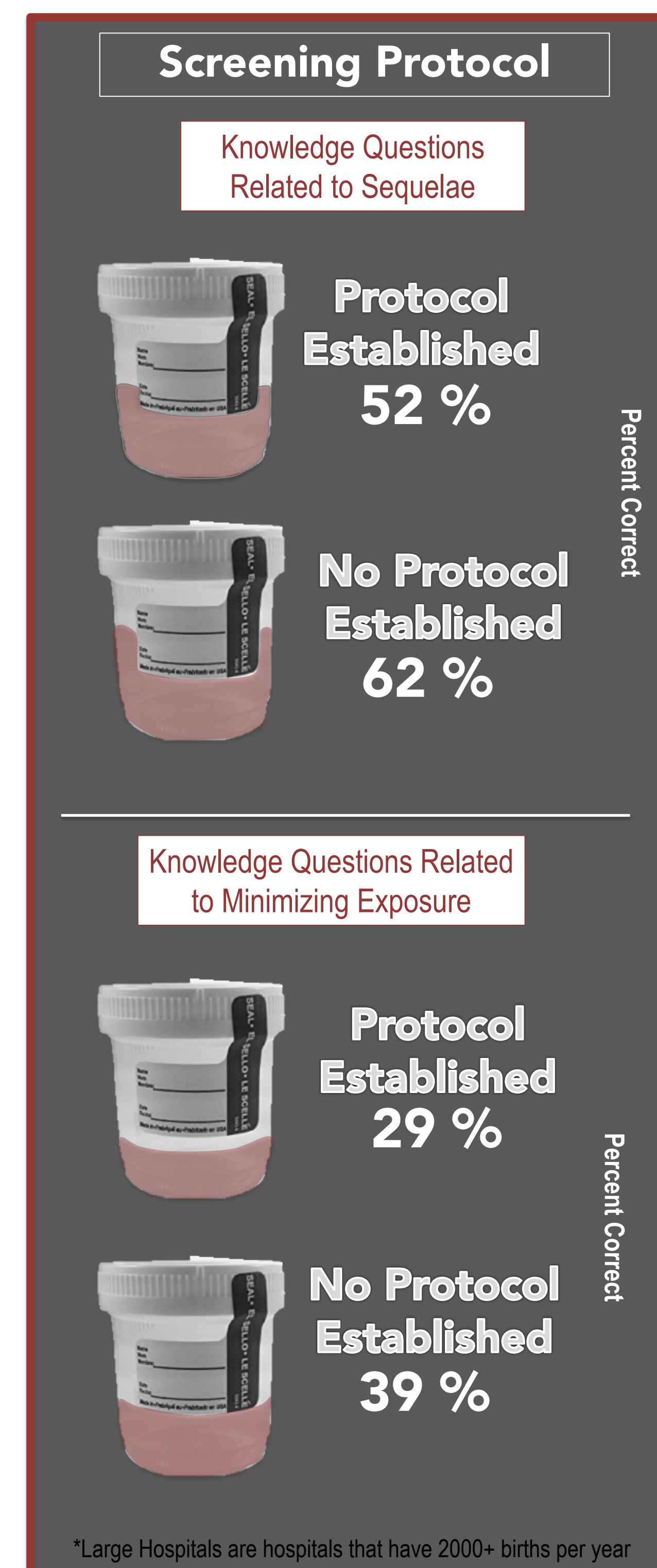
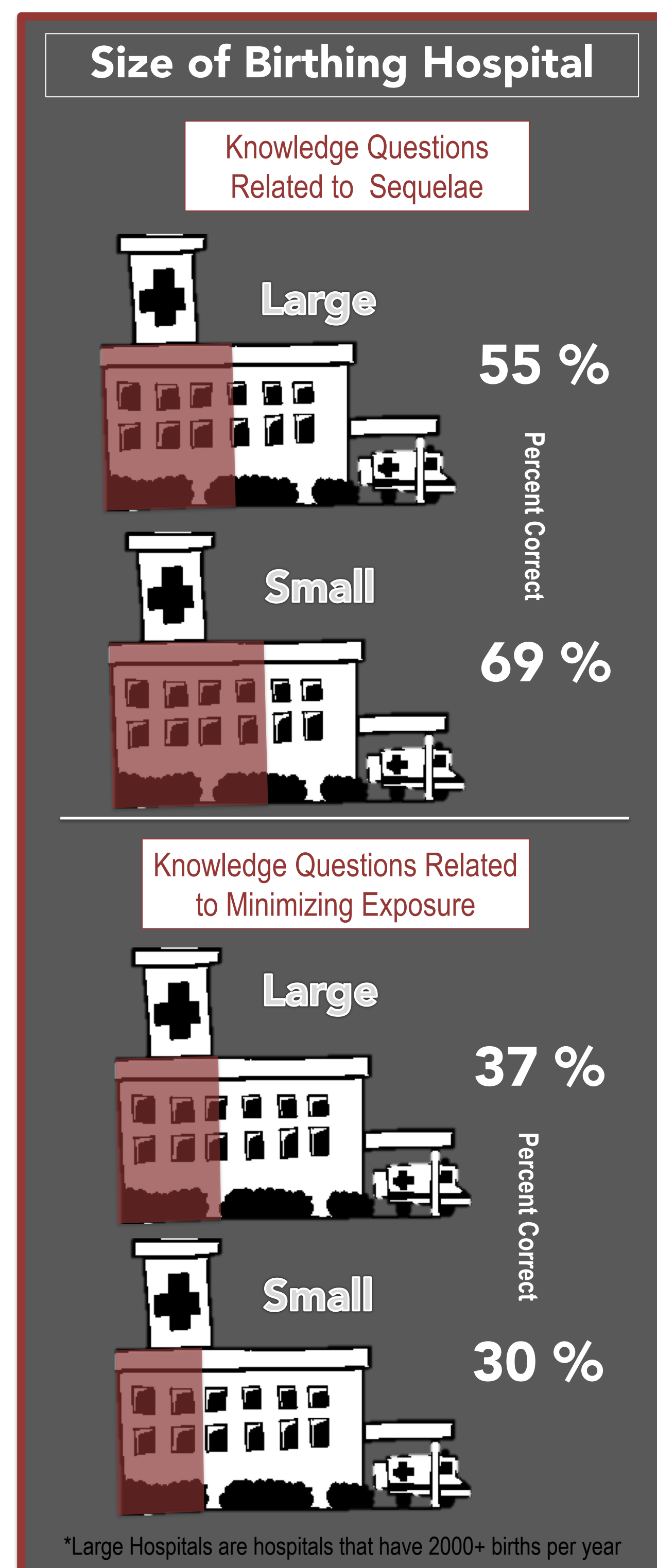
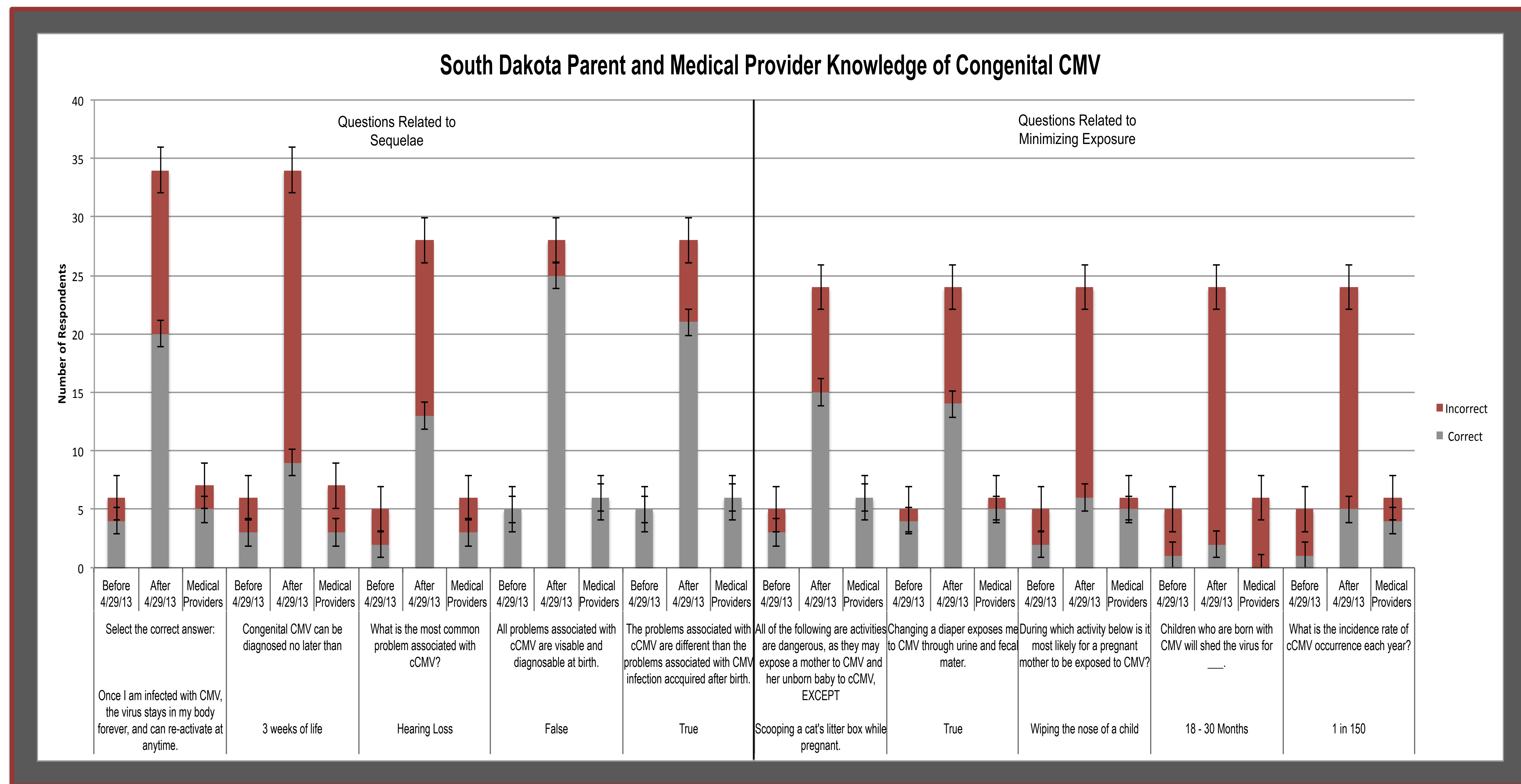
**South Dakota Parents**

**Survey Questions:**

- Child D.O.B
- Location of birth
- Location of residency
- Knowledge
- Knowledge sources

Link distributed via social media and at daycares

## Results



## Conclusion

**Question 1**  
Knowledge related to sequelae and minimizing exposure for cCMV is limited for parents and health care providers

**Question 2**  
Knowledge related to cCMV appears to vary across domains (sequelae & means for minimizing exposure), with parents appearing more knowledgeable about the sequelae of cCMV than about how to minimize exposure.

**Question 3**  
More responses are needed from medical providers to comment difference in knowledge.

**Question 4**  
There is no difference in knowledge of cCMV between parents of children born after April 29, 2013 who gave birth in large birthing facilities as compared to those who gave birth in small birthing facilities.

**Question 5**  
No difference in knowledge exists between parents whose infant was born in a birthing facility that has a screening protocol for cCMV compared to parents whose infant was born in a birthing facility that does not.

## References

- Anderson, B., Schukin, J., Ross, D.S., Rasmussen, S.A., Jones, J.L., & Cannon, M.J. (2007). Knowledge and practices of obstetricians and gynecologists regarding cytomegalovirus infection during pregnancy - United States, 2007. *MMWR Weekly*. <https://www.cdc.gov/mmwr/preview/mmwrhtml/mm5703a2.htm>
- Binda, S., Pellegrinelli, L., Terraneo, M., Caserini, A., Primateo, V., Bubba, L., & Barbi, M. (2016). What people know about congenital CMV: an analysis of a large heterogeneous population through a web-based survey. *BMC Infectious Diseases*, 16: 513. doi: 10.1186/s12879-016-1861-z
- Doutre, S.M. (2015). Reducing congenital cytomegalovirus infection through policy and legislation in the United States. *Microbiology Australia*, 162-164. doi: 10.1071/MA15058
- Doutre, S.M., Barrett, T.S., Greenlee, J., & White, K.R. (2016). Losing ground: Awareness of congenital cytomegalovirus in the United States. *The Journal of early hearing detection and intervention*, 1(2): 39-48
- National CMV Foundation. CMV Awareness: <https://www.nationalcmv.org/default.aspx>
- South Dakota Department of Health. Birthing records 2011-2017.

## Acknowledgements

Thank you to the daycares, parent groups, and medical networks who distributed the survey. Also, thank you to the parents and medical providers who took the time to complete the survey.