What Child Care Providers, Teachers and Pregnant Women Need to Know About CMV
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In 2017, I asked OSHA to educate child care workers about their occupational hazard for CMV.

On May 22, 2019, OSHA announced in "QuickTakes," its newsletter on workplace safety and health, the following:

"A common virus, Cytomegalovirus (CMV) affects thousands of workers in childcare centers and healthcare facilities. These workers are at the greatest risk of exposure because the virus is often spread through saliva and other body fluids of young children. OSHA's new webpage on CMV [https://www.osha.gov/SLTC/cmv/], explains how to minimize health risks associated with workers' exposure to this virus."
Toddlers in group care spread infections such as CMV

- They put each other’s toys in their mouths.
- They mouth each other’s cups, utensils, and toothbrushes.
- They need adults to wipe their noses, feed them and change their diapers.
- "Children enrolled in child care facilities are more likely to acquire CMV than are children cared for at home" (Caring for Our Children, AAP et al., modified 2017).
Child Care and CMV

- Approximately 0.1% of babies, or 4,000 babies, are born disabled by congenital CMV every year in the U.S.

- 8 - 20% of child care providers contract CMV every year (Red Book, AAP, 2015) as compared to 1-4% of women (who have never had CMV) in the general population (CDC, 2018).

- On average, 30-40% of preschoolers in day care excrete CMV in their saliva and/or urine (Red Book, AAP, p. 144). "Up to 70% of children ages 1 to 3 years in group care settings excrete the virus ("Staff Education and Policies on Cytomegalovirus," http://nrckids.org/CFOC/Database/7.7.1.1, Caring for Our Children: National Health and Safety Performance Standards; Guidelines for Early Care and Education Programs, AAP et al., modified 2017)

- Parents of children in day-care centers are at increased risk for contracting CMV (Pass et al, 1986). According to Dr. Jason Brophy, a pediatric infectious disease specialist, “Almost all the babies that I see who have congenital CMV, there is an older toddler at home who is in daycare” (Payne, Ottawa Citizen, 2018).

- Child care providers are largely unaware of CMV and many acknowledge using diaper wipes to clean (Thackeray and Magnusson, 2016). Diaper wipes do not effectively remove CMV from hands (Stowell et al., 2014).
REDUCE CHANCES OF CONTRACTING CMV
Wash hands after handling saliva and urine.

DIAPER WIPES DO NOT EFFECTIVELY REMOVE CMV FROM HANDS!
In 1989, I was unaware of CMV risks and prevention

- When pregnant with Elizabeth in 1989, I was at a high risk for CMV because I was the mother of a toddler, a licensed home day care provider and volunteered in our church nursery.
I suffered a miscarriage just prior to my pregnancy with Elizabeth


- Although at high risk for CMV, I didn’t know about the virus or to be tested for it to see if CMV could have been the cause of the miscarriage. If it was shown to be a possible cause, I would have waited to get pregnant again.

- I got pregnant as quickly as I could after the miscarriage—three months later.

- Sonogram at four months showed the baby was smaller than expected. No further testing was suggested or done.
My daughter, Elizabeth Saunders born severely disabled by congenital CMV in 1989

- Her head was small and deformed. She had microcephaly.
- I was told she would never roll over or sit up—she never did.
- Told she would never speak—she never did.
Elizabeth—a very happy girl

Elizabeth’s temporary congenital CMV symptoms at birth

Purple skin splotches
Lung problems
Small size at birth
Seizures

Elizabeth's permanent symptoms and disabilities

Hearing loss
Vision loss
Mental disability
Small head
Lack of coordination
Seizures
Death
Elizabeth is seen here in 2005 at 15 with her big sister on our last family vacation together.
In 2006, Elizabeth died during a seizure at 16.
CMV Awareness Among Women

- After Elizabeth died in 2006, I had a tormenting dream about young parents wondering why I didn’t do more to warn them about CMV.

- I began researching CMV awareness and prevention. A 2006 survey, "Knowledge and Awareness of Congenital Cytomegalovirus Among Women," concluded that … only 22% had heard of it and most of those could not correctly identify modes of CMV transmission or prevention (Jeon, et al, 2006)

- The only way I can find peace is to help future babies escape my daughter’s suffering.
Moms want to know how to protect their babies!
In 2014 and 2015, I, along with others, encouraged Connecticut to pass a law requiring targeted CMV testing. It passed in 2015, but prevention education didn’t pass because of funding.

- As of 2016, newborns are tested for CMV if they fail their hearing screen.
- According to Dr. Brenda K. Balch, Connecticut’s American Academy of Pediatrics Early Hearing Detection and Intervention Chapter Champion, the CMV “testing protocol allows for a more timely diagnosis of the etiology of the infants hearing loss and is less expensive than imaging and genetic testing.” A CMV testing law also increases “healthcare workers’ and parents’ awareness of CMV research and possible intervention strategies for congenital CMV.”
What I would have done differently had I known about CMV

- I would have gotten tested to see if I had any antibodies to CMV prior to getting pregnant.
- I would have gotten tested after suffering a miscarriage to see if CMV could have been the cause so I could wait before getting pregnant again.
- Knowing how difficult it is to prevent contracting CMV in a group child care setting, I would not professionally cared for toddlers nor would I have volunteered in our church nursery.
- I would not have shared food and cups with my toddler, nor let her kiss me on the lips.
Childcare Givers Should be Counseled about CMV

- "In view of the risk of CMV infection in child care staff and the potential consequences of gestational CMV infection, child care staff members should be counseled about risks. This counseling may include testing for serum antibody to CMV to determine the child care provider’s protection against primary CMV infection, but routine serologic testing is not recommended." (American Academy of Pediatrics, Red Book, 2012, 2015)

- “Pregnant childcare employees should be informed about CMV, assess their risk by serologic testing or avoid if possible caring for children less than 2 years age for the duration of pregnancy," states Stuart P. Adler M.D. of the CMV Research Foundation Inc. in his article, Prevention of Maternal–Fetal Transmission of Cytomegalovirus.
CMV Screening and Testing

According to the National CMV Foundation:

- “Every woman of childbearing age should know her CMV status. Before you plan to conceive, ask your doctor to have a blood sample drawn for a CMV IgG and IgM antibody tests.”

- Even if you have had already had a CMV infection, “It is recommended that you practice CMV prevention recommendations during pregnancy because it is still possible that a recurrent CMV infection or an infection with a different strain of CMV may cause mild harm to your baby. These infections are rare and generally result in less serious disability than primary infections.”
Other Counties: CMV in Daycare

In Queensland, Australia, they suggest relocating “workers who are pregnant, or who expect to become pregnant, to care for children aged over two to reduce contact with urine and saliva.”

In Germany: "Based on the German Maternity Protection Law (Mutterschutzgesetz)... to protect DCWs [day care workers] from primary infection, their CMV serostatus must be checked at the beginning of their pregnancy. When the DCW is seronegative, she is excluded from professional activities with children under the age of three years..."
CMV LAWSUIT BY CHILD CARE WORKER

- In New South Wales, Australia, in a landmark decision, “a childcare worker and her severely disabled son were awarded $4.65 million. A Court of Appeal ruled that the child's disabilities resulted from the woman being infected with cytomegalovirus (CMV) at work (Hughes v SDN Children's services 2002)” (Queensland Government, Australia, 2017).

- Meridian Lawyers of Australia state: “The allegations of negligence were that Sydney Day Nursery breached its duty of care to Linda ...by failing to warn her of the risks of CMV in circumstances where the centre knew or ought to have known of the risks of CMV to pregnant women…”

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Why haven't most women heard of CMV? Five possible reasons:

1. **CMV prevention education is not part of a doctor’s “standard of care.”**

2. **Doctors don’t want to frighten, worry or “burden” patients:** *New York Times:* "Guidelines from ACOG [American College of Obstetricians and Gynecologists] suggest that pregnant women will find CMV prevention 'impractical and burdensome,' especially if they are told not to kiss their toddlers on the mouth — a possible route of transmission.” (Saint Louis, 2016).

3. **Low media coverage.** In the HealthNewsReview.org article, "Why does CMV get so much less news coverage than Zika — despite causing far more birth defects?" the author states, “Researchers we spoke with identified the same factors – fear and the epidemic/endemic nature of the diseases – as driving the media disparity” (Shipman, 2018).

4. **No federal laws governing CMV education policies for child care workers.** (Although U.S. workers have the right to “receive information and training about hazards” (Occupational Safety and Health Act of 1970.) The Department of Labor states, "Education and training requirements vary by setting, state, and employer:"

5. **Infection often goes undiagnosed:** "The virtual absence of a prevention message has been due, in part, to the low profile of congenital CMV. Infection is usually asymptomatic in both mother and infant, and when symptoms do occur, they are non-specific, so most CMV infections go undiagnosed” (Cannon and Davis, 2005).
How can CMV be avoided?

- Wash hands often with soap and water for 15-20 seconds, especially after wiping runny noses, changing diapers, picking up toys, etc. If soap and water are not available, use alcohol-based hand gel.
- Use soap and water or a disinfectant to clean hard surfaces that have been contaminated by secretions.
- Don’t kiss young children on the lips or share food, drinks, or eating utensils with them.
- Pregnant women working in child care facilities should minimize direct exposure to saliva... Hugging is fine and is not a risk factor, ([NY Dept. of Health](#)).
- Staff should be advised not to allow children to put their fingers or hands in another person’s mouth. ([American Academy of Pediatrics et al., Caring for Our Children, 2011](#)).
Q: “There are pregnant teachers and other care givers at our school who work closely with children known to have CMV infection. For their safety, should these employees be relieved from their duties in caring for these children?”

A: No.

“Changing the duties of a teacher or care giver from children known to have CMV infection to other children may not reduce their risk of acquiring CMV. It is a common virus in all children. In fact, studies reveal that between 30 and 80% of children between the ages of 1-3 years of age who attend some form of group care are excreting CMV. In this setting transmission of CMV is usually transmitted from child-to-child by direct contact with bodily fluids such as saliva or urine. It also may be transmitted to care givers. Therefore it is wise for care givers in this type of setting to be aware of CMV and consider knowing their CMV antibody status. If results are negative, they are susceptible to catching CMV for the first time and it is a potential risk to the fetus if they are pregnant. On the other hand, if results of a CMV antibody titer (IgG) is positive, they have already acquired CMV at some time in their life and their risk is greatly reduced. Additionally, it is important for all care givers to practice good hygienic measures. This is achieved by hand washing with soap and water, especially after diaper changes and any contact with a child's bodily fluids. Kissing and sharing food or drink also should be avoided.” --National Congenital CMV Disease Registry
There was a happy little family expecting a new baby.