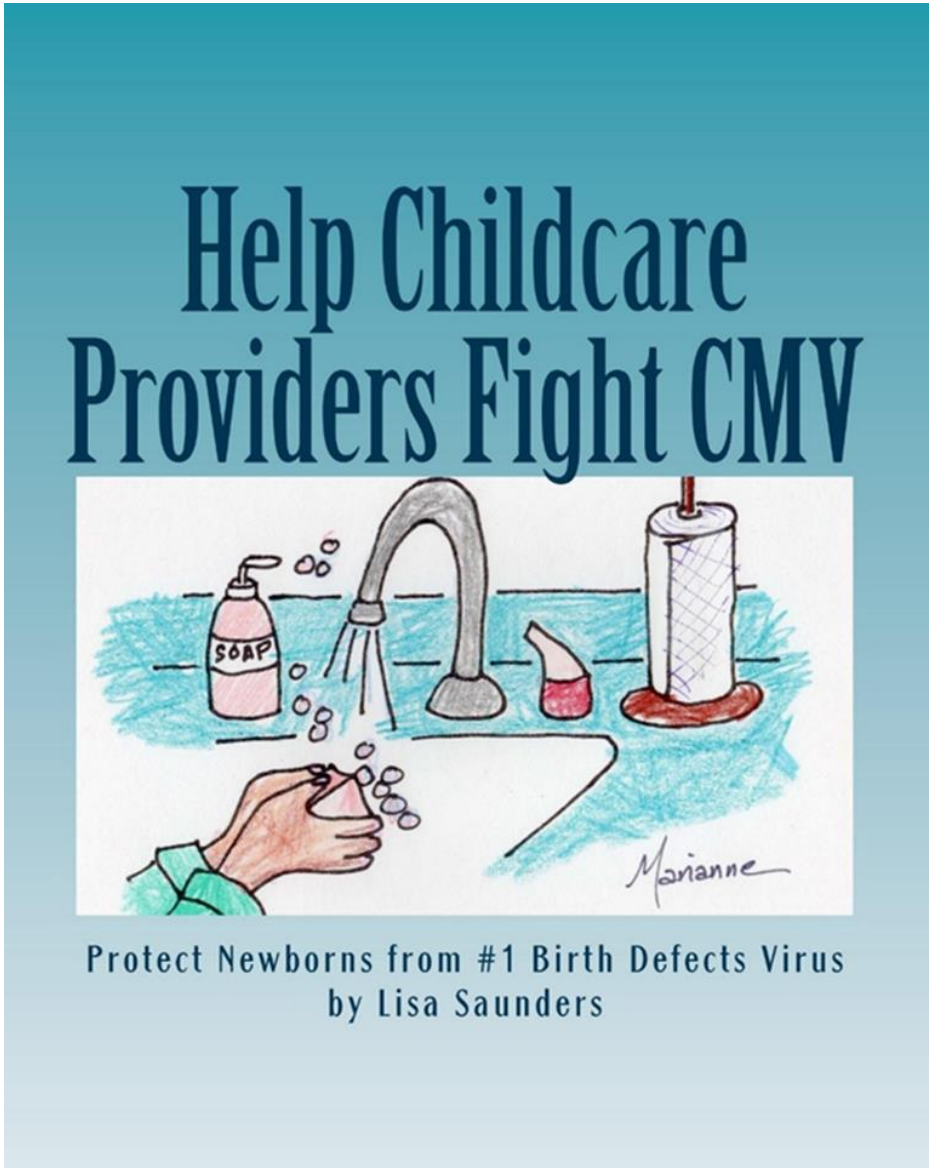
PowerPoint based on the book:



Talking Points—you will

1. Learn about congenital cytomegalovirus (or CMV) and the birth defects it can cause.
2. Understand the recommendations for child caregivers and teachers from the American Academy of Pediatrics.
3. Realize caregivers and mothers of toddlers are at increased risk for CMV.
4. Learn how CMV is spread from toddler to toddler and from toddler to caregiver.
5. Understand how hand hygiene protocols and avoiding bodily fluids, such as saliva and urine, can reduce transmission of CMV.
6. Discover data from five studies on the effectiveness of CMV prevention education.
7. Learn why it is important childcare providers understand their increased risk of CMV.
8. Find resources to educate women and families about CMV prevention.

Bibliography at http://congenitalcmv.blogspot.com/2017/05/cmv-bibliography-with-source-links.html

What is CMV?

- CMV, or cytomegalovirus (sī-to-MEG-a-lo-vī-rus), is a common virus.
- Discovered in 1956. Between 50% and 80% of adults in the U.S. are infected with CMV by 40 years of age.
- Most infections with CMV are “silent,” meaning most people who are infected with CMV have no signs or symptoms.
- Infected pregnant women can pass the virus to their unborn babies.
- When babies are infected with CMV before they are born, the condition is called congenital CMV.
- Congenital CMV is the leading viral cause of birth defects.
- **The *New York Times* states: “CMV Is a Greater Threat to Infants Than Zika, but Far Less Often Discussed” (2016).**

Image caption: Lisa Saunders, author of this presentation, holds her daughter Elizabeth, born disabled by congenital CMV in 1989.

Symptoms of Congenital CMV

See: cdc.gov/cmv/congenital-infection.html

Some babies may have signs of congenital CMV infection at birth:

- Premature birth,
- Liver, lung and spleen problems,
- Small size at birth,
- Small head size, and
- Seizures.

Some babies with signs of congenital CMV infection at birth may have long-term health problems:

- Hearing loss,
- Vision loss,
- Intellectual disability
- Small head size,
- Lack of coordination,
- Weakness or problems using muscles, and
- Seizures.

Lisa's daughter, Elizabeth, seen at right, had all the symptoms. She died in 2006 during a seizure.

How is CMV Spread?

- **Sharing drinks, food, or utensils is a mode of CMV transmission.**
- Contact with the saliva or urine of young children is a major cause of CMV infection among pregnant women.
- Person to person contact (kissing, sexual contact, getting saliva or urine on hands and then touching eyes, or the inside of nose or mouth).
- Blood transfusions and organ transplantations .
- Through the breast milk of an infected woman.

Image caption: Illustrated by Marianne Greiner. Coloring artist Suzanne Doukas Niermeyer.

Toddlers in Group Care Spread Infections Like CMV

- Toddlers put each other's toys in their mouths.
- They need adults to wipe their noses, feed them, and change their diapers.
- **44% to 100%** of two-year-olds in group daycare are excreting CMV (Pass et al., 1986).
- "Children cared for at daycare or in preschool education exhibit a two to three times greater risk of acquiring infections..." (Nesti et al, 2007).

Group Care in Numbers:

- There are more than half a million childcare workers in the U.S.
- 61 % of children under the age of 5 are cared for in a child care facility.

Childcare Workers and Mothers of Toddlers at Greater Risk For CMV

- **8-20% of caregivers/teachers** contract CMV infection every year (AAP et al.. 2011)
- **Mothers of children in group care** are at increased risk for CMV ("Group day care and cytomegaloviral infections of mothers and children," Pass et al., 1986).
- According to Dr. Demmler-Harrison, "Approximately **1-4%** of all pregnant women will experience a primary CMV infection during their pregnancy. If you work in a child care setting, the risk increases to approximately **10%.** If you have a toddler at home who is actively infected with CMV and shedding CMV in their saliva or urine, the risk is even higher, **approaching 50%** in some studies" (CMV In Pregnancy: What Should I Know?, 2014).
- "Increasing risk perception is important because providers may not be concerned about taking measures to reduce the probability of infection if they feel that they are at low risk," according to a study published by Thackeray et al. in 2016.

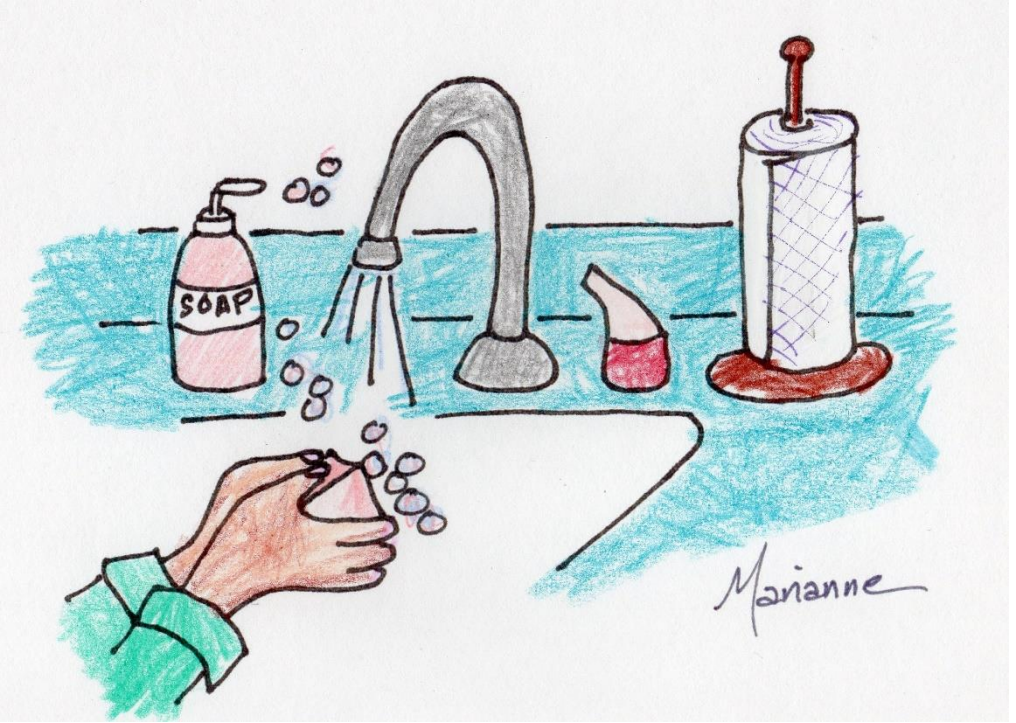
The American Academy of Pediatrics states that staff of childbearing age who care for infants and children should be provided the following information:

- *The increased probability of exposure to cytomegalovirus (CMV) in the child care setting.*
- *Female employees of childbearing age should be referred to their primary health care provider or to the health department authority for counseling about their risk of CMV infection.*
- *This counseling may include testing for serum antibodies to CMV to determine the employee's immunity against CMV infection.*
- *Since saliva can transmit CMV, staff should be advised not to share cups or eating utensils, kiss children on the lips, or allow children to put their fingers or hands in another person's mouth.*

*Citation: American Academy of Pediatrics, American Public Health Association, National Resource Center for Health and Safety in Child Care and Early Education. 2011. Caring for our children: National health and safety performance standards; Guidelines for early care and education programs. 3rd edition. Elk Grove Village, IL: American Academy of Pediatrics; Washington, DC: American Public Health Association. Also available at http://nrckids.org.

How Can CMV be Avoided?

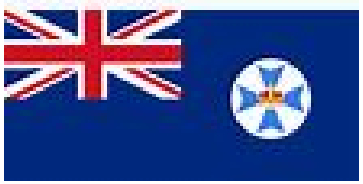
- Wash hands often with soap and water for 15-20 seconds, especially after wiping runny noses, changing diapers, picking up toys, etc. If soap and water are not available, use alcohol-based hand gel.
- Use soap and water or a disinfectant to clean hard surfaces that have been contaminated by secretions.
- Don't kiss young children on the lips
- **Don't share food, drinks, or eating utensils with them.**
- Pregnant women working in child care facilities should minimize direct exposure to saliva…Hugging is fine (NY Dept. of Health)



The Centers for Disease Control and Prevention (CDC) States:

"Women may be able to lessen their risk of getting CMV by reducing contact with saliva and urine from babies and young children. Some ways do this are: kissing children on the cheek or head rather than the lips, and washing hands after changing diapers. These cannot eliminate your risk of getting CMV, but may lessen your chances of getting it."

How Other Countries Handle CMV in Daycare



In Queensland, Australia, they relocate “workers who are pregnant, or who expect to become pregnant, to care for children aged over two to reduce contact with urine and saliva.” (Queensland Government--Workplace Health and Safety Electrical Safety Office Workers' Compensation Regulator: “Cytomegalovirus (CMV) in early childhood education and care services.”)

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 [day care worker] is seronegative, she is excluded from professional activities with children under the age of three...“ (Stranzinger et al.,2016)

Research on CMV Prevention

- *New York Times* summarized a 2004 CMV prevention education study: **"pregnant mothers shown a video and offered hygiene tips were much less likely to get CMV (5.9 percent) than those not given information on prevention (41.7 percent)"** ("CMV Is a Greater Threat to Infants Than Zika, but Far Less Often Discussed," Saint Louis, 2016).

- Five CVM prevention education studies published between 1993 and 2015 were analyzed in the article, "Prevention of Maternal–Fetal Transmission of Cytomegalovirus**: "In each report, the efficacy of hygienic precautions has been > 75%...For seronegative pregnant women who are at high risk because of exposure to a young child in the home or in large group childcare, hygienic precautions are simple, inexpensive, and highly effective."** (Adler, 2015)

- "**Studies have shown that women who know they are CMV seronegative, know they are pregnant, and know about their toddler's CMV shedding are the most likely to prevent CMV transmission and reduce their risk from over 50 percent during pregnancy to a risk of less than 5 percent during pregnancy."** Dr. Demmler-Harrison, Director, Congenital CMV Disease Research, Clinic & Registry.

My daughter, Elizabeth Saunders, was born with congenital CMV

- When pregnant with Elizabeth, I was unware of CMV. I was at increased risk for it because I was:

1. The mother of a toddler
2. A licensed childcare provider
3. Volunteered in a church nursery.

- In 1989, Elizabeth was born. Her head was small and deformed—microcephaly.
- I was told Elizabeth would never roll over or sit up—she never did.
- I was told Elizabeth would never speak—she never did.

2005: Elizabeth at 15 with big sister on last family vacation.

- In 2006, Elizabeth died during a seizure at age 16.
- In 2010 a grandmother contacted me to ask about CMV because her grandson was born with congenital CMV.
- The grandmother wondered why the baby's mother, a high school student, was not educated about CMV before interning at a childcare facility.
- The nurse caring for baby asked me to start a CMV education campaign.
- CMV families, doctors, and researchers have been trying for years to raise CMV awareness.
- **We need your help to raise awareness.**

If I had known about CMV before trying to become pregnant with my daughter Elizabeth, I would have:

- Asked my doctor for a blood test to determine if I had a primary CMV infection. If I did, I would have waited to get pregnant.
- If the blood test showed I had never had CMV in my life, I would have:

1. Declined to volunteer in our church Sunday school with children under the age of three.
2. Declined to care professionally for children under the age of three in my home childcare center.
3. Practiced careful hygiene with my own toddler—I would not have shared food or cups with her or kissed her near the mouth, and I would have washed my hands every time I fed her, wiped her nose, picked up her toys, changed her diaper, etc.

Connecticut passed a law to help battle the effects of congenital CMV. Seen here, at the Office of the Governor in Hartford, CT, on July 28, 2015, is Governor Dannel P. Malloy with medical professionals, parents, legislators, and lobbyists at the ceremonial signing for “Public Act 15-10: An Act Concerning Cytomegalovirus.” I am standing beside the governor holding a photograph of Elizabeth.

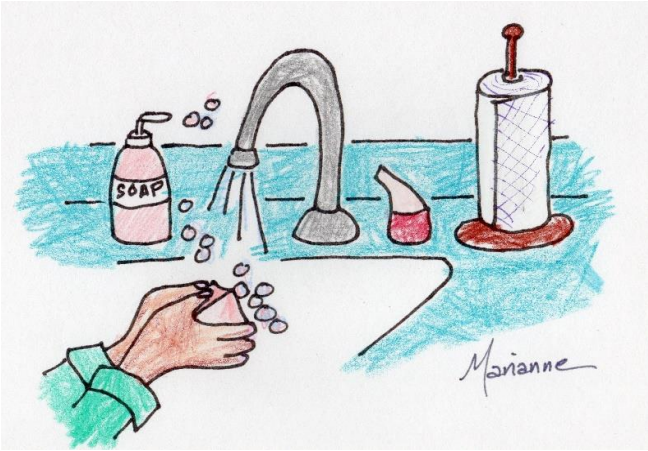
SUMMARY

Women Who Care for Toddlers: Reduce your chances of contracting CMV. CMV is a common virus that is shed by many young children.

- Avoid saliva when kissing a child
- Do not share food, drinks, or eating utensils

Wash your hands often, especially after:

- handling children's toys
- wiping a young child's nose or drool



FIND FLYERS AND OTHER RESOURCES

CDC.gov/CMV

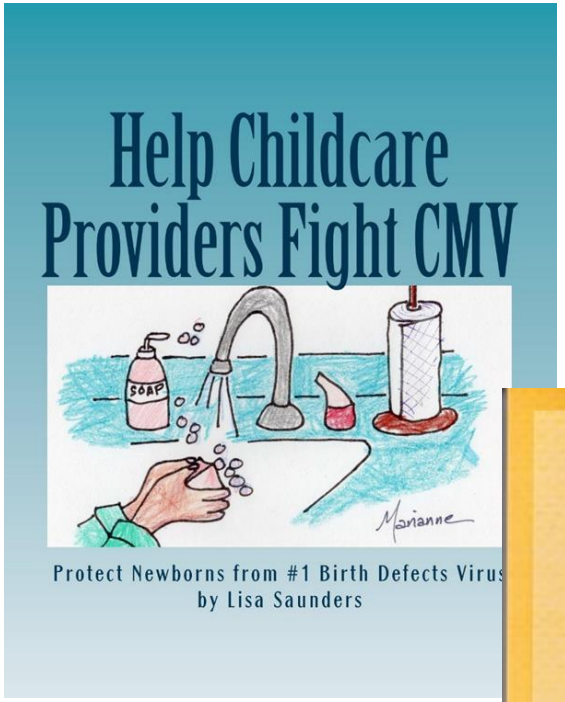
My blog features resources geared to childcare providers (includes Bibliography):

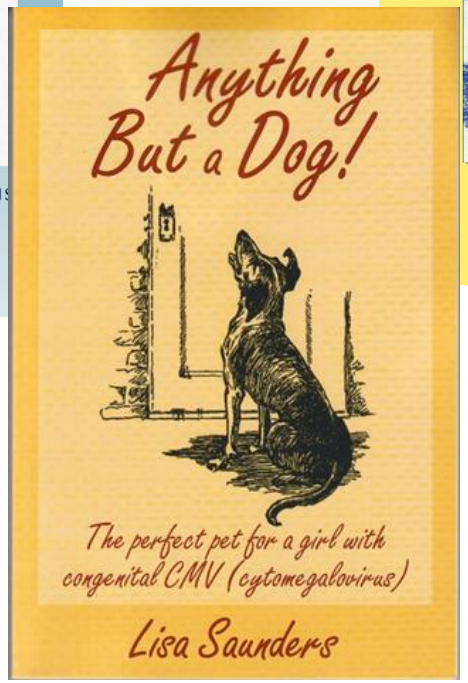
CongenitalCMV.blogspot.com

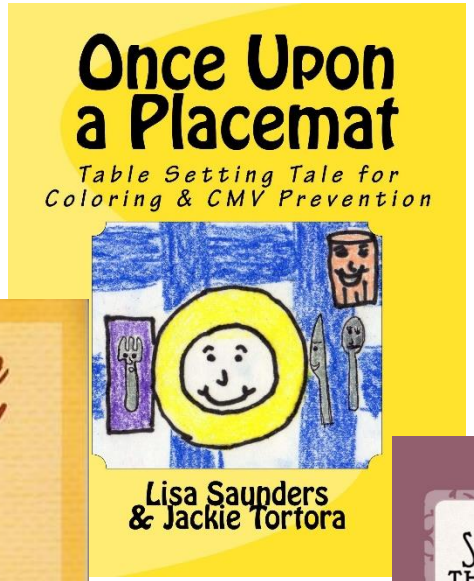
CMV Prevention Resources in English and Spanish

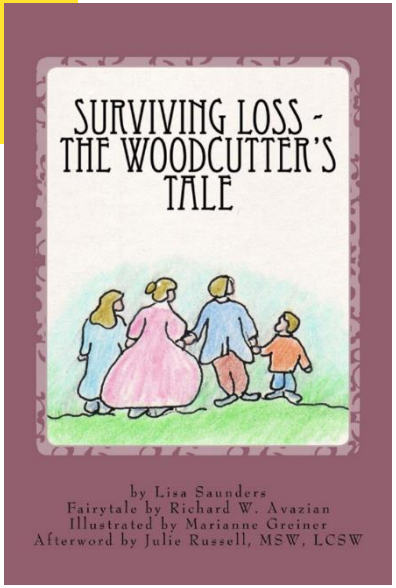
1. **“Staff Education and Policies on Cytomegalovirus (CMV)“** by the American Academy of Pediatrics (AAP) et al., Caring for Our Children, can be found on: http://cfoc.nrckids.org/StandardView/7.7.1.1
2. **Centers for Disease Control and Prevention (CDC):** Flyer: “Talking with Pregnant Patients about CMV: A Resource for Healthcare Providers”: https://www.cdc.gov/cmv/downloads/pregnant-patients-cmv.pdf
3. **National CMV Foundation** features several types of CMV flyers for your wall: https://www.nationalcmv.org/resources/educational-downloads.aspx
4. **Handwashing procedures** by the CDC: Video and posters on handwashing procedures and what to do if soap and water are not available (childcare providers don’t have soap and water available to them while wiping noses on the playground): https://www.cdc.gov/handwashing/index.html
5. **CDC has CMV information available in English and Spanish:**
   - English: About CMV: https://www.cdc.gov/cmv/overview.html
   - Español: Acerca del citomegalovirus: https://www.cdc.gov/cmv/overview-sp.html
6. **Connecticut Department of Public Health (DPH):** Flyers and information for childcare providers at: http://portal.ct.gov/DPH/Family-Health/EHDI/CMV
7. **Congenital CMV Disease Research, Clinic & Registry**: Contact Gail J Demmler-Harrison, MD, Professor, Pediatrics, Section Infectious Diseases, Baylor College of Medicine, Attending Physician, Infectious Diseases Service, Texas Children's Hospital. Email: cmv@bcm.edu. Info in Spanish.
8. **Flyers and Fairytale for the Whole Family:** Congenitalcmv.blogspot.com

CMV Books by Lisa Saunders





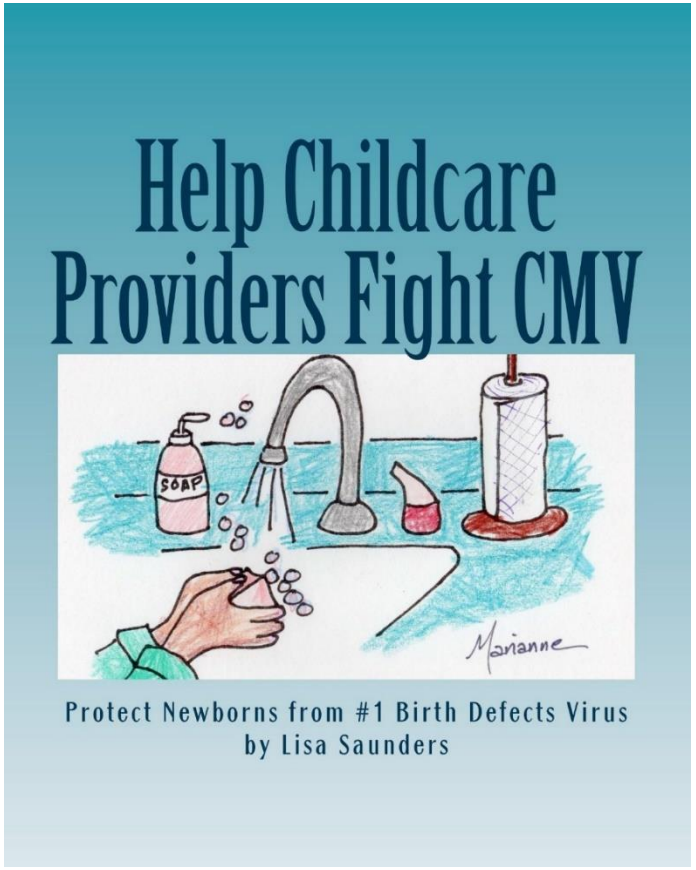




Help Childcare Providers Fight CMV

Book by Lisa Saunders

- Introduces childcare providers unaware of risk for CMV.
- Explains why the public is largely unaware of CMV.
- 15 reasons why childcare providers should be educated about CMV
- What childcare providers and mothers who use childcare services need to know to protect their unborn children from CMV.
- Saunders includes her fairytale, "Once Upon a Placement: A Table Setting Tale," to reach the whole family with the message on how to share a meal, not the germs. In the fairytale, "Grandma" speaks for Miss Cup to enforce germ prevention while highlighting Mr. Knife's fear of the dish running away with the spoon to teach table-setting.



- Content available on: http://congenitalcmv.blogspot.com/

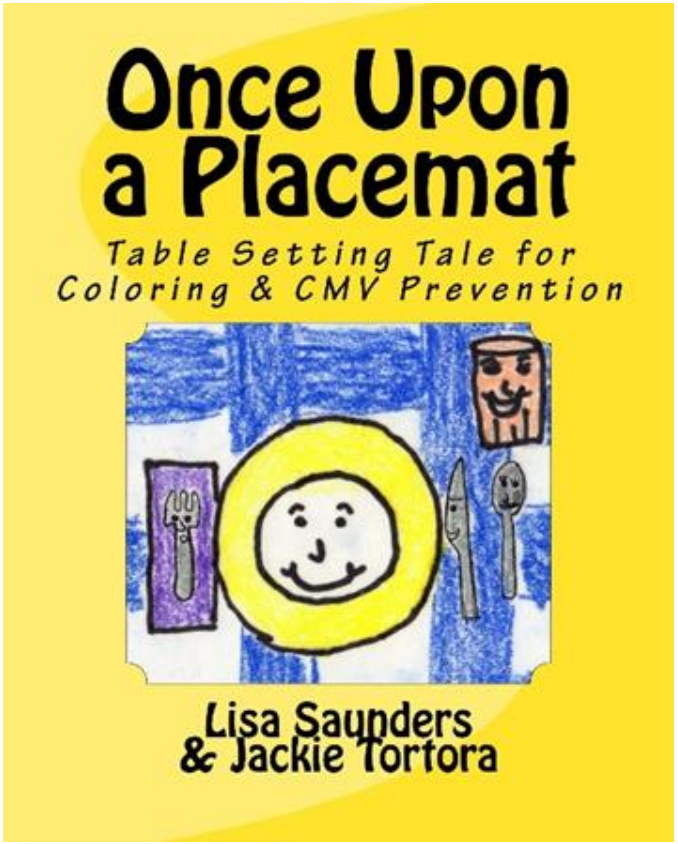
Share a meal, not the germs!

Educational, "color-me-in" fairytale

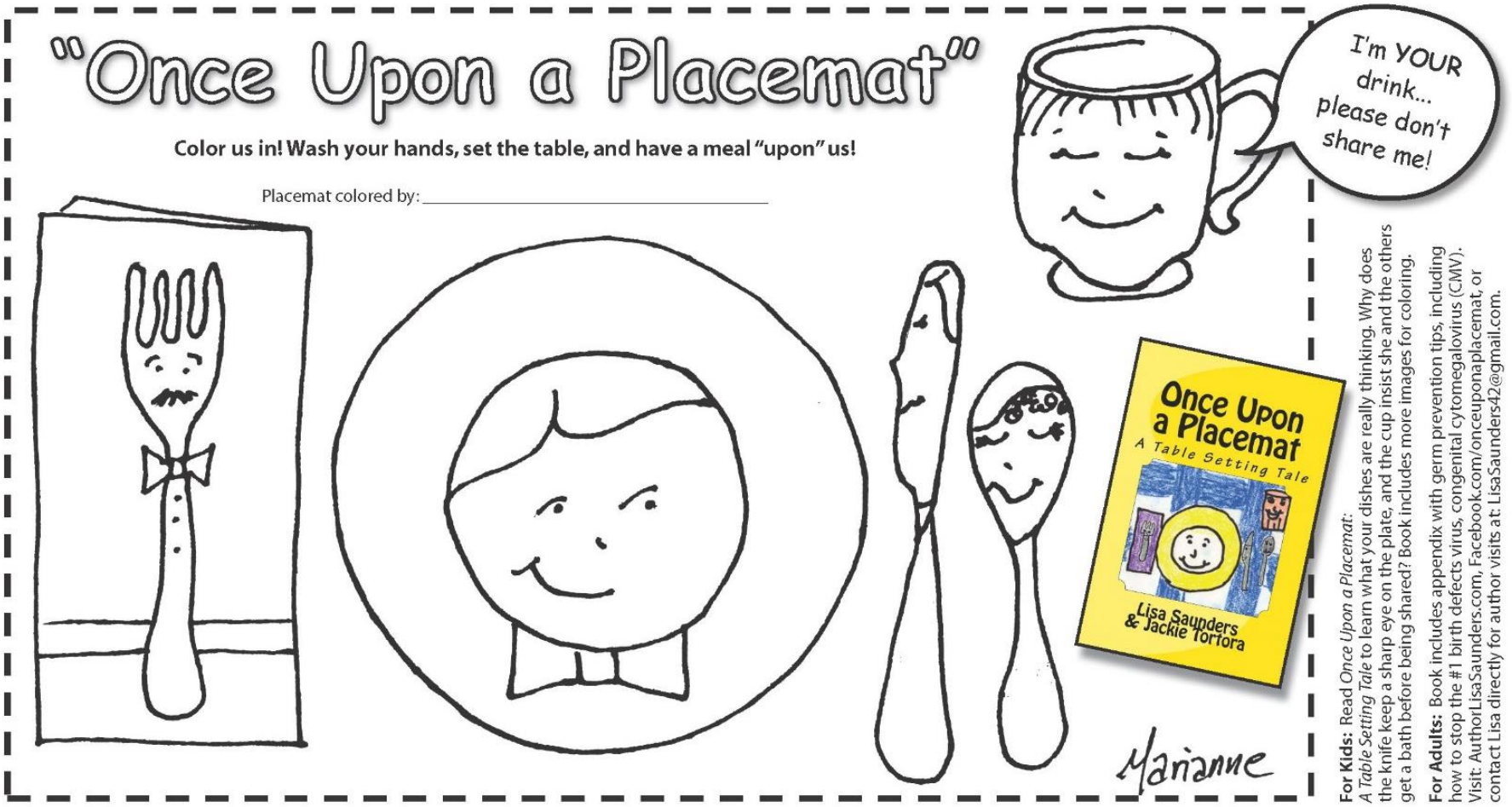
"Grandma" reminds children when and why to wash their hands and speaks for Miss Cup to teach germ prevention. She also features Mr. Knife's fear of the dish running away with the spoon to teach table-setting.

FREE Teaching Tool Kit:

- Placemats: Side one: Placemat with tableware characters with space for your coloring artist's name (perfect for laminating and using as a table-setting reminder). Side two: Germ prevention tips and hand-washing instructions.
- Video: Short introduction of the tableware characters by Lisa Saunders
- Educational Coloring Book: Bound copies of Once Upon a Placemat are available on Amazon, but a free pdf version is available on http://congenitalcmv.blogspot.com/



Placemat with tableware characters with space for your coloring artist's name (perfect for laminating and using as a table-setting reminder).



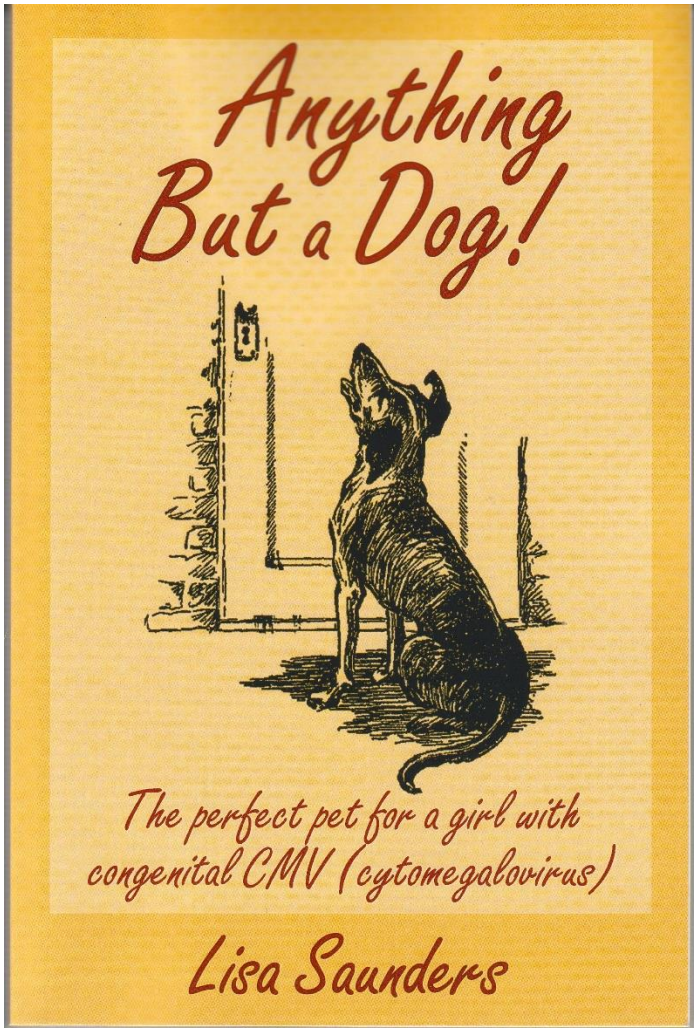
Anything But a Dog!

The perfect pet for a girl with congenital CMV

by Lisa Saunders

Published in English and Japanese

- The true story of a big, homeless canine and Lisa's fragile daughter, Elizabeth, who needed him. Elizabeth was born disabled by congenital CMV in 1989.
- "Sheds light on a disorder that is preventable and not talked about enough. If you're an animal lover, you'll love the critter tales as much as the special-needs storyline...really lifted my spirits." About.com
- Excerpt available at: www.authorlisasaunders.com. For permission to publish an excerpt, contact: ops@unlimitedpublishing.com. Cover design by Mary Kramer (MilkweedGraphics.com), Copyright (c) 2008 by Unlimited Publishing LLC, used by permission.

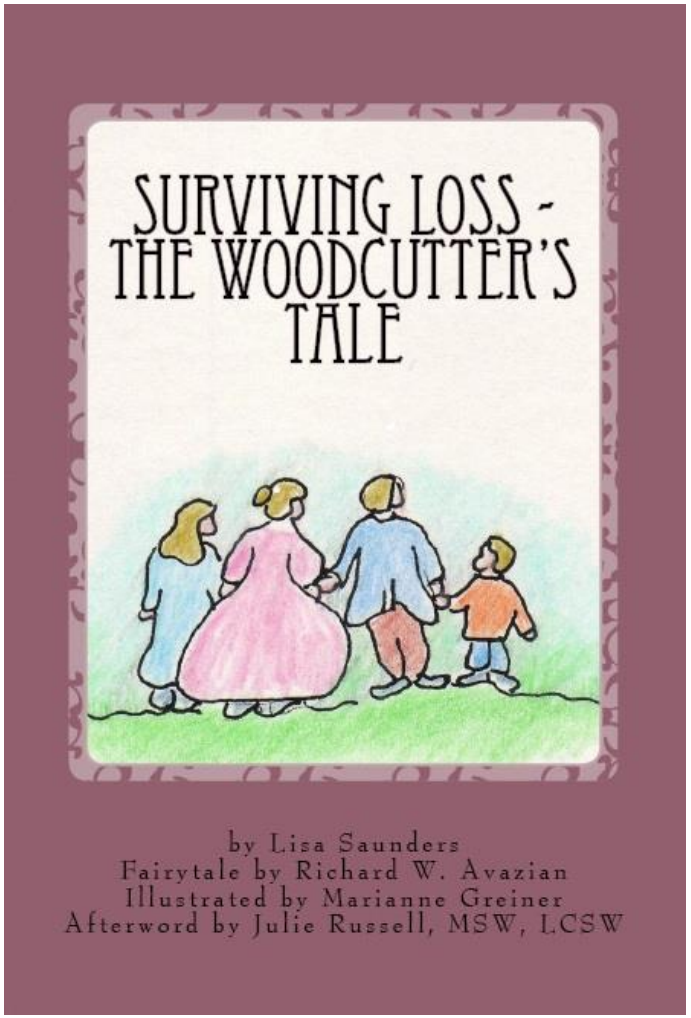


Surviving Loss
The Woodcutter's Tale

By Lisa Saunders

A tender fairytale for all ages about the process of healing after the death of a loved one. It was inspired by the death of Elizabeth Saunders, who died from the effects of congenital cytomegalovirus (CMV) in 2006.

Includes comments by Julie Russell, MSW, LCSW, to help individuals understand the grieving process so they can return to a life with purpose and meaning.



About Lisa Saunders

Lisa Saunders of Mystic, Connecticut, is a former licensed childcare provider and graduate of Cornell University. She, in collaboration with medical professionals and parents, was instrumental in helping Connecticut pass a CMV law in 2015. She speaks to groups across the U.S. in her mission to ensure childcare providers learn about CMV.

Lisa is the parent representative of the Congenital Cytomegalovirus Foundation, founder of the “Help Childcare Providers Fight CMV” project, a talk show host on SEC-TV , and an award-winning writer. She is the content coordinator for the magazine, *Groton-Mystic Neighbors*, author of 10 books, and a part-time history interpreter at Mystic Seaport. Lisa writes extensively about congenital CMV in her books and through articles such as "The Danger of Spreading CMV: How We Can Protect Our Children," published by *ChildCare Aware of America* in 2017.

Photo caption: Lisa Saunders holding a photograph of daughter Elizabeth (1989-2006) with Governor Dannel P. Malloy at the ceremonial signing for “Public Act 15-10: An Act Concerning Cytomegalovirus” at the Office of the Governor in Hartford, CT, on July 28, 2015.