Planning Committee
2014 CMV Public Health and Policy Conference

Jim Bale
Michael Cannon
Sara Doutré
Mandy McClellan
Ronda Menlove

Stephanie McVicar
Albert Park
Lenore Pereira
Alyson Ward
Karl White
Abstracts Due Monday, September 29th
What Do People Know About CMV? What Can We do About It?

Rosemary Thackeray, PhD, MPH
Department of Health Science
Brigham Young University
Session Objectives

- Identify levels of CMV awareness among various groups
- Locate best sources of CMV information on CMV websites or books
- Name three ways to engage in social media conversations about CMV
What We Know
U.S. Women

- Pediatric outpatient clinic
- OB/gyn clinic
- Medical students and staff
- Students at student union building
- $N = 643$
- 22% had heard of CMV

Jeon, et al 2006
U.S. Women

- Mail survey
- N = 2,656
- 14% had heard of CMV

Ross, et al 2008
Pregnant Women in France

- Obstetric clinics
- $N = 362$
- 60% have heard of CMV
- 72% knew how to prevent infection

Cordier, et al 2012
Pregnant Women in Singapore

- Specialist outpatient clinic at Singapore General Hospital
- N = 200
- 20% heard of CMV
- Most common sources of information
  - the workplace- 50.0%
  - newspaper or magazine- 22.5%
  - None informed by their obstetrician

Lim, et al 2012
U.S. Men and Women

- Nationwide mail survey
- N= 4,184
- 13% of women aware
- 7% of men aware

Cannon, et al 2012
Pregnant Women in The Netherlands

- 20 midwifery practices
- \( N = 1,097 \)
- 12.5\% heard, seen or read about
- Knowledge was low or incorrect

Pereboom, et al 2013
Japanese Pregnant Women

- Kobe University Hospital
- N= 343
- 18% aware
- 77% no knowledge of transmission
- 85% no knowledge of prevention

Morioka, et al 2014
U.S. Medical Students

- Medical school
- N = 422
- 34% of year one students
- 100% of year 2 students

Baer, et al 2014
Summary

- Low awareness
  - 13 to 22%
- Exceptions
  - 2nd year medical students
  - France
- Specific knowledge lower than awareness
Child Care Providers Study

Thackeray & Magnusson, 2014
Child care facilities are primary locations for the spread of infectious and other communicable diseases.

Child to parent transmission (Pass et al 1986)

CMV can stay on absorbent surfaces (Stowell et al 2012)

Women associating with or having close contact with young children are at risk for contracting CMV.

There is no literature about CMV awareness among child care providers.
Child Care Licensing Options

- Hourly
  - not on a regular schedule
- Residential
  - 1-8 children in the home
- Licensed Family
  - 1-16 children in the home
- Child Care Centers
  - 5 or more children, not at the provider’s home
- Out of school time programs
  - non-residential setting for school age children 5-12 years
Sample

- Licensed family (n = 796)
- Residential certificate (n = 118) providers
- Simple random sampling
  - 451 selected
    - estimating a proportion, within 5% points
    - response rate of 60%
    - finite population correction
Methods

- Mail survey
- Dillman Total/Tailored Design
- Response rate = 68.4% (N = 306)
Questions

- Awareness of viruses, parasites, bacteria (1)
- Sources of information (3)
- Awareness of how to prevent spread of disease in child care settings (7)
- CMV knowledge and source of information (5)
- Demographics (12)
Sample Demographics

- Female
- White (86%)
- Age
  - 21.4% <35 years of age
- Education
  - 69.8% high school or some college
Sample Demographics

- **Household income**
  - <$25,000 per year  13%
  - >=$65,000  32%

- **Pregnancy**
  - 97% ever pregnant
  - 8.3% current

- 72% no children under the age of 5
Child Care Experience

- 63% a child care provider for >10 years
- 36.6% employed at least one other staff member
- All age ranges of children
Aware of Viruses, Bacteria, Parasites

- Adenovirus: 12.8%
- CMV: 18.5%
- Enterovirus: 13.2%
- Giardia: 13.2%
- Influenza: 30.7%
- Parainfluenza: 99.4%
- RSV: 91.1%
- Rhinovirus: 72.9%
- Rotavirus: 77.4%
- Shigella: 39.7%
- Toxoplasmosis: 24.9%
## Disinfect Diapering Surface

<table>
<thead>
<tr>
<th></th>
<th>Soap &amp; Water</th>
<th>Water alone</th>
<th>Antibacterial Wipes</th>
<th>EPA Cleaner</th>
<th>Other Household Cleaner</th>
<th>Bleach &amp; Water</th>
</tr>
</thead>
<tbody>
<tr>
<td>% - Yes</td>
<td>21.1%</td>
<td>0.33%</td>
<td>71.7%</td>
<td>48.3%</td>
<td>16.4%</td>
<td>93.8%</td>
</tr>
</tbody>
</table>

6.5%
### Disinfect Surfaces When There is a Spill of Blood or Blood-Containing Bodily Fluids

<table>
<thead>
<tr>
<th></th>
<th>Soap &amp; Water</th>
<th>Water alone</th>
<th>Antibacterial Wipes</th>
<th>EPA Cleaner</th>
<th>Other Household Cleaner</th>
<th>Bleach &amp; Water</th>
</tr>
</thead>
<tbody>
<tr>
<td>% - Yes</td>
<td>21.9%</td>
<td>0.66%</td>
<td>45.0%</td>
<td>54.2%</td>
<td>19.2%</td>
<td>90.9%</td>
</tr>
</tbody>
</table>

13.3%
Sanitize Surfaces Such as Cutting Boards Prior to Food Preparation

<table>
<thead>
<tr>
<th></th>
<th>Soap &amp; Water</th>
<th>Water alone</th>
<th>Antibacterial Wipes</th>
<th>EPA Cleaner</th>
<th>Other Household Cleaner</th>
<th>Bleach &amp; Water</th>
</tr>
</thead>
<tbody>
<tr>
<td>% - Yes</td>
<td>47.5%</td>
<td>0.66%</td>
<td>26.6%</td>
<td>40.6%</td>
<td>20.7%</td>
<td>87.4%</td>
</tr>
</tbody>
</table>

7.5%
Sanitize toys that children have placed in their mouth or have been soiled with bodily fluids

<table>
<thead>
<tr>
<th></th>
<th>Soap &amp; Water</th>
<th>Water alone</th>
<th>Antibacterial Wipes</th>
<th>EPA Cleaner</th>
<th>Other Cleaner</th>
<th>Bleach &amp; Water</th>
</tr>
</thead>
<tbody>
<tr>
<td>% - Yes</td>
<td>37.3%</td>
<td>0.66%</td>
<td>49.3%</td>
<td>41.2%</td>
<td>19.1%</td>
<td>92.8%</td>
</tr>
</tbody>
</table>

6.5%
## Likelihood to clean hands using soap & water or hand sanitizer (gel)

<table>
<thead>
<tr>
<th>Event</th>
<th>Extremely unlikely</th>
<th>Unlikely</th>
<th>Neutral</th>
<th>Likely</th>
<th>Extremely likely</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before serving food</td>
<td>2.29</td>
<td>.33</td>
<td></td>
<td>2.29</td>
<td>95.10</td>
</tr>
<tr>
<td>Before changing diapers</td>
<td>10</td>
<td>23</td>
<td>14</td>
<td>16.33</td>
<td>36.67</td>
</tr>
<tr>
<td>Before blowing your nose</td>
<td>18.33</td>
<td>34</td>
<td>20.67</td>
<td>9.33</td>
<td>17.67</td>
</tr>
<tr>
<td>Before wiping a child’s running nose or drool</td>
<td>15.33</td>
<td>36</td>
<td>18</td>
<td>12</td>
<td>18.67</td>
</tr>
<tr>
<td>After serving food</td>
<td>5.57</td>
<td>7.21</td>
<td>4.92</td>
<td>13.11</td>
<td>69.18</td>
</tr>
<tr>
<td>After blowing your nose</td>
<td>1.96</td>
<td>.65</td>
<td>.98</td>
<td>6.54</td>
<td>89.87</td>
</tr>
<tr>
<td>After changing diapers</td>
<td>2.62</td>
<td>.66</td>
<td></td>
<td></td>
<td>96.72</td>
</tr>
<tr>
<td>After wiping a child’s running nose or drool</td>
<td>2.61</td>
<td>.65</td>
<td>.33</td>
<td>5.23</td>
<td>91.18</td>
</tr>
<tr>
<td>After going to the toilet</td>
<td>2.61</td>
<td></td>
<td>.65</td>
<td></td>
<td>96.73</td>
</tr>
<tr>
<td>After handling children’s toys</td>
<td>5.28</td>
<td>12.87</td>
<td>24.42</td>
<td>20.46</td>
<td>36.96</td>
</tr>
</tbody>
</table>
Sources of CMV Information

- School or Classes: 47.2%
- Radio, Television, Newspaper: 13.2%
- Social Media: 17.0%
- Websites: 90.6%
- Books about Pregnancy: 47.2%
- Magazines: 17.0%
- Other: 29.1%

N=56
Sources of CMV Information

Instructor at school: 46.8%
Healthcare Providers: 64.3%
Family or Friends: 47.5%
Childcare Co-worker: 31.9%
Other: 29.8%

N=56
Awareness of What is Caused by CMV

- Vision Loss: 58.5%
- Seizures: 45.3%
- Microcephaly: 18.9%
- Mental Retardation: 45.3%
- Jaundice: 39.6%
- Heart Defects: 28.3%
- Hearing Loss: 74.6%
- Death: 49.1%
- Club Foot: 9.4%

N=56
Awareness of How You Come in Contact with CMV

- Wiping a child’s nose: 77.8%
- Sleeping in the same bed as a Child: 13.0%
- Sharing utensils or cups with a child: 88.9%
- Sharing food or drinks with a child: 87.0%
- Preparing Food for a Child: 11.1%
- Kissing a Child on the Lips: 85.2%
- Hugging a child: 11.1%
- Handling toys: 61.1%
- Changing Diapers: 81.5%

N=56
Likely You Will be Exposed at Child Care Facility

N=56
Conclusions

- Overall awareness similar to other populations
- Knowledge varies
- Perceived risk is low
- Communication
  - Website = key channel
  - Training classes
- Child care “centers” may employ higher risk group
Reference Books and Websites

Rationale

- Women seek pregnancy information from
  - health care providers
  - the internet
  - discussion forums
  - family members
  - books

- Read and colleagues (2008) suggested that pregnancy books and the popular press contain very little, if any, CMV information
Methods

- Content analysis
  - 37 pregnancy reference books 2001-2012
  - 7 websites

- Two Coders
  - inter-coder agreement 85.4-95.4%

- Subject matter experts review
- General coding categories
  - CMV description
  - Transmission
  - Prevention
Methods

- Accuracy
  - % of women with antibodies before pregnancy
  - % who will get infection
  - % of maternal infections that lead to fetal infection
  - # born with CMV
  - # of deaths
  - # with permanent disabilities
  - likelihood of transmission with a reinfection
Methods

- Compared CMV with
  - toxoplasmosis
  - listeriosis
  - group B strep
  - HIV
  - Down syndrome
  - fetal alcohol syndrome
  - spina bifida
Include CMV

Books (21) vs. Websites (7)
Number of Sentences about CMV

- Websites: 40.7 sentences
- Books: 10.8 sentences
Include Prevention

![Bar Chart]

Books (12/21) vs Websites (4/7)

- Books (12/21): 57.1
- Websites (4/7): 57.1
What Preventive Measures?

- Use condoms and avoid oral sex
- Clean toys, countertops, and other surfaces
- Do not share towels or washcloths
- Do not kiss on or near the mouth
- Do not share cups, plates, utensils, toothbrushes, or food
- Wash hands with soap and water
- Wash hands after handling child’s toys
- Wash hands after wiping child’s runny nose or drool
- Wash hands after feeding or bathing child
- Wash hands after diaper changes or helping kids use the restroom
- Thoroughly wash hands with soap and water
- Good personal hygiene

Websites: 57.1%
Books: 52.4%
Risk Factors for Maternal Infection

- Books (10/21): 47.6%
- Websites (4/7): 57.1%
Transmission

- Books: 61.9
- Websites: 100
Inaccurate Info About

- % of maternal infections that lead to fetal infections
- # of children who have permanent disabilities
- the chance of developing CMV immunity
Conclusions

- Limited CMV information, though not statistically different from other infections or birth-defects.

- Inadequate coverage given to prevention of CMV transmission may contribute to CMV remaining a continued leading cause of birth defects in the United States.
Still have a long way to go
#Pregnant women should follow these steps to protect their unborn baby from the leading viral cause of disabilities.

1. Do not share food or drinks with a toddler. No more "one for mommy and one for baby."

2. Avoid contact with saliva when kissing a child under 6 years old. Instead, of kissing on the lips, for instance, kiss on the forehead and add a hug.

3. Wash your hands often with soap and water for 15 - 20 seconds especially after changing diapers, wiping noses or drool, and...
WHERE ?
WHEN?

- On-going
- Need strategic communications plan
  - What, when, where, who
- Does not need a lot of resources
Facts & Prevention {Cytomegalovirus :: The Silent Virus that Women Need to Know About}

by Guest Blogger on June 30, 2014 in Babies, Motherhood, Pregnancy, Preschoolers, Toddlers

Today’s series is composed of four women brought together by the most unfortunate circumstances. They all have one thing in common... Cytomegalovirus {CMV} has significantly changed their lives. However, their individual experiences resulting from this awful virus are vastly different. On this last day of National Congenital Cytomegalovirus Awareness Month...
Congratulations and thank you to Katie Igoe and her "Together We Can" team for hosting their annual event this weekend in New York! With almost 200 attendees, they raised over $21,000 for Stop CMV!
National Health Observances

National Health Observances (NHOs) are special days, weeks, or months dedicated to raising awareness about important health topics.

1 - 30 June
National Congenital Cytomegalovirus Awareness Month

Stop CMV - The CMV Action Network
P. O. Box 62214
Sunnyvale, CA 94088-2214
(209) 712-9929
email@stopcmv.org
www.stopcmv.org
Materials available
Contact: Janelle Greenlee
Social Media Defined

“Activities, practices, and behaviors among communities of people who gather online to share information, knowledge, and opinions using conversational media. Conversational media are web-based applications that make it possible to create and easily transmit content in the form of words, pictures, videos, and audios.”

THE ALS ICE BUCKET CHALLENGE

Thank you for the outpouring of support.

WHAT IS ALS?  WHAT WE DO  DONATE
The Ice Bucket Challenge, sometimes called the ALS Ice Bucket Challenge, is a viral fundraising campaign for the ALS Association that involves dumping a bucket of ice water on someone's head to promote awareness of the disease lateral sclerosis (ALS) and encourage donations to research. The challenge went viral in August 2014.[1][2] In the US, many people participate for the ALS Association.
Has The Ice Bucket Challenge Changed Healthcare Fundraising Forever?

There’s no shortage of Ice Bucket Challenge knockoffs. From giving rice to the needy to taking a pie to the face for suicide prevention, many are trying to start a challenge that will echo what the ALS Association received from the Ice Bucket Challenge in one month, which as of Aug. 29 was $100.9 million from over three million donors. That level of fundraising success in such a short period of time is unprecedented, for ALS Association or anyone, and everyone with a passionate cause is trying to reach it.
How to participate?

1. Pickup a bowl of rice from your kitchen
2. Go to the nearest needy person and give it to them

Rice Bucket Challenge 🍚
Commmunity
#RiceBucketChallenge
Are you up?

#RiceBucketChallenge
Take the #doubtfireface challenge. Donate: asp.donordrive.com (Doubtfire Face)
Ice bucket craze faces cream pie challenge

Published: 11 Sep 2014 13:30

MOVE over Ice Bucket Challenge — there's a new craze coming to Scotland.

In aid of Childhood Cancer Awareness Month, social media users are preparing to 'Get Whipped' by having a cream pie thrown in their face.
I'm so happy I got tagged! I tagged the world! Donate to www.alsa.org or another charity of your choice. Such a fun way to bring awareness to a horrible disease. Thinking of my friends Lisa and Debbie who lost their moms to ALS. — with Julene and 40 others.
“Less and less users are interested in publishing, all they are looking for are *snackable* content to share in order to start quick conversations and social interactions.”

*Fred Cavazza*
What Makes Your Grandma Special?

#MeetMyGrandma. If you could share one story you love about your grandma, what would it be?

Sign in now to share

#MeetMyGrandma
Jill
My grandma was my inspiration for becoming a journalist. She wrote for a Kansas newspaper; I grew up wanting to do that too. #MeetMyGrandma

59 likes
kyla These are my grandmas! Grandma Lindblom is awesome cause she always has dum dums and we ways drank Nesquik chocolate milk complete with a straw and she ways gives us $2 dollar bills for our birthdays and she always made me say please and thank you no matter what! I love her for all those reasons! Grandma Francis is the bomb dot com cause
#MeetMyCMVchild
“Content is the fuel to conversation, it is a valuable investment you cannot avoid.”

Fred Cavazza
Go To Where The Conversations Are Happening
Make Your Posts Specific and Meaningful

Kimberley Walsh @WalshDaily · Sep 5
ATTENTION Kimba fans!!!! 🍁🍂🍁
uk.virginmoneygiving.com/fundraiser-web... 🍁❤️🎁
 retorno 24 ⭐️ 11 ···

Kimberley Walsh @WalshDaily · Sep 15
If you haven't already, why not donate to a charity close to Kimberley's heart and celebrate the birth of Bobby 🍁❤️🎁 👍
uk.virginmoneygiving.com/team/kimberley...
Engage in Conversation

Answer their questions or comment on their post

Give thanks
Make Content Unique for The Platform
Posts with Compelling Information or Opinion

Sharyn Rundle-Thiele @rundlesr · Sep 18
Back pain, poor posture, leg cramps, tense muscles? Here’s something you can do about it! [link](https://lnkd.in/bqGKkmf)

Craig lefebvre @chiefmaven · Sep 18
During infectious disease outbreaks, behavioral changes account for 80-90% of economic losses.
#socialmarketing

Maddie’s Mission retweeted
CDCChronic @CDCChronic · Sep 16
Sept. is #InfantMortality Awareness Month. Sign up for @mytext4baby - just text BABY to 511411. [go.usa.gov/yRaB](https://go.usa.gov/yRaB)
Posts that are Personal

Maddie's Mission @Maddies_Mission · Aug 26
Met with @RepJohnZerwas to discuss the importance of CMV legislation in Texas! Women deserve to be educated about CMV
Retweet Others

Maddie's Mission retweeted
March of Dimes NY @MarchOfDimesNY · Sep 16
We're bringing awareness to #InfantMortality. #Retweet to help us honor all of the #babies who left us too soon.

share a hug march of dimes
forever our baby

View more photos and videos
Use Hashtags

- #cmv
- #stopcmv
- #cmvconference
Conclusion

- Awareness is low
- There are lots of audiences to talk to
- Messages need to be
  - Specific, actionable
  - Personal
  - Sharable
- Social media is one way to have that conversation, but not the only way.
rosemary_thackeray@byu.edu