Keeping Waterbirth Safe During Covid-19

Presented by Waterbirth International

www.waterbirth.org
Professor Barbara Harper, RN, Midwife
Founder/Director Waterbirth International
Certified Blissborn Birth Hypnosis Educator and Trainer
Certified Infant Craniosacral Therapist
Certified Prenatal Aquatic Instructor
Certified Kangaroo Care Consultant
Certified Childbirth Educator
Certified Labour Doula

Barbara@waterbirth.org
info@waterbirth.org
@thebarbaraharper
@waterbirthint
This presentation is made possible by the work of these outstanding professionals

With instruction, advice and assistance from:
• Dianne Garland, UK Midwife
• Jennifer Vanderlaan, CNM, MPH, PhD
• Lisa Lederer, CNM – Midwives of NJ
• Lindsey Meehleis, LM, CPM
• Royal College of Midwives – UK recommendations
• Royal College of Obstetricians – Coronavirus (COVID-19) Infection in Pregnancy
• CDC – “Municipal Water and COVID-19.” Centers for Disease Control and Prevention, 10 Mar 2020
• EPA - Infection Prevention and Control of Epidemic- and Pandemic-Prone Acute Respiratory Infections in Health Care.

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Is waterbirth a safe and realistic option during COVID-19?

• Risk assessment process
  1. Testing status
  2. Symptomology
  3. Serology is available
  4. Home environment – how many people/visitors

• Couples respect professional attitudes supporting “Collaborative decision making” while planning care
• Informed consent
• Provider makes ultimate determination

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Royal College of Midwives (RCM)
Royal College of Obstetricians and Gynaecologists (RCOG)

UNITED KINGDOM
• Joint position paper between midwives, physicians and pediatricians

• “The use of birthing pools in hospitals should be avoided in **suspected or confirmed cases**, given evidence of transmission in faeces and the inability to use adequate protection equipment for healthcare staff during water birth.”

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Preventing Infections in the Pool

• Three people to be concerned about
  – Mother
  – Provider
  – Baby
• Test the water first
• The microbiome of the baby remains intact
Practical Matters - During Covid-19

Contraindications – normal physiology versus pathology
• Absolute contraindications
• Controversial contraindications
• Auscultation guidelines
• Maintaining water temperature
Absolute Contraindications = pathology

• Abnormal Fetal heart rate
• Moderate to severe preeclampsia
• Maternal fever
• Untreated skin, blood or respiratory infection
• Excessive vaginal bleeding
• Any pathology
• Prematurity
Infection Control Issues

• Universal precautions – employ standard practice
• Decide on your policy and stick to it
• Clean and dry pool before and after use
  • Inflatable – disposable cover
  • Permanent installation
• Store inflatable pools in large plastic bins/bags – label with cleaning date

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Infection Control Issues

- PPE – how much do you want to use?
  - Full
  - Masks only
  - Water-proof aprons/gowns
  - Head coverings – a must in China
  - Long gloves
  - Short gloves
  - Boots
Infection Control Issues

• Tub set up in home
  – Who is responsible
  – Liners are even more important
  – Always carry an extra liner
  – Wipe down pool before placing liner
  – Use any non-sudsing cleaner or wipes
Infection Control Issues

- Procedure for removal
  - Everything must be cleanable or disposable
  - Drain pump
  - Thermometer
  - Hoses
  - Each couple should have their own ideally
  - Use PPE while cleaning
Portable pool accessories – all must be cleaned

- Fill hose
- Drain hose
- Label or use different colors
- Bucket to hold
- Drain pump
- Different tap adapter/shower adapters
- Electric inflator
- Foot inflator
- Thermometer
Infection Control Issues

• Use a broad spectrum anti-viral/bacterial solution
• All equipment disposable or cleanable
• Do NOT leave water standing longer than 24 hours
  – Drain and refill
• Cleaning protocols for both hard tubs and plastic inflatables available at Waterbirth.org - Monday

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EPA Approved Cleaning Products

3 Major substances listed to fight viruses
- Chlorine – Sodium hypochlorite
  – 10% dilution
- Quaternary Amonium – 10 minutes
  – EPA-registered QA compounds can be used when disinfecting medical equipment that comes into contact with intact skin Okay for hard or plastic birth pools Comes in concentrate – dilute 2.5%
- Hydrogen Peroxide 35%
  – Okay for plastics
  – Can obtain HP individual wipes

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What might contaminate the water?

- Fecal material
- Urine
- Blood / clots
- Amniotic fluid
- Meconium
- Vernix
- Hair
- Vomit

- Dilution factor
- No increase in infection rates
- Studies confirm higher infection rates in bed vs. bath
- Contaminate removal is easy
  - Mother exit bath
  - Drain
  - Clean
  - Refill and resume bath

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“The COVID-19 virus has not been detected in drinking water. Conventional water treatment methods that use filtration and disinfection, such as those in most municipal drinking water systems, should remove or inactivate the virus that causes COVID-19.”
“There is no evidence that COVID-19 can be spread to humans through the use of pools and hot tubs. Proper operation, maintenance, and disinfection (e.g., with chlorine and bromine) of pools and hot tubs should remove or inactivate the virus that causes COVID-19.”
Adding antibacterial to decrease infection risk

- Not necessary – unless you are off grid without water quality check
- Even with wells, the water quality is always tested – county extensions
- The dilution is typically enough to dissipate any virus in feces
- 1 oz – 30 ml of Bleach
- 1 quart bottle of 3% Hydrogen peroxide

Photo Andaluz.net – Jennifer Gallardo, LM, CPM

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Types of infections during and after waterbirth

- GBS – Follow treatment guideline
- HIV/AIDS
  - Non communicable in water
- Hepatitis
- E-Coli - usually not related to the water
- Pseudomonas sepsis/otitis media
- Legionella pneumonia
  - Recent deaths
- Burkholderia Picketti: pneumonia
- SARS – Covid 19
New US Studies 2018-2020

• Ongoing prospective studies
  – University of SF multi site
  – Individual hospitals with IRB approval

• Large retrospective comparing nurse midwife to direct entry practices
  – Home birth
  – Hospital birth
  – Birth center birth

• Meta analysis of all studies
  – 400+ research papers
  – Over 100,000+ waterbirths in papers
  – Waterbirth found to provide better outcomes for neonates
  – Less NICU admissions
  – Fewer infections
  – More maternal satisfaction

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Neonatal Clinical Outcomes – Three meta-analyses

Neonatal Clinical Outcomes – Three meta-analyses

- Stable findings across 35 studies that examined different aspects including neonatal infection rates
- no increased odds of poor neonatal outcomes
- considered a safe non-pharmacologic method for managing labor pain

Photo Nancy Pol, CNM
Neonatal Clinical Outcomes – Three meta-analyses


- Looked at neonatal sepsis/infection, including fever and other infection markers, within seven days of birth
- There is no evidence to suggest that the practice of waterbirth in a low risk population is harmful to the neonate
Neonatal Clinical Outcomes – Three meta-analyses


- No significant difference in neonatal mortality, neonatal intensive care unit/special care baby unit admission ..........or infection rates was found between babies delivered into water and on land.
Zanetti- Dallenbach

• Retrospective 89 waterbirths
  – Colonization rate of bath and neonate following waterbirth

• Results:
  – Newborns showed no difference in GBS colonization following waterbirth
  – trend towards less colonization
  – Bath water had slightly more colonization
Film Clip: Completely Hands off Birth
EVERY BABY DESERVES A GENTLE BIRTH

~BARBARA HARPER, RN, CLD, CCCE, MIDWIFE, CKC

barbara@waterbirth.org
@thebarbaraharper
@waterbirthint

Thank you NACPM