

# Fetal Development & the Development of Ultrasonography as a Window to the Womb

## OPENING PRAYER

*5 minutes*

Lord Jesus,  
You who faithfully visit and fulfill with your Presence  
the Church and the history of men;  
You who in the miraculous Sacrament of your Body and Blood  
render us participants in divine Life  
and allow us a foretaste of the joy of eternal Life;  
We adore and bless you.

Prostrated before You, source and lover of Life,  
truly present and alive among us, we beg you.

Reawaken in us respect for every unborn life,  
make us capable of seeing in the fruit of the maternal womb  
the miraculous work of the Creator,  
open our hearts to generously welcoming every child  
that comes into life.

Bless all families,  
sanctify the union of spouses,  
render fruitful their love.

Accompany the choices of legislative assemblies  
with the light of your Spirit,  
so that peoples and nations may recognize and respect  
the sacred nature of life, of every human life.

Guide the work of scientists and doctors,  
so that all progress contributes to the integral well-being of the person,  
and no one endures suppression or injustice.

Give creative charity to administrators and economists,  
so they may realize and promote sufficient conditions  
so that young families can serenely embrace  
the birth of new children.

Console the married couples who suffer because they are unable to have children and in Your goodness provide for them.

Teach us all to care for orphaned or abandoned children, so they may experience the warmth of your Charity, the consolation of your divine Heart.

Together with Mary, Your Mother, the great believer, in whose womb you took on our human nature, we wait to receive from You, our Only True Good and Savior, the strength to love and serve life, in anticipation of living forever in You, in communion with the Blessed Trinity.

- Pope Benedict XVI

Before I formed you in the womb I knew you, before you were born I dedicated you, a prophet to the nations I appointed you.

- *Jeremiah 1:5*

## **OBJECTIVE**

Educate students about embryology, fetal development, and the advancements in sonography and science that give the medical community this information.

### ***Learning Objectives***

During this presentation it is essential to communicate the following points:

- Each and every human life is valuable from the moment of conception.
- From the moment of fertilization each embryo is a distinct, living, and whole human being.
- Abortion and embryonic stem cell research take the life of human beings in their embryonic or fetal stages.
- Advances in sonography have given us a window to the womb, making it even harder to deny the humanity of the unborn.

## LECTURE

5 minutes

- Teach basic fetal development facts.<sup>1</sup> As you describe each stage, show *Little One Sweet Posters*. *Watch Me Grow* brochures are also available (a condensed version of the posters) to hand out to students. Both are available from the Archdiocesan Respect Life Office at [life@archbalt.org](mailto:life@archbalt.org) or (410) 547-5337. Posters are free of charge to Archdiocesan schools and parishes.
  - From the moment of conception, all 46 chromosomes are present, gender is determined, and a new unrepeatable human being comes into the world.
  - During the first month, the baby grows to 10,000 times his size at conception.
  - By the third week, the heart begins to beat.
  - Brain waves can be recorded in the second month. Teeth form and fingers and toes begin developing.
  - By eight weeks, all body systems are present.
  - In the third month, fingernails and toenails form and the baby has a unique fingerprint.
  - In the fourth month, facial expressions can be seen and babies dream.
  - At five months, some babies are viable, meaning they can survive outside the womb.
  - During the 6<sup>th</sup> month, babies respond to sound.
  - At seven months, babies can hear, taste, cough, yawn, and hiccup.
  - Through the 8<sup>th</sup> and 9<sup>th</sup> months, babies continue to gain weight and prepare for birth.

## SHORT ACTIVITY

5 minutes

Pass the 11 week fetal model around the classroom.

If they are available or can be borrowed, show and describe larger fetal development models.

These can be purchased from Heritage House at [www.hh76.com](http://www.hh76.com) or borrowed from the Archdiocesan Respect Life Office. Please contact [life@archbalt.org](mailto:life@archbalt.org) or (410) 547-5337.

## BRIEF LECTURE

5 minutes

- What is sonography?
  - **so·nog·ra·phy**: Pronunciation: /sō-näg-rə-fē/ Physics. Sound with a frequency greater than 20,000 Hz, approximately the upper limit of human hearing.

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<sup>1</sup> *Watch Me Grow*, Little One Sweet Publishing (2004).

Medicine/Medical. The application of ultrasonic waves to therapy or diagnostics, as in deep-heat treatment of a joint or imaging of internal structures.

- Information from GE Healthcare about 3D and 4D sonograms: “It is important to understand that sonologists around the world have always conjured three-dimensional images of anatomy or pathology in their minds while doing their 2D scans. However, until recently it was not possible to do this type of reconstruction on patient data acquired using ultrasound. The advent of 3D and 4D ultrasound for the first time allowed us a peek into the mechanics of thinking of a sonologist by acquiring the volume data and allowing us to reconstruct the images in different planes on the ultrasound machine or a workstation. The problem is that we are not used to manipulating this data in such an “external” visualization format. It takes some understanding of the basics of volume acquisition and manipulation to understand the dynamics of reconstruction. It is perhaps easier for radiologists who have dealt with axial imaging in CT and multiplanar imaging in MRI since they are used to sectional imaging. Additionally the ability to render the volume using different algorithms makes it seem more complicated. However, the basic steps are simple, and a logical approach to 3D and 4D scanning can help in its complete comprehension, and even makes it easier to scan in many instances. Remember, multiplanar imaging is the greatest benefit of Volume scans.” (from GE Healthcare, [http://www.gehealthcare.com/usen/ultrasound/education/products/cme\\_3d4d.html](http://www.gehealthcare.com/usen/ultrasound/education/products/cme_3d4d.html))
- The effect of advances on the pro-life and pro-choice movements
  - If appropriate for your students, please share the first chapter of Abby Johnson’s (former Employee of the Year at Planned Parenthood) book, *Unplanned*, with the students in advance.
    - Johnson, Abby. *Unplanned: The dramatic true story of a former Planned Parenthood leader’s eye-opening journey across the life line*. Ignatius Press: United States (2010).
  - Many believe this is the future of the pro-life movement. These pictures provide visual proof of the humanity of the unborn.

## **VIDEO**

*20 minutes*

*Eyewitness 2: The Next Generation*. Sound Wave Images, Inc.: West Bloomfield, MI (2008).

“In a High School presentation, Shari Richard, sonographer, gives a complete description of all three trimesters. This version will entertain and delight viewers as you share in the interaction of the students as they travel the fascinating journey in the womb.”

This can be purchased online or borrowed from the Respect Life Office at [life@archbalt.org](mailto:life@archbalt.org) or (410) 547-5337.

## **LECTURE**

### **Reiterate essential lessons**

- From the moment of fertilization each embryo is a distinct, living, and whole human being. This is scientific fact.
- Abortion and embryonic stem cell research take the life of human beings in their embryonic or fetal stages.

## **QUESTIONS**

*5 minutes*

## **CLOSING PRAYER**

For all helpless little children who die in the wombs of their mothers, we pray that all of these little souls will be given eternal life by Our God, through His Divine Mercy. We ask You to bless and protect the children who today are in their mothers' wombs. Save them from the danger of abortion. Give their mothers the grace to sacrifice themselves, in body and soul, for their children. Help all people to recognize in the preborn child a brother, a sister, saved by You, our Redeemer in the womb.

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CHERYL POKED HER HEAD INTO MY OFFICE. “Abby, they need an extra person back in the exam room. Are you free?”

I looked up from my paperwork, surprised. “Sure.”

Though I'd been with Planned Parenthood for eight years, I had never been called into the exam room to help the medical team during an abortion, and I had no idea why I was needed now. Nurse-practitioners were the ones who assisted in abortions, not the other clinic staff. As director of this clinic in Bryan, Texas, I was able to fill in for any position in a pinch, except, of course, for doctors or nurses performing medical procedures. I had, on a few occasions, agreed at a patient's request to stay with her and even hold her hand during the procedure, but only when I'd been the counselor who'd worked with her during intake and counseling. That was not the case today. So why did they need me?

Today's visiting abortionist had been here at the Bryan clinic only two or three times before. He had a private abortion practice about 100 miles away. When I'd talked with him about the job several weeks before, he had explained that at his own facility he did only ultrasound-guided abortions — the abortion procedure with the least risk of complications for the woman. Because this method allows the doctor to see exactly what is going on inside the uterus, there is less chance of perforating the uterine wall, one of the risks of abortion. I respected that about him. The more that could be done to keep women safe and healthy, the better, as far as I was concerned. However, I'd explained to him that this practice wasn't the

protocol at our clinic. He understood and said he'd follow our typical procedures, though we agreed he'd be free to use ultrasound if he felt a particular situation warranted it.

To my knowledge, we'd never done ultrasound-guided abortions at our facility. We did abortions only every other Saturday, and the assigned goal from our Planned Parenthood affiliate was to perform 25 to 35 procedures on those days. We liked to wrap them up by around 2 p.m. Our typical procedure took about 10 minutes, but an ultrasound added about five minutes, and when you're trying to schedule up to 35 abortions in a day, those extra minutes add up.

I felt a moment's reluctance outside the exam room. I never liked entering this room during an abortion procedure — never welcomed what happened behind this door. But since we all had to be ready at any time to pitch in and get the job done, I pushed the door open and stepped in.

The patient was already sedated, still conscious but groggy, the doctor's brilliant light beaming down on her. She was in position, the instruments were laid out neatly on the tray next to the doctor, and the nurse-practitioner was positioning the ultrasound machine next to the operating table.

"I'm going to perform an ultrasound-guided abortion on this patient. I need you to hold the ultrasound probe," the doctor explained.

As I took the ultrasound probe in hand and adjusted the settings on the machine, I argued with myself, *I don't want to be here. I don't want to take part in an abortion.* No, wrong attitude — I needed to psych myself up for this task. I took a deep breath and tried to tune in to the music from the radio playing softly in the background. *It's a good learning experience — I've never seen an ultrasound-guided abortion before, I told myself. Maybe this will help me when I counsel women. I'll learn firsthand about this safer procedure. Besides, it will be over in just a few minutes.*

I could not have imagined how the next 10 minutes would shake the foundation of my values and change the course of my life.

I had occasionally performed diagnostic ultrasounds for clients before. It was one of the services we offered to confirm pregnancies and estimate how far along they were. The familiarity of preparing for an ultrasound soothed my uneasiness at being in this room. I applied the lubricant to the patient's belly, then maneuvered the ultrasound probe until her uterus was displayed on the screen and adjusted the probe's position to capture the image of the fetus.

I was expecting to see what I had seen in past ultrasounds. Usually, depending on how far along the pregnancy was and how the fetus was turned, I'd first see a leg, or the head, or some partial image of the torso, and would need to maneuver a bit to get the best possible image. But this time, the image was complete. I could see the entire, perfect profile of a baby.

*It looks just like Grace at 12 weeks,* I thought, surprised, remembering my very first peek at my daughter, three years before, snuggled securely inside my womb. The image now before me looked the same, only

clearer, sharper. The detail startled me. I could clearly see the profile of the head, both arms, legs, and even tiny fingers and toes. Perfect.

And just that quickly, the flutter of the warm memory of Grace was replaced with a surge of anxiety. *What am I about to see?* My stomach tightened. *I don't want to watch what is about to happen.*

I suppose that sounds odd coming from a professional who'd been running a Planned Parenthood clinic for two years, counseling women in crisis, scheduling abortions, reviewing the clinic's monthly budget reports, hiring and training staff. But odd or not, the simple fact is, I had never been interested in promoting abortion. I'd come to Planned Parenthood eight years before, believing that its purpose was primarily to prevent unwanted pregnancies, thereby reducing the number of abortions. That had certainly been my goal. And I believed that Planned Parenthood saved lives — the lives of women who, without the services provided by this organization, might resort to some back-alley butcher. All of this sped through my mind as I carefully held the probe in place.

"Thirteen weeks," I heard the nurse say after taking measurements to determine the fetus's age.

"Okay," the doctor said, looking at me, "just hold the probe in place during the procedure so I can see what I'm doing."

The cool air of the exam room left me feeling chilled. My eyes still glued to the image of this perfectly formed baby, I watched as a new image entered the video screen. The cannula — a strawshaped instrument attached to the end of the suction tube — had been inserted into the uterus and was nearing the baby's side. It looked like an invader on the screen, out of place. Wrong. It just looked wrong.

My heart sped up. Time slowed. I didn't want to look, but I didn't want to stop looking either. I couldn't not watch. I was horrified, but fascinated at the same time, like a gawker slowing as he drives past some horrific automobile wreck — not wanting to see a mangled body, but looking all the same.

My eyes flew to the patient's face; tears flowed from the corners of her eyes. I could see she was in pain. The nurse dabbed the woman's face with a tissue.

"Just breathe," the nurse gently coached her. "Breathe."

"It's almost over," I whispered. I wanted to stay focused on her, but my eyes shot back to the image on the screen.

At first, the baby didn't seem aware of the cannula. It gently probed the baby's side, and for a quick second I felt relief. *Of course*, I thought. The fetus doesn't feel pain. I had reassured countless women of this as I'd been taught by Planned Parenthood. *The fetal tissue feels nothing as it is removed. Get a grip, Abby. This is a simple, quick medical procedure.* My head was working hard to control my responses, but I couldn't shake an inner disquiet that was quickly mounting to horror as I watched the screen.

The next movement was the sudden jerk of a tiny foot as the baby started kicking, as if it were trying to move away from the probing invader. As the cannula pressed its side, the baby began struggling to turn and twist away. It seemed clear to me that it could feel the cannula, and it did not like what it was feeling. And then the doctor's voice broke through, startling me.

"Beam me up, Scotty," he said lightheartedly to the nurse. He was telling her to turn on the suction — in an abortion the suction isn't turned on until the doctor feels he has the cannula in exactly the right place.

I had a sudden urge to yell, "Stop!" To shake the woman and say, "Look at what is happening to your baby! Wake up! Hurry! Stop them!"

But even as I thought those words, I looked at my own hand holding the probe. I was one of "them" performing this act. My eyes shot back to the screen again. The cannula was already being rotated by the doctor, and now I could see the tiny body violently twisting with it. For the briefest moment the baby looked as if it were being wrung like a dishcloth, twirled and squeezed. And then it crumpled and began disappearing into the cannula before my eyes. The last thing I saw was the tiny, perfectly formed backbone sucked into the tube, and then it was gone. And the uterus was empty. Totally empty.

I was frozen in disbelief. Without realizing it, I let go of the probe. It slipped off the patient's tummy and slid onto her leg. I could feel my heart pounding — pounding so hard my neck throbbed. I tried to get a deep breath but couldn't seem to breathe in or out. I still stared at the screen, even though it was black now because I'd lost the image. But nothing was registering to me. I felt too stunned and shaken to move. I was aware of the doctor and nurse casually chatting as they worked, but it sounded distant, like vague background noise, hard to hear over the pounding of my own blood in my ears.

The image of the tiny body, mangled and sucked away, was replaying in my mind, and with it the image of Grace's first ultrasound — how she'd been about the same size. And I could hear in my memory one of the many arguments I'd had with my husband, Doug, about abortion.

"When you were pregnant with Grace, it wasn't a fetus; it was a baby," Doug had said. And now it hit me like a lightning bolt: *He was right! What was in this woman's womb just a moment ago was alive. It wasn't just tissue, just cells. It was a human baby. And it was fighting for its life! A battle it lost in the blink of an eye. What I have told people for years, what I've believed and taught and defended, is a lie.*

Suddenly I felt the eyes of the doctor and nurse on me. It shook me out of my thoughts. I noticed the probe lying on the woman's leg and fumbled to get it back into place. But my hands were shaking now.

"Abby, are you OK?" the doctor asked. The nurse's eyes searched my face with concern.

"Yeah, I'm OK." I still didn't have the probe correctly positioned, and now I was worried because the doctor couldn't see inside the uterus. My right hand held the probe, and my left hand rested gingerly on the woman's warm belly. I glanced at her face — more tears and a grimace of pain. I moved the probe until I'd recaptured the image of her now-empty uterus. My eyes traveled back to my hands. I looked at them as if they weren't even my own.



*How much damage have these hands done over the past eight years? How many lives have been taken because of them? Not just because of my hands, but because of my words. What if I'd known the truth, and what if I'd told all those women?*

What if?

I had believed a lie! I had blindly promoted the “company line” for so long. Why? Why hadn't I searched out the truth for myself? Why had I closed my ears to the arguments I'd heard? Oh, dear God, what had I done?

My hand was still on the patient's belly, and I had the sense that I had just taken something away from her with that hand. I'd robbed her. And my hand started to hurt — I felt an actual physical pain. And right there, standing beside the table, my hand on the weeping woman's belly, this thought came from deep within me:

*Never again! Never again.*

I went into autopilot. As the nurse cleaned up the woman, I put away the ultrasound machine, then gently roused the patient, who was limp and groggy. I helped her sit up, coaxed her into a wheelchair, and took her to the recovery room. I tucked a light blanket around her. Like so many patients I'd seen before, she continued to cry, in obvious emotional and physical pain. I did my best to make her more comfortable.

Ten minutes, maybe 15 at most, had passed since Cheryl had asked me to go help in the exam room. And in those few minutes, everything had changed. Drastically. The image of that tiny baby twisting and struggling kept replaying in my mind. And the patient. I felt so guilty. I'd taken something precious from her, and she didn't even know it.

How had it come to this? How had I let this happen? I had invested myself, my heart, my career in Planned Parenthood because I cared about women in crisis. And now I faced a crisis of my own.

Looking back now on that late September day of 2009, I realize how wise God is for not revealing our future to us. Had I known then the firestorm I was about to endure, I might not have had the courage to move forward. As it was, since I didn't know, I wasn't yet looking for courage. I was, however, looking to understand how I found myself in this place — living a lie, spreading a lie, and hurting the very women I so wanted to help.

And I desperately needed to know what to do next.

This is my story.