

NC Ultrasound Society

Fall, 2017 Newsletter

Editor's Note

By Marta Thorup, RVT, RDMS (AB, OBGYN, BR)

I am happy to present to you the NCUS Fall 2017 Newsletter. I hope that you read through the articles and learn at least one new thing. We would love to hear from you on our Facebook page, let us know something you have learned or what you liked about this newsletter. ([please link to our Facebook page here](#))

Do sonographers have stressful jobs?? Well according to CareerCast who just published the top 200 least and most stressful jobs, determined that the field of Diagnostic Medical Sonography is the **NUMBER 1 LEAST STRESSFUL** job in America!! CareerCast ranked 200 jobs by their level of stress, factoring in criteria such as risk of injury, tight deadlines, physical demands and working in the public eye. Each of the jobs was given a "stress rank" from 0 to 100, with 100 being the most stressful. Click on the link to see the complete list.

<http://www.careercast.com/jobs-rated/least-stressful-jobs-2017>

How fortunate we are to belong to such a strong ultrasound society that so successfully promotes diagnostic ultrasound imaging education. North Carolina is a leader in this endeavor. It is my belief that North Carolina sonographers are the best, and least stressed of them all! Of course we are partial to our own. :)

We are looking forward to seeing everyone at our next conference that will be held April 13-15, 2018 at the Grande Dunes Marriott in Myrtle Beach, SC.

Regards,

Marta Thorup, RVT, RDMS (AB, OBGYN, BR)

President's Note**By Cristy Webster**

Fall. It's probably the most favored season of the year for most. The trees change their leaves into breathtaking colors that you really get to enjoy for about 3 months. Neighborhood smell of fire places, kids playing in the leaves give memories of a lifetime. And who doesn't love throwing on your favorite hoodie and jeans while watching nature unfold its colors right before your very eyes. Oh yeah, all those pesty mosquitoes are gone! So even though its football season, get up, go outside, take a break from your computer and take a moment to acknowledge the beautiful world that surrounds us.

We had an amazing time in Chapel Hill during the Fall Symposium. We wanted to send a thank you for all of the great connections made, memories created, and laughs shared. The sessions were right on target by covering all topics of ultrasound. For those of you who were unable to attend, we hope to see you in the spring in Myrtle Beach, SC. We would love to hear your input and suggestions for future events.

We look forward to seeing you,

Cristy Webster

2017-2018 NCUS President

Photographer vs. Diagnostic Medical Sonographer: A Clinical Lesson

By Marta Thorup RVT, RDMS (AB, OBGYN, BR)

Photographer

38 year old female goes to the doctor because she has abdomen pain. She tells the doctor about her abdominal pain and other symptoms that include nausea, vomiting, loss of appetite, bloat, etc.

The ordering physician orders an abdominal ultrasound to see if the gallbladder is the culprit. The order reads, "US Abdomen", Diagnosis: "Abdomen Pain."

She comes to the imaging facility at the scheduled morning appointment time npo as instructed. The sonographer has the patient get into a gown and into position on the scanning table for the ultrasound.

The sonographer, performs 76700 Abdominal ultrasound which includes imaging of the liver, gallbladder, pancreas, spleen, aorta, kidneys, common bile duct, and ivc.

The sonographer completes the Impressions Worksheet that has all the data as required by the worksheet, protocol, and satisfies the expectations of the radiologist.

The patient gets dressed, and is instructed that a radiologist report will be available to their ordering physician in 24-48 hours.

Findings of the report are shared to the patient at the next follow up appointment with the primary care provider the following week.

Report is negative for any abnormality.

The patient goes back to work ignoring her pain and treating with Gas-x to control the bloat.

Has the sonographer done everything possible on behalf of this patient at the time of imaging?

Sonographers are tasked with not only imaging the abdominal organs in this setting, but also to employ a diagnostic approach to their patient to find the answers that the patient and ordering physician need. It is imperative to approach studies with an inquisitive mind, trying to answer diagnostic questions, not just being an organ imager.

Diagnostic Medical Sonographer

This is the diagnostic approach to imaging this same patient.

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The sonographer completes the protocol as required by the facility.

Now, the diagnostic sonographer asks the patient to direct the diagnostic imaging.

There are several ways of asking the same thing,

"Have I imaged your site of pain?"

"Can you show me where your pain is?"

"I would like to image your site of pain now. Show me where it hurts."

The patient directs imaging which leads to imaging over the bowel. As transducer pressure is applied the patient yelps, and the sonographer can feel a sort of mass resistance sliding side to side under the pressure.

The sonographer Impression Worksheet now includes the following ;

“Patient directed imaging over site of pain which is in the Right Lumbar Region. There appears to be a complex solid irregular mass in area of the ascending colon, with adjacent inflamed fat.”

The ordering physician ordered a contrasted CT on this patient which confirmed a large solid colon mass with abdominal lymphadenopathy.

Two ways of approaching the same study.

Do you want to be a photographer or diagnostic medical sonographer?

There are many scenarios we encounter that require us to be diligent in our commitment to answering diagnostic questions.

It is important to answer;

- The question of the order, and
- The concern of the patient.

Whether it is an area of pain or lump, whatever the concern that is what we will focus on, EVEN if it is outside of the standard imaging protocol of the facility. Imaging bowel is not standard protocol, but giving your patient a moment with diagnostic suspicion looking for answers will always be in a good diagnostic sonographer’s protocol.

Evaluating Thoracic Aortic Aneurysms

Lisa A. Miro, BAE, RDCS

Lately, I have seen an increase in patients referred to the echo lab for Thoracic Aortic Aneurysms. Echocardiography can be a valuable tool in detection of this pathology, sparing the patient the cost and radiation of CT.

There are two types of abnormal dilation of the aorta :

“Saccular” which is a weakening of the vessel at one point, resulting in a “pouch” dilation with a relatively small neck, or “fusiform”, a fairly uniform dilation of the entire circumference of the vessel.

Risk factors for dilation of the thoracic ascending aorta are age greater than 65, high blood pressure, family history, tobacco use, Marfan Syndrome and related disorders, or atherosclerosis.

Measuring the ascending aorta as far up as you are able in the parasternal view should already be a standard part of your echo protocol, with several measurements preferred and displayed. The IAC is not specific with regard to exact locations to measure, as this will vary according to patient anatomy.

Even if these measurements are within normal limits for the ascending aorta diameter (<3.8 centimeters according to the American Society of Echocardiography with 4.0 centimeters being considered dilation), I am routinely adding imaging of the thoracic ascending aorta from an additional view if I see a dilated ascending aorta in the standard parasternal view or the patient has been referred for a thoracic aortic aneurysm. This view is obtained with the patient rolled into a right decubitus position and labeled on the displayed image as “Right Parasternal Ascending Aorta”. This position is not difficult for most patients to assume, and, in fact, many patients are already familiar with this position if they are being followed for aortic stenosis, as it is the same position they are asked to take when obtaining additional aortic valve velocities with the Pedoff transducer - the probe we use for obtaining velocities in places where access is too limited for the imaging transducer, such as the Suprasternal Notch window for aortic valve velocities in aortic stenosis.

The right parasternal window images are not difficult to obtain, even with obese patients, and most of the time, I have been able to obtain, and measure, a useful

image. Once the patient has rolled up on his or her right side, ask him or her to place the right arm on the pillow up behind the head, or extended straight back on the pillow. The left arm may remain down by the patient's side. If a female patient's gown is open to the back, ask her to slip her left arm out of her gown and place it by her side. This will allow the sonographer unhindered access to the thoracic ascending aorta. The sonographer orients the transducer with the notch in the same direction as when obtaining standard parasternal images and, starting fairly high on the patient's chest, look for the aorta. It will appear as a "tube" displayed transversely.

Measurements should be obtained in as many locations as can be imaged. Some patients will have several centimeters of the aorta visible, and measurements should be obtained from as much of the vessel as the sonographer is able to display.

In many situations, I have found measurements of the thoracic ascending aorta to be normal in the parasternal view, but will find a dilated aorta (>3.8 cm) in the right parasternal view. Measurements over 4 cm should be routinely evaluated and, by current thinking, a thoracic ascending aorta should be repaired if it reaches 5 centimeters. Repair of the aneurysm may be done in one of three ways. A metal mesh "stent" is sometimes fitted over the aneurysm, preventing further dilation, or surgical repair if deemed appropriate.

In memoriam: We will miss our friend Lisa Miro. Thank you for your dedication of 30 years to the field of Diagnostic Echocardiography

Case Studies

[Case Study - Colon Adenocarcinoma, Amy Dela Cruz](#)

[Case Study - It Baffles Me, Monica McNamara](#)

[Case Study - Gynecology, Angela Hansen](#)

[Case Study - Colon Cancer, Jessica Pizzo](#)

North Carolina financial program available to help NC students pay for their Sonography education

By Jessica Pizzo

If I told you that I knew of a way for you to receive up to \$3000 a year towards a Sonography degree, would you turn it down? Probably not! Well folks, that's precisely what I am here to tell you! Many of you don't know this, but there is a wonderful program available to help NC residents receive funds towards a Sonography degree. It is called **Forgivable Education Loans for Service (FELS)** and was first established by the North Carolina General Assembly in 2011. Not only does it help Sonography students but also many other professions that the state has deemed "critical employment shortage professions." For simplicity's sake, I will stick with talking about our Sonography profession only.

A Sonography student taking 6-11 credits can receive \$1,500/yr or \$3,000/yr if taking 12+ credits. They can apply each year for a maximum of \$6,000 aggregate loans. Now, I'm sure you're all wondering "but what's the catch?" Well, according to the College Foundation of NC, the borrower must complete his or her Approved Education Program, obtain certification or licensure from the applicable licensing board, and work in a Qualified Position in North Carolina. There is NO specific county or establishment required or specified. Employment as a Sonographer **anywhere** in the entire state of NC is acceptable! The newly graduated student is expected to find a job within 3 months of graduation, but if unable to do so, they can easily fill out a deferment application which covers them up to 24 months. Once the borrower is working in a **full time position** for one year or two years in a **part-time position**, a simple "Loan Forgiveness" form submission is all it takes to erase ONE **full** year of loans received! As the name of the program states with its title, "Forgivable Education Loans for Service", these loans are forgivable. However, if one doesn't complete their degree, or never follows through with the other very basic conditions, then he/she will be forced to repay the loans PLUS 8% interest.

This is truly a no-brainer! I implore every single Sonography/Pre-Sonography student to take advantage of this help and to submit an application in January. This is a legitimate program and something that all instructors/students should be aware exists! I've created a very detailed and easy to read FAQ sheet on this subject, so please feel free to contact me for more information. Thanks! 😊

You can read more about the process on www.CFNC.org.

Frequently Asked Questions

Q. Is this a "financial need only" type of program?

A. NO! FELS is open to everyone, whether they show financial need or not! Applicants will need to meet the other basic requirements though, such as:

-be a legal NC resident

-have at least a 2.80 GPA at the time of application

-currently enrolled for at least 6 credit hours

-must not be in default, or owe a refund, to any federal or State loan or grant program

-must not already receive other educational help from the state (ex. North Carolina Community College Grant ♣)

North Carolina Education Lottery Scholarship ♣ North Carolina Need-Based Scholarship Program).

(PELL grants are NOT considered state funding, so those are not an issue)

Q. Can PRE-sonography students apply?

A. Any pre-sonography student can apply, however, preference is given to those who have already been accepted or are currently in the program. Also, PRE-sonography students who are approved will NOT receive any funding until they become officially accepted into their program.

Q. How can I apply?

A. The application and rules to apply can be found here: www.cfnc.org/FELS

Q. What is the minimum GPA required to APPLY for FELS?

A. 2.80 GPA to apply. Once they're in the program they must maintain the required GPA deemed necessary by their school (ex. CFCC Sonography min GPA of 2.5). If the student gets dropped from the program, then he/she will be responsible for repaying the FELS loan WITH 8% interest that started accruing from the time of disbursement. (Note: the interest is subject to change every year).

Q. Is it first come first serve?

A. YES. If everyone meets the criteria, then it is a first come first serve type of process; however, there are two types of students who will get "priority". Those students who were previously awarded FELS are given priority over newbies, and students who are currently in their program (or were recently officially accepted) are given priority over those who are still taking pre-requisites. Other than that, it doesn't matter who has a higher GPA, who has more financial need, etc.

Q. Is this like other student loans given out by the federal government?

A. NO, this is a different type of funding. It is a mix of state funding, federal grants, NC education lottery \$, and several other avenues. The annual budget for NC education is decided on by the NC general assembly. It is then the North Carolina State Education Assistance Authority that determines the specific budgets towards the various college grants/scholarship programs available through the state. They also create the specific budget amounts for each FELS-approved program.

Q. How much money are we talking here? How are the funds dispersed?

A. Currently, a student in the program may receive \$1500/yr if taking 6-11 credits, or \$3000/yr if taking 12+ credits. The payments will split between two semesters. (So, \$750/semester, or \$1500/semester).

Once approved, the school receives the funds. If there is no debt or balance owed by the student.. then the school will release the funds during "refund" time.

Here is how mine went: I applied in late April, was approved in June, the funds were sent to the school late August, and then I received them via direct deposit from the school during refund-time (mid-late September).

Q. When does the application period open/close?

A. Usually opens in January, and closes on March 1st.

Q. What If the student fails the program or never completes it?

A. They will have to repay the loan amount in cash PLUS 8% interest (interest amounts can change each year).

Q. Is there a set number of people that can receive FELS funds in a specific industry each year?

A. Not exactly. Since everyone's status is varied, the number of approved people each year can fluctuate. There IS, however, a budgeted \$ amount that the state must not go over (and even that number can be changed each year according to the annual budget). (Side note: I was unable to get a certain dollar amount from my research on the Sonography budget, but it has never really been an issue either. Funding has typically always been available for those who met the criteria)

Q. How long after graduation does the borrower need to begin working in order to avoid default?

A. The new graduate is expected to begin working 90 days after graduation. IF they cannot find a job, or another problem arises, they can easily fill out the single page deferment application which will keep them from going into default ☐ (defaulting will take away their right to ever have loan forgiveness).

Q. If the new graduate can't find a job, how long will the deferment cover them?

A. If the reason is due to not finding employment, the deferment can last for 2 years! The borrower needs to be mindful though, and be actively looking for available job opportunities.

Q. When should FELS be notified about employment?

A. Within the FIRST 30 days!!! If not, the borrower will not be eligible for loan forgiveness! Never just let things go.. always update FELS in order to avoid ineligibility. Change in address? Notify FELS! Change in employment? Notify FELS!

Q. How long must the borrower live/work in the state of NC?

A. As long as necessary to have their loans forgiven. Generally speaking, if they received only 1 yr. of FELS funding (either \$1500 or \$3000), then they will only be required to WORK in NC for 1 year (if in a fulltime work position) or 2 years (if in a part-time work position). Technically speaking, one could live outside of NC, but would still have to WORK here for the duration of the loan forgiveness.

Q. How many people in the Sonography program received FELS funding last year?

A. The most recent data available was found on the NC general assembly website and it showed that only ONE person received FELS in 2015-2016 for the Sonography program. I have tried to find out more information on whether this was due to lack of applicants, lack of funding, lack of *eligible* applicants, etc.. but I had no such luck in having that question answered. I am going to assume (just from my own general observation) that it is due to a lack of applicants secondary to a lack of awareness about the program. That's what really prompted me to do all of this research and get the word out!! So, don't turn down free money and make sure you/your students apply!! 😊

Here is the full breakdown of 2015-2016 FELS funding:

<http://www.ncleg.net/documentsites/committees/JLEOC/Reports%20Received/2016%20Reports%20Received/Forgivable%20Loan%20Fund%20Report%202015-16.pdf>

Here are the FULL rules of the FELS program:

http://www.ncseaa.edu/pdf/Rules_FELS.pdf

General FELS details:

http://www.ncleg.net/documentsites/committees/JointAppropriationsEducation/2017%20Session/2017_03_14/2_NCSEAA_Financial_Aid_Programs_Presentation.pdf

A Sonographer's Wish

By Angela Sanderson

May we have Sight to see the shapes out of monochrome clouds,
Understanding to recognize masses in a sea of gray,
And Wisdom to know if they are malignant or benign.

May we have Compassion to ease our patient's fears,
Sympathy when illness is confirmed,
And Delight when diagnosis is sublime.

May we Trust in our knowledge of the body and landmarks,
Show Support to coworkers, whose day might be tougher than our own,
And be Resilient when we make mistakes that must be refined.

And most of all, may we Remember our time as students,
Never forget to challenge our learning in order to grow,
And keep Faith that we do make a difference, one patient at a time.