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Greetings! I want to begin my first South Dakota Medicine column with a thank you to the members of the South Dakota State Medical Association (SDSMA) for the honor of serving as the 133rd president. To introduce myself, I am a graduate of the South Dakota School of Medicine. I completed a surgical internship at Highland Alameda County Hospital in Oakland, Calif., and then spent three years in Sisseton at the Indian Health Service hospital as a member of the U.S. Public Health Service Commissioned Corps. I then entered surgical residency in the integrated program in general surgery at Michigan State University (MSU) in Flint and East Lansing. After completing residency, I taught in the MSU Department of Surgery for two years. In 1991, I moved to Yankton and joined the Yankton Medical Clinic and have been in practice there ever since. I am board certified in general surgery and a fellow of the American College of Surgeons. I originally entered general surgery practice in Yankton, but after two years, devoted my practice to breast disease. After medical school I married my classmate Dr. Dan Johnson who is an orthopedic surgeon in Yankton. We have four daughters: Carrie, Laura, Leslie and Amy. I have been a member and chair of the SDSMA Committee on Medical Practice and a member of the SDSMA Executive Committee and have volunteered as the Doctor of the Day.

The SDSMA represents the vital voice of South Dakota physicians for the practice of medicine and for high quality, available and affordable patient care in this rapidly changing time in medicine. I am a strong advocate for the role of physicians in leadership and believe it is a key component of excellent patient care which is sustainable within our society. A white paper recently released by the American College of Physician Executives demonstrates a clear link between physician leadership and high performance. The top five hospitals ranked by U.S. News and World Report in 2013 were physician-led; 21 of the 29 pioneer accountable care organizations (ACOs) that earned Centers for Medicare and Medicaid Services (CMS) bonuses were physician-led, and 29 percent of the physician-led ACOs achieved greater savings than the minimum. This suggests that physicians’ clinical knowledge and dedication to patient care provides an essential perspective in the redesign of health care. Unfortunately, the inconvenient truth is that this creates a dilemma for many physicians who are divided between the call to clinical practice and the call to leadership. The SDSMA is here to help bridge that gap with its new Center for Physician Resources, which is designed to help meet the personal and professional needs of its members. The Center is built around three main pillars including the practice of medicine, health and wellness, and physician leadership. Please go to the recently redesigned, user-friendly SDSMA website at www.sdsm.org and check out the webinars of past programs, white papers on a variety of topics and information about upcoming programs.

I look forward to working with you over the next 12 months to bring the voices of South Dakota physicians to the table as important decisions are made in the future of health care as medicine moves toward new delivery and payment systems. In that role, it is important that I hear from you. I look forward to visiting all of the SDSMA districts, and I have heard from previous SDSMA presidents that the district visits were the most informative and enjoyable parts of their presidential year. I also urge you to become involved in your district and in the committees and council of the SDSMA. Together we have a stronger voice, and your voice is important, so please let it be heard.

Lastly, be sure to take time to step outside and enjoy the wonders and beauties of a South Dakota summer.

Book Recommendations
Leadership on the Line: Staying Alive Through the Dangers of Leading by Martin Linsky and Ronald A. Heifetz
Tribal Leadership: Leveraging Natural Groups to Build a Thriving Organization by Dave Logan, John King and Halee Fischer-Wright
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The Only Thing That Doesn’t Change…Is Change!

By Connie Schroeder
Immediate Past Co-President, SDSMA Alliance

The wine has been tasted, reports have been given, awards received and meetings adjourned. The annual meetings of the South Dakota State Medical Association (SDSMA) and the Alliance (SDSMAA) organizations have wrapped up for another year. With that have come changes for the structure of our Alliance and new ideas about the leadership of our organization. The American Medical Association Alliance has responded to the leadership recruitment struggles of district and state Alliances with the creation of the Organizational Assessment Task Force, which examined this problem and suggested solution options. Data from phone interviews and the recently completed member needs assessment helped them come up with new ideas and tips. Past SDSMAA President Grace Wellman of Sioux Falls was tapped for the work of this committee. So instead of introducing a new SDSMAA president for the 2014-15 year, as a president would normally do this month in this column, I am priming you for the options for change in the Alliance. These choices will be unveiled at the 2014 National Conference in Chicago in June.

These changes could not have come about without the sincere efforts of members from across the nation who worked hard to not only examine what was not working, but also tried to look ahead and execute a vision for our long-term future and success. Here in South Dakota, it is no small feat for any organization to survive for 104 years as our Alliance has. Our SDSMAA has continued through two world wars, the Great Depression and several past and ongoing recessions, among many other historic occurrences. It would be fascinating to know what Mattie Jennings and those first 18 physicians’ wives thought the future of their newly formed organization would be. What did they imagine it would become? Did they have hopes that it would survive over a century into the future? Now we have the responsibility to choose how we will sustain and build the SDSMAA for future success. We did not last for over a century by being inflexible, and we can’t start now. We can’t just accept change; we need to embrace it.

Often, when we talk about “wishes,” they are about the past, and express regret. “I wish I had done this,” or, “I wish I had known that.” I have some wishes about our organization, not in terms of what I regret from the past, but what I hope for its leadership and its future. First, I wish that our leaders would have the courage and conviction to re-invent the Alliance. Change is difficult and often resisted, but the alternative is apathy and ineffectiveness. Any change requires that we try new things and risk that we may fail. Our society is changing and certainly different from 100 years ago. We need to evaluate what we offer our members. Do our activities bring value to the table, and answer needs in our society? Do they meet the new and emerging needs of our medical families? Do we have calendar dictated meetings, or can we create one-time project-oriented teams?

Second, I wish for a large base of members who will care, be real, be opinionated, and be invested in our activities. Opportunities will be available for short-term commitments for one-time projects, or responsibility for one area as opposed to taking an “office,” (which often covers a broad range of tasks and requires service for a certain length of time). Our organization has been blessed with a core of committed individuals, who have served in multiple roles, but we will be, and need to be, expanding the number of people who will share responsibilities so those committed individuals can take a step back. Diverse perspectives and new ideas only make the Alliance stronger. More people sharing the work will only make the job lighter. You may be asked to serve, but don’t wait! Identify your area of interest and/or skill, and micro-volunteer for just one project, committee or program. Take the Alliance in a new direction!

I wish the Alliance a continued appreciation of its history. Our SDSMAA has a tradition of vigorous excellence that you come to appreciate as you meet past presidents and officers and members from across the state. We have past national presidents, national award winning health projects, and members on national committees. It’s a proud tradition built on hard work and dedication, and sets the standard for our future attempts at success.

And finally, I wish future leaders the best. I hope you will tackle at least one project, make one commitment, attend one meeting and make one new friend. I think we all agree that our health projects are timely and important, and they address a need in our society, sometimes urgent. Our annual fundraiser aids our future physicians, and in a kind of circular action, we actually help ourselves by providing our replacement physicians!

Our Alliance is changing. Be ready! Be part of the change that you want to see!
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GME in South Dakota: A Response to the 2013 COGME Report

By Nedd Brown, EdD; and Anne Ruud, MA

The release of the Council on Graduate Medical Education’s (COGME) Twenty-First Report in August 2013, entitled “Improving Value in Medical Education,” has sparked renewed discussion on the commitment of the U.S. to serve its population by the “world’s best physician workforce.” Charged with advising the Secretary of the Department of Health and Human Services and subcommittees in both houses of the federal government, COGME makes a number of recommendations to convey the urgency of improving the national graduate medical education (GME) community to meet the needs of the growing, aging population of the country.1

The COGME report was produced by national leaders to inform states of the need to appropriately expand GME. The GME community in South Dakota stands to be strongly impacted by the first two recommendations from this report. The need for an increased number of trained physicians to care for this state's population is at a critical moment, requiring additional funds to meet the demand.

The first recommendation from this report calls for the continued funding of current resident and fellow GME positions, while increasing funding for additional positions. It further delineates that this increase in funding should be sufficient to graduate 3,000 new physicians a year nationally. Currently, three bills sit before Congress to address this recommendation. The Resident Physician Shortage Reduction Act of 2013 (S. 577) was referred to committee on March 14, 2013. The House has a bill by the same name (H.R. 1180) as well as the Training Tomorrow’s Doctors Today Act (H.R. 1201). Both of the House bills were also referred to committee on March 14, 2013. The bills include funding for an additional 15,000 GME positions over the next five years.2 Rep. Kristi Noem has cosponsored H.R. 1201.3

The second recommendation seeks to accelerate physician workforce alignment. The COGME report indicates that many training hospitals have not focused on primary care training when adding GME positions. The COGME report identifies family medicine, geriatrics, general internal medicine, general surgery, psychiatry, and high priority pediatric subspecialties as areas where increased funding should be targeted.4

The hospitals in South Dakota who participate in GME are moving against the current national trend. Since 2008, the University of South Dakota Sanford School of Medicine (SSOM) sponsored and affiliated residencies and fellowships have increased the number of positions in these programs by 44. This was accomplished through expansion of current programs and the addition of three new programs – geriatrics, general surgery and pediatrics. The pediatric residency is a requirement for the consideration of pediatric subspecialties. In all, requests for 59 additional training positions in South Dakota have been requested in the past five years, most in primary care.

The second recommendation further states that the increase in GME funding should be directed to regions with a relatively lower per capita supply of physicians. According to the November 2013 AAMC State Physician Workforce Data Book, South Dakota has 221.5 active physicians per 100,000 population, compared to a national average of 260.5. In addition, South Dakota ranks 45th in the nation with just 14.1 resident physicians per 100,000 population compared to the national average of 26.8. South Dakota does rank in the top 10 percent in the increase of GME positions and the retention of physicians who complete both medical school and GME in South Dakota.5 Based on this national data, South Dakota should qualify to receive directed funding.

The remaining recommendations from the report address curriculum change and outcome measures. The GME community in South Dakota has actively participated in improvement efforts in these areas. The ACGME selected SSOM as an early visit site to conduct a clinical learning environment review (CLER) in July 2013. The areas of focus stated in CLER align with the recommendations from COGME.

SSOM GME has also been fully integrated within the Next Accreditation System (NAS) implemented by the ACGME in July 2013. In the NAS, programs are required to assess resident physician progress using “milestones” of competency in preparing for practice. SSOM GME programs have fully complied and are prepared for full implementation by July 2014.

The investment of $13 billion in GME nationally is sizable. The future of the quality physician workforce that has come to be expected by South Dakota and the nation is dependent on these funds and future increases. The SSOM GME community will continue to monitor and is prepared to implement national initiatives as appropriate for the state’s healthcare needs.

REFERENCES

Please note: Due to limited space, we are unable to list all references. You may contact South Dakota Medicine at 605.336.1965 for a complete listing.

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Hypoxemia in the Setting of Right to Left Shunting Through Patent Foramen Ovale Without Pulmonary Hypertension

By Ryan Miller, MSIV; Muhammad Khan, MD; Naveen Rajpurohit, MD; and Adam Stys, MD, FACC

Abstract

Patent foramen ovale is often seen in the population but rarely observed with right to left shunting in the absence of pulmonary hypertension. Our report describes such a case where a patient with progressive shortness of breath had resolution of symptoms upon percutaneous closure. A discussion of the case and relation to similar cases is presented. A literature review along with explanation of possible contributing mechanisms in our patient’s situation is explained. We also discuss several implications for practice and suggest that percutaneous closure is effective in our case and in similar situations.

Introduction

Foramen ovale is an important communication between the right and left atrium during fetal life that typically closes during the first two years of life. However, a patent foramen ovale (PFO) can be found in as many as 27 percent of the adult population. In such cases, right to left shunting of blood can occur during the shift in pressure that occurs typically at the end of diastole or when right atrial pressure (RAP) increases such as during valsalva maneuver or coughing, and is typically only transient. Rare complications associated with PFO include cryptogenic stroke and even more rarely, hypoxemia because of significant atrial shunting in a right to left direction. One would expect to find high pulmonary and RAPs with significant right to left shunting across a PFO.

Percutaneous closure of a PFO is between 95 and 100 percent effective and is a relatively safe procedure. Observational studies report major complication rates between 0.2 and 1.5 percent, and minor complications from 7.9 to 11.5 percent. These complications include peri-procedural atrial arrhythmias, device arm fractures, device embolization, thrombosis and femoral hematomas. Newer devices are showing decreased complication rates. The utility of PFO closure has been mostly evaluated in the setting of cryptogenic stroke. Despite numerous observational studies and randomized controlled trials, PFO closure in the setting of cryptogenic stroke remains controversial. The CLOSURE I trial failed to offer greater benefit than medical therapy alone for prevention of recurrent stroke or transient ischemic attack (TIA). The subsequent PC and RESPECT trials failed to show a significant benefit. While research focus has been on implications of cryptogenic stroke and PFO, little has been investigated for closure in the hypoxemic patient with right to left shunt, a situation where closure of the PFO theoretically has the potential to improve clinical outcomes.

We describe a case of a patient found to have fatigue, mild shortness of breath and resting hypoxia without pulmonary hypertension whose symptoms and hypoxia improved after closure. This interesting case of a rare scenario provides a discussion surrounding PFO in patients with associated symptoms, some proposed pathophysiologic mechanisms and the implications for practice and further research.

Case Presentation

We evaluated a 67-year-old white male with a several-month history of fatigue and occasional shortness of breath, New York Heart Association (NYHA) functional class 2. He had noted a decrease in activity level due to the associated level of fatigue. He denied wheezing, dyspnea on exertion, chest pain or paroxysmal nocturnal dyspnea (PND). There was no change in shortness of breath with posture changes. Current medical problems included gastroesophageal reflux disease (GERD),
hypertension, hyperlipidemia, diabetes mellitus and prostate cancer. There was no known history of COPD, asthma, pulmonary thromboembolic disease or recurrent pneumonia. Medications included omeprazole, metoprolol, amitriptyline, glyburide, metformin, lyrica, simvastatin, tadalafil, losartan-hydrochlorothiazide, ranitidine, hydrocodone-acetaminaphen, cholecalciferol, and aspirin. He had a 3.5 pack-year smoking history. Vital signs demonstrated an oxygen saturation of 89 percent on room air, blood pressure 130/76 mmHg, pulse 84 bpm and respirations 16/min. Lungs were clear to auscultation with no wheezes or rales, no clubbing or cyanosis present. Cardiac examination demonstrated regular rate and rhythm with normal S1 and S2 and no murmurs. Laboratory values showed WBC count of 8.8 K/uL, hemoglobin of 15.5 g/dL, hematocrit of 46.3 percent, platelets of 273 K/uL. Basic metabolic panel, methemoglobin level and thyroid studies were normal. Arterial blood gases demonstrated a pH of 7.43, pCO2 of 39 mmHg, pO2 of 67 mmHg, oxygen saturation at 90 percent. Alveolar-arterial (AA) gradient was calculated to be slightly elevated at 26.6 mmHg from the age-adjusted normal of 20.8 mmHg, using normal pressures at approximately 1,300 feet above sea level.

An extensive pulmonary and cardiac workup was undertaken. Chest X-ray, pulmonary function tests were unremarkable. A CT angiogram performed did not reveal intrinsic lung disease or pulmonary vascular disease other than a small amount of bibasilar atelectasis. Electrocardiogram (ECG) was normal. A transthoracic echocardiogram (TTE) with saline bubble study showed a secundum atrial septal defect versus patent foramen ovale with right to left shunt. A transesophageal echocardiogram (TEE) was subsequently performed, confirming a large PFO with evidence of right to left shunting after injection of agitated saline. There was normal left ventricular and right ventricular chamber size and function with no valvular dysfunction noted. Pulmonary pressures were normal. Right heart catheterization was performed, revealing right atrial pressure of 5 mmHg, right ventricular pressure of 23/7 mmHg, left ventricular end-diastolic pressure of 8 mmHg, pulmonary capillary wedge pressure of 7 mmHg, pulmonary arterial pressure of 25/10 mmHg, and aortic pressure of 108/80 mmHg. Pulmonary venous oxygen saturation was normal at 97 percent. Other oxygen saturation results were as follows: pulmonary artery, 62 percent; aorta, 82 percent; right ventricle, 62 percent; right atrium, 63 percent; and superior vena cava, 68 percent. Catheter balloon occlusion with oximetry studies was not performed.

Coronary angiogram showed minimal stable coronary disease, with a 40 percent stenosis of mid-left anterior descending artery, 30 percent stenosis of mid-circumflex artery, and mild diffuse disease of the left anterior descending and circumflex arteries, little change from a previous left heart catheterization in 2010. The patient underwent a sleep study and was found to have obstructive sleep apnea during the time of initial evaluation. He was started on continuous positive airway pressure (CPAP), which did not help his symptoms despite compliance with therapy.

The patient continued to demonstrate low oxygen saturations on subsequent visits, now noting more shortness of breath with exertion. Given the lack of improvement in symptoms and no obvious etiology despite extensive work up, the patient was referred to a tertiary care center where the decision was made to close the PFO. Prior to closure, the pulmonary vein oxygen saturations were 94 percent with femoral artery oxygen saturation of 87 percent. A 30-mm Helex device (Gore HELEX Septal Occluder) was used to close the PFO. Immediately after closure, femoral artery oxygen saturation increased to 92 and 93 percent, and no significant right to left shunting was seen on bubble studies. Ambulation around the hospital floor occurred without oxygen desaturation. He denied any dyspnea with this exertion.

A six-month post-closure follow-up at our facility with a chest X-ray and echocardiogram with saline contrast showed the device in a good position with no evidence of pulmonary complications or interatrial shunt. The patient reported normal oxygen saturations with home pulse

![Figure 1. Mid-esophageal short axis view on transesophageal echocardiogram (TEE) with saline contrast showing large PFO with right to left shunt. The PFO is marked by an arrow with left atrium (LA), right atrium (RA) and interatrial septum visible.](image-url)
Discussion
PFO has been generally associated with cryptogenic CVA, and numerous studies have tried to address this question. Right to left shunting in the setting of PFO is theoretically possible in the setting of elevated right atrial pressure (RAP). Patients who have normal RAP at baseline can have shunting though PFO transiently during maneuvers that increase RAP (e.g., valsalva). We describe a case where persistent right to left shunting is documented in the setting of normal RAP with associated symptoms and improvement in symptoms after closure of PFO. There are no prior large studies to address this question. The scenario described above has some pathophysiologic similarity to a rare clinical syndrome, platypnea-orthodeoxia syndrome, where shunting across a PFO is noted in certain postures with normal baseline RAP. Of note, the platypnea-orthodeoxia syndrome was explored at the tertiary center but not thought to be consistent in this patient.

A similar situation has been described in a few case reports and small retrospective analyses. One case report described a patient with cyanosis and significant right to left shunt across PFO without pulmonary hypertension who underwent surgical repair (rather than percutaneous closure) of the PFO as well as coronary artery bypass surgery, with correction of the hypoxia and cyanosis. Another report a patient with progressive dyspnea, which became intense prior to evaluation, and which was corrected after surgical repair of the PFO (atrioseptoplasty). This case, however, is attributed to the rare platypnea-orthodeoxia syndrome. A retrospective study of 11 cases of hypoxemia despite no pulmonary hypertension, with six of these associated with platypnea and orthodeoxia, demonstrated that all but one were successfully treated by percutaneous closure. In the patients without platypnea-orthodeoxia, there was no evident difference in the patient characteristics, medical history, or presentation, and closure was equally as successful as those with the classic platypnea-orthodeoxia syndrome. The only obvious difference is the increased hypoxemia with changes in posture. This seems to suggest that the pathophysiology of the right to left shunt in these scenarios is the same regardless of whether changes with posture exist, and those patients without documented platypnea-orthodeoxia can be compared with those who do. The results of a multicentric French registry of 78 patients with platypnea-orthodeoxia who had percutaneous closure of the PFO with a variety of closure devices showed oxygen saturation increase immediately after occlusion and improvement of dyspnea, with successful closure in 97 percent of the patients. The authors suggested that this showed safe and excellent results in a number of closure devices and allowed patients in an unstable condition to avoid surgical closure. Given the examples of this rare right to left shunt without pulmonary hypertension, it is thought that there must be other contributing mechanisms in the development of long-term right to left shunting.

Typically, physiologic right to left shunting through a PFO only occurs when a person increases the venous blood return to the right atrium as in release of the valsalva maneuver, coughing, laughing, sneezing or taking a deep breath. A number of mechanisms have been suggested for the phenomenon of chronic right to left shunting without pulmonary hypertension. The primary thought is that there must be some anatomic or physiologic differences in these patients that accounts for the lack of pulmonary hypertension.

The first theory is a hemodynamic explanation with an interatrial pressure gradient between right and left atrium in which the systolic pressure in the right atrium is higher than in the left which can be exacerbated by changes in posture. This explanation does not seem to be consistent with our patient where the RAP was 5 mmHg and the PCWP (indirect estimate of LAP) of 7 mmHg and thus favors a left to right rather than a right to left shunt. Another theory is an anatomical explanation, which suggests that there is preferential blood flow from either the superior vena cava or inferior vena cava (more common) to the left atrium. Even without a positive right to left interatrial pressure gradient, there is preferential blood flow to the left atrium sometimes due to an over-developed, large Eustachian valve. Additionally, the inter-atrial septum has been observed to be displaced horizontally in some cases, so that the blood flow from the inferior vena cava has a direct path to the left atrium. Finally, right ventricular dysfunction or a decrease in its compliance has also been a proposed mechanism. In our view, obstructive sleep apnea with transient increase in RV pressure can also potentially lead to shunting across a PFO. For our patient, an anatomical explanation seems more plausible, but a prominent Eustachian valve was not noted on TEE.

This case has some notable implications for patient care. As described above, PFO can be a cause of a right to left shunt and a resulting decline in functional status with dyspnea on exertion. Especially important is the fact that such shunting can occur in the absence of pulmonary HTN. In addition, classically described platypnea-
Congratulations to this year’s National Doctors’ Day honorees! For each physician listed, a crib and kit was donated to help reduce infant mortality and promote safe sleep practices. More than $10,000 was raised!

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Martin Spahn, MD  
Daniel Tackett, MD  
Wayne Wittenberg, MD  
William Zavitz, MD  
Carol Zielke, MD
orthodeoxia is not always the presentation. In such patients, resting or exertional decline in oxygen saturation with no other clear etiology should alert the provider regarding this diagnosis. It remains unknown if provocative testing like valsalva maneuver or coughing during a TEE should be performed to identify these patients. Patients who have resting oxygen desaturation can also be evaluated with balloon closure of the PFO during right heart catheterization. In this scenario, improvement in oxygen saturation with balloon closure can be considered as a proof of the significance of shunting across the PFO.

As in other cases, our patient’s PFO was first identified by echocardiography performed because of hypoxia in the setting of some shortness of breath. The diagnosis of PFO has been shown to be best done by TEE due to increased sensitivity and specificity over transthoracic echocardiogram and there are some centers using an even more sensitive transcranial Doppler to assess the extent of the shunt in the cerebral vessels. In our view, cardiac catheterization as an adjunct is helpful in order to determine the level at which shunting occurs.

Overall, for the rare patient in this scenario, percutaneous closure provides an excellent option that typically results in a resolution of symptoms. The technique prevents the need for extensive surgery for closure. Further research in to the mechanisms involved as well as effectiveness of closure devices will be needed as more cases are identified and more patients see resolution of symptoms upon closure.

### REFERENCES


Please note: Due to limited space, we are unable to list all references. You may contact South Dakota Medicine at 605.336.1965 for a complete listing.

About the Authors:
- Ryan Miller, MSIV, University of South Dakota Sanford School of Medicine.
- Muhammad Khan, MD, Cardiovascular Disease Fellow, University of South Dakota Sanford School of Medicine.
- Naveen Rajpurohit, MD, Cardiovascular Disease Fellow, University of South Dakota Sanford School of Medicine.
- Adam Styx, MD, FACC, Interventional Cardiologist, Sanford Cardiovascular Institute; Director of Cardiovascular Diseases Fellowship – University of South Dakota Sanford School of Medicine.
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Paid for by private donations to the Department of Internal Medicine
In the center of the standard death certificate (Figure 1) is, for the physician certifier, the core of the death certificate – the cause of death statement. Depending upon the state in which the death is to be certified, the cause of death statement contains three to five lines for the physician certifier to list why their patient died. Predictably however, this simple concept has been complicated by definitions, rules and regulations.

First, the concept of cause of death needs to be defined. While many physicians may have their own definition to this seemingly simple concept, the accepted definition comes from the World Health Organization as follows: “A disease or injury which initiated the train of events leading directly or indirectly to death or the circumstances of the accident or violence which produced the fatal injury.”

The train of events cited in the definition above are commonly referred to as mechanisms of death. Often we may hear lay individuals or physicians referring to a patient’s final or terminal cause of death. Since there can be only one cause of death for a patient, the use of the terms final or terminal, or even intermediary, cause of death is incorrect – these are mechanisms, not causes of death.

Before giving some examples of how to structure the cause of death and its accompanying mechanisms of death, there are a few formatting rules for the cause of death statement. First, and most importantly, the true cause of death – the event that initiated the chain of events leading to the death – must be listed on the bottom line of the certificate.

Above the cause of death line various mechanisms of death may be listed, but they must flow in a logical fashion, each the direct result of the condition listed below them, as in this example:

**CAUSE OF DEATH STATEMENT**

I. Mechanism leading to the final cessation of life
II. Mechanism leading to the mechanism I above
III. Mechanism leading to the mechanism II above
IV. The cause of death
SOUTH DAKOTA MEDICAL CERTIFICATE

INSTRUCTIONS FOR FILING THE MEDICAL CERTIFICATE: As the physician, physician's assistant, nurse practitioner, last in attendance or the coroner, you are responsible for completing, signing and filing the Medical Certificate with the Department of Health within 5 days of the date of death.

Please complete and sign the Medical Certificate and forward it to ATTN: CE, Vital Records, 207 E Missouri Ave, Ste 1-A, Pierre, SD 57501. If you have any questions, please contact the Vital Records Office at (605) 773-4961.

1. What is the Decedent's Legal Name

First ______________________ Middle ______________________ Last ______________________ Suffix ______________________

2. What is the Decedent's:
Date of birth: ______________________ Date of death: ______________________
MM/DD/YYYY MM/DD/YYYY

Age: ________ Sex: ________

Place of Death: ______________________ Facility Name ______________________

3. Was the Coroner contacted?
[ ] Yes [ ] No [ ] Unknown

4. What is the Manner of Death: If the Manner of Death is not natural (i.e. the Cause of Death is attributable, at least in part, to an external event and does not solely represent the effects of a natural disease process), the case should be forwarded to a County Coroner for certification.

[ ] Natural [ ] Accident [ ] Suicide [ ] Pending Investigation [ ] Homicide [ ] Could Not be Determined

5. Cause of Death to be completed below:

PART I. Enter the Chain of Events - diseases, injuries, or complications - that directly caused the death. DO NOT enter terminal events such as cardiac arrest, respiratory arrest, or ventricular fibrillation without showing the etiology. DO NOT abbreviate. Enter only one cause on a line.

Immediate Cause (final disease or condition resulting in death)
a. ______________________ DUE TO: ______________________

Sequentially list conditions if any leading to the cause listed on line a.

Enter the UNDERLYING CAUSE (disease or injury that initiated the events resulting in death) LAST.
b. ______________________ DUE TO: ______________________
c. ______________________ DUE TO: ______________________
d. ______________________ DUE TO: ______________________

PART II. Enter other significant conditions contributing to death but not resulting in the underlying cause given in PART I.
CAUSE OF DEATH STATEMENT

I. Low output shock

II. Congestive heart failure

III. Acute myocardial infarction

IV. Atherosclerotic coronary vascular disease

In the clinical example above, mechanisms I and II are known as non-specific conditions. They are perfectly acceptable mechanisms, but may not be used as a cause of death. Non-specific conditions may well be in a chain of events, but they must be caused by something. A cause of death statement, for example, that only included lines I and II from the example above, would be incorrect. Missing from this incorrect certificate would be what caused the congestive heart failure.

While non-specific conditions have a place in a good cause of death statement, there are some terms that have no place on a death certificate. The most common of these terms are: cardiac arrest, cardiopulmonary arrest and cardiac electromechanical disassociation. These are all conditions caused by something else and in reality just indicate what can be found in any deceased individual. Included in a cause of death statement these terms tell nothing about why a patient died and simply waste a line on the cause of death statement if there are listed underlying mechanisms and a cause of death.

There is no obligation to use all of the provided lines in the cause of death statement. The clinical example above could be stated as:

CAUSE OF DEATH STATEMENT

I. Congestive heart failure

II. Acute myocardial infarction

III. Atherosclerotic coronary vascular disease

or

CAUSE OF DEATH STATEMENT

I. Acute myocardial infarction

II. Atherosclerotic coronary vascular disease

The cause of death statement must contain the underlying cause of death even if the overlying mechanisms of death are deleted. But by deleting the mechanisms, valuable information about how the patient died is lost. Therefore, while a cause of death statement listing only the cause of death is not incorrect, it is not optimal either. The physician should strive to include as much detail as possible about both the cause and mechanism(s) of death.

The sort of detail necessary in the cause of death statement would include, for example, what type and origin of malignancy rather than simply carcinoma (e.g., ductal carcinoma of the right breast). Likewise, infectious agents should be listed when known (e.g., group B streptococcal sepsis rather than just sepsis).

Beneath the cause of death statement on the death certificate (Figure 1) is another line called Other Significant Conditions. This part of the death certificate serves a variety of functions. First, if the list of mechanisms of death is too long to fit in the overlying cause of death statement, you can subtract some that might either be obvious or less significant and place them in the other significant conditions section (making sure that the cause of death hasn’t mistakenly found its way to the other significant conditions box and that the remaining items in the cause of death statement still flow from the bottom up in a logical and causative fashion).

The other significant condition section also should be used to identify other significant conditions that posed a major health condition for your patient but which were not directly part of the cause of death chain. In a patient dying of coronary artery disease, for example, other pertinent conditions would include underlying malignancies, diabetes, hypertension, etc. Trivial conditions (at least from a cause of death standpoint), such as subclinical hypothyroidism, should not be listed.

Any discussion of cause of death determination also needs at least a short discussion of manner of death. While there may well be an infinite number of potential causes of death, there are only four named manners of death: natural, accident,
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homicide and suicide (along with the obligatory unknown/could not be determined when a definitive manner cannot be assigned).

Physician certifiers (unless they also are serving as a coroner) may only certify deaths that are of natural manner. A death of natural manner implies that the underlying cause of death is a natural disease process (e.g., an infectious process, a malignancy, a congenital defect, prematurity, etc.). When an external event represents the cause of death the manner must be unnatural (accident, homicide or suicide).

A common error among physician death certifiers is forgetting that, after dealing with a string of natural disease processes, such as pneumonia and renal failure, that an external event such as trauma actually brought the patient to the hospital in the first place. Since this external event initiated the chain of events leading to the death it represents the underlying cause of death. The manner of death in this case would be unnatural and the physician would be legally unable to certify the death (even if the initiating traumatic event was a relatively benign event such as a simple fall).

The certification of neonatal deaths may pose special problems. The basic principles of death certification that apply to other individuals also largely apply to neonates. For example, disease process such as pneumonia, sepsis, congenital defects, trauma that lead to death in neonates would be certified the same as had they occurred in adults. However, certain processes are unique to neonates. Respiratory failure from pulmonary immaturity, necrotizing enterocolitis, periventricular hemorrhages are all processes usually associated with prematurity. Yet frequently death certificates are filed without mention of the underlying prematurity.

While prematurity may be listed as the underlying cause of death, it is best to indicate, if known, why the birth was premature. For example, prematurity may be the result of ascending chorioamnionitis, placental abruptio or other placental dysfunction, fetal abnormalities, etc. If the precipitating process leading to a premature birth is known and the neonate subsequently dies from mechanisms resulting from the prematurity, then that precipitating event or process should be listed below prematurity on the death certificate as the cause of death. If no precipitating event is known to explain the premature delivery then prematurity of unknown cause should be on the bottom line of the death certificate as the cause of death (hopefully with other mechanisms of death such as sepsis or respiratory failure listed above).

Death certificates are restricted to live births. Stillbirths need to be separately certified on a fetal death certificate if of more than 20 weeks gestation. The fetal death certificate is completed in the same fashion, using the same rules, as a non-fetal death certificate. Non-viable neonates that are born alive (i.e., with any independent sign of life, even a pulsatile umbilical cord) need to have their deaths certified in the usual way (i.e., not with a fetal death certificate).

The distinction between natural and unnatural manners of death can be complicated and will be discussed in further detail in the fourth installment of this series.

In the next installment, I will discuss the level of certainty needed for completing a cause of death statement along with how to handle cases where the cause of death is unknown.

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<td>Instructions for completing the cause-of-death section of the death certificate 2002 <a href="http://www.cdc.gov/nchs/about/major/dvs/handbk.htm">www.cdc.gov/nchs/about/major/dvs/handbk.htm</a></td>
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About the Author:
Brad Randall, MD, Professor of Pathology, University of South Dakota Sanford School of Medicine; Sole Proprietor; Dakota Forensic Consulting.

The author is a paid consultant for the South Dakota Department of Health.

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Don’t forget to send in your favorite scenic photo for South Dakota Medicine front cover consideration. Send photos to ereiss@sdsma.org.
June 27th is National HIV Testing Day

Do you know the HIV status of every patient you will see today?

If not, then CDC recommends you order a test and document their status.

There have been recent changes to the HIV surveillance case definition. Laboratory criteria now require reporting of positive test results in multitest algorithms or stand-alone virologic tests and enough information about the tests to determine that they meet the following criteria:

A multitest algorithm consisting of

- A positive (reactive) result from an initial HIV antibody or combination antigen/antibody test, and
- An accompanying or subsequent positive result from a supplemental HIV test different from the initial test.

The U.S. Preventive Services Task Force (USPSTF) recommends that clinicians screen adolescents and adults ages 15-65 years for HIV infection. Younger adolescents and older adults who are at increased risk should also be screened. This is a grade A recommendation. The USPSTF recommends that clinicians screen all pregnant women for HIV, including those who present in labor whose HIV status is unknown. This is a grade A recommendation.

For more information, contact Lon Kightlinger, State Epidemiologist for the South Dakota Department of Health at, lon.kightlinger@state.sd.us
Gastroesophageal reflux (GER) is defined as the passage of gastric contents into the esophagus, which can occur with or without regurgitation and vomiting. Considered a normal physiologic process, GER occurs many times a day in healthy infants, as well as children and adults, and is associated with minimal or no symptoms. However, gastroesophageal reflux disease (GERD) occurs when the passage of these gastric contents into the esophagus causes troublesome symptoms or complications for the patient. These symptoms may include recurrent vomiting, poor weight gain, and esophagitis. Infants with uncomplicated GER are often referred to as “happy spitters.” This reflux usually resolves by one year of age, and pharmacologic treatment should be avoided. Infants with troublesome symptoms of GERD may benefit from pharmacologic treatment if non-pharmacologic measures fail, while those with GER can often be managed by a conservative approach. Various treatment options for infants exist, including both pharmacologic and non-pharmacologic modalities. Recent evidence suggests that pharmacologic treatment of GERD with acid suppressants may introduce both short- and long-term adverse effects.

Treatment guidelines outlined by the North American and European Societies of Pediatric Gastroenterology, Hepatology and Nutrition, as well as the American Academy of Pediatrics emphasize various lifestyle modifications for the initial management of GERD in infants. These modifications may include a trial for breastfed babies of altering the maternal diet to avoid milk and egg intake, or switching to an extensively hydrolyzed protein or amino acid-based formula for formula-fed infants. Thickening of infant formula may also be considered. Positioning infants in the upright position after feeding may also benefit those with GERD. Avoidance of semi-supine positioning, such as seated in a car seat, is suggested, especially after feeding.

When lifestyle modifications fail, further workup is recommended and pharmacologic treatment may be considered in infants with complicated GERD, including those with poor weight gain. Medication options include acid suppression or prokinetic agents. It is important to note that pharmacologic treatment is not recommended for the infant with uncomplicated GER.

Histamine-2 receptor antagonists (H2RAs) competitively inhibit histamine-2 receptors in gastric parietal cells, thereby decreasing gastric acid secretion. Two randomized, placebo-controlled, double-blind trials demonstrated H2RAs, cimetidine and nizatidine, to be superior to placebo in treating children with GERD and esophagitis. While studies on the use of ranitidine and famotidine in infants and children are limited, these agents are considered as effective as cimetidine and nizatidine by expert opinion. One drawback with the use of H2RAs is the fairly rapid development of tachyphylaxis, limiting their role in chronic treatment of GERD. Additionally, cimetidine has been associated with gynecomastia and increased risk of liver disease.

Proton pump inhibitors (PPIs) cause inhibition of the H+/K+ ATP pump in gastric parietal cells, causing suppression of both basal and meal-induced gastric acid secretion. PPIs have maximal effect if administered approximately 30 minutes before meals, which can be difficult to achieve in infants that often eat on demand. Agents approved in children include omeprazole, lansoprazole and esomeprazole, though only esomeprazole is approved in infants less than one year of age with erosive esophagitis. A randomized, placebo-controlled, double-blind trial compared four weeks of treatment with lansoprazole to placebo in infants with persistent symptoms of GERD. There was no difference in reduction of GERD symptoms between the groups. A review of other trials of PPIs in infants also demonstrated a lack of evidence of efficacy in this age group. However, trials of PPIs in older pediatric patients support their efficacy for treatment of GERD symptoms and erosive esophagitis.

Metoclopramide is a prokinetic agent that exerts its pharmacologic effect by increasing gastrointestinal tract motility, gastric emptying and lower esophageal sphincter tone without an effect on GI secretion. Its use in GERD in infants is limited by adverse effects including extrapyramidal reactions. Other agents for the treatment of GERD in
infants include antacids to buffer gastric acid secretions in the stomach. These medications are limited by complications with aluminum toxicity in children as well as milk-alkali syndrome with calcium-containing agents. Antacids are not recommended for the treatment of GERD in pediatrics patients.

When pharmacologic treatment of GERD is indicated in pediatrics, the mainstay of therapy involves H2RAs and PPIs. The use of acid suppressant therapy, specifically with PPIs, has increased dramatically in recent years. With this increased utilization comes an increased concern for adverse effects, especially with chronic use of these medications. The most common side effects associated with PPIs are headache, diarrhea, constipation and nausea.

When infants and children receiving acid suppression with either H2RAs or PPIs were compared to those receiving placebo in a multi-center, prospective study, the incidence of gastroenteritis and community-acquired pneumonia was increased in patients receiving acid suppression therapy. Gastroenteritis occurred in 43 percent of the treatment group and 19 percent of the placebo group (p<0.05), while pneumonia occurred in 11 percent versus 2 percent of patients (p<0.05). Data in adults suggest that patients with chronic PPI use may be at increased risk for *Clostridium difficile*-associated diarrhea, magnesium and vitamin B12 deficiency and bone fractures, though strong evidence is lacking. These adverse effects introduce areas for further research in pediatric patients, as well as potential monitoring parameters for patients on acid suppressants.

The management of infants with reflux involves first distinguishing patients with GERD from the happy spitter with uncomplicated GER. Lifestyle modifications such as feeding and positioning changes should be trialed initially. In those patients with ongoing troublesome symptoms of GERD that require further workup and pharmacologic treatment, frequent re-evaluation for the ongoing need for medication is recommended, along with awareness of potential adverse effects.

**REFERENCES**

Please note: Due to limited space, we are unable to list all references. You may contact South Dakota Medicine at 605.336.1965 for a complete listing.

About the Author:
Amy Heiberger, PharmD, BCPS, Assistant Professor, South Dakota State University College of Pharmacy; Clinical Pharmacist, Sanford Children’s Hospital.
Low health literacy – the inability to read, understand and act on health information – is a hidden epidemic and one that affects nearly one in every three people in the U.S. Even college-educated patients can have difficulty understanding complex health information given to them by their physician. A lack of literacy skills leaves patients unable to effectively manage their personal health and poses a significant threat to patient safety.

The cure for this epidemic lies in improving communication with patients. In a 2004 report, Health Literacy: A Prescription to End Confusion, the Institute of Medicine (IOM) defined health literacy as, “The degree to which individuals have the capacity to obtain, process and understand basic health information and services needed to make appropriate decisions.” According to the IOM, adults with low health literacy:

- Have less knowledge of disease management;
- Have less knowledge of health-promoting behaviors;
- Report poorer health status; and
- Are less likely to use preventative health services.

When patients cannot understand health information because of an inability to read and comprehend the information, or because of a language barrier, they cannot follow through with treatment plans or medication instructions. This means they are at higher risk for complications, which can lead to poor health outcomes.

Of note, patients with low health literacy can be any ethnicity or age – the common factor is their inability to adequately understand and follow health care instructions. Most low health literacy patients are white, native-born Americans. Low health literacy is not a reflection of intelligence. Patients with low health literacy are from all segments of society; however, there is a greater proportion among older adults, people with limited education and those with limited English proficiency.

Whenever you suspect a patient may have low or limited health literacy, a statement such as, “Many people have trouble reading and remembering health information or instructions. Is this hard for you?” may be enough to induce a patient to ask for help. Patients with low health literacy describe feelings of shame when face-to-face with highly educated medical professionals and are afraid to ask questions for fear of feeling stupid.

Nearly 80 percent of patients forget what their providers tell them as soon as they leave the office making it necessary to provide them with written materials. These materials and self-care instructions are among the most important materials you can provide your patients so it is important that your patients can read and comprehend the information and instructions given. In this country, one out of five adults read at the fifth grade level or below; the average American reads at an eighth or ninth grade level. In contrast, most patient education materials are written at a 10th grade level or higher.

When communicating with patients, be sure to treat all patients with respect and provide a shame-free, secure environment that allows them to discuss their difficulty reading or understanding the information you provide. In addition:

- Use lay terms, not medical jargon;
- Choose simple not complex words (“start” not “commence”);
- Use short sentences;
- Emphasize patient actions and behaviors;
- Invite family members to participate in patient visits;
- Link information to previous knowledge;
- Tailor the information to the individual patient;
- Use pictures or diagrams to improve comprehension;
- Teach-back techniques (“tell me” or “show me”);
- Introduce two or three new concepts at a time;
- Read information aloud and slowly to patients;
- Provide interpreters for patients with limited English proficiency; and
- Translate frequently used written education materials.

Good communication is the cornerstone to providing quality care to your patients and is the moscommon “procedure” health care professionals perform. Recognizing that half of your patients might not be able to understand the information you give them and taking necessary steps to improve your communication can reduce poor outcomes and decrease your risk of a malpractice claim.
COGME Report Focuses on Recommendations to Ensure Value in GME
Training Needs to Better Align With Needs of Nation, According to Report

By Sheri Porter, AAFP

Graduate medical education (GME) in the U.S. needs an overhaul if it is to keep up with health system reform and an aging American population, according to a recently released report from the Council on Graduate Medical Education (COGME). Ensuring value for dollars spent is high on the list of recommendations from the council.

The report’s authors point out that the nation faces serious challenges in ensuring that Americans have access to “the very best physician workforce in the world.” Medical education has not evolved as rapidly as changes in the health care delivery system, they say.

The report, Improving Value in Graduate Medical Education (www.hrsa.gov), proposes a number of recommendations that address topics ranging from funding, recruiting criteria, curricula issues and medical education research.

Defining the Problems
According to COGME, past unsolved problems, including poor geographic distribution of the physician workforce and accelerating subspecialization at the expense of primary care, have collided with new challenges to create a crisis in medical education. “GME is responsible for developing the future physician workforce but falls short in several areas,” say the authors. “Training program size and specialty mix are sometimes at odds with the nation’s health workforce requirements.”

Many training hospitals have not adequately focused on primary care training, and the curriculum is often lacking in important areas, such as population health, care coordination and team-based care. “National accreditation organizations have been slow to lead these necessary changes,” says the report.

In addition, for 15 years, Congress has resisted funding GME with additional public monies. “The Balanced Budget Act’s imposition of a funding cap on the number of Medicare-funded positions slowed expansion (of residency slots), except under limited circumstance,” says the report. “Without additional funding, the number of training positions continued to grow slowly, but largely in subspecialties.”

Stan Kozakowski, MD, director of the AAFP Division of Medical Education, calls the report “groundbreaking” in its assertion that the country’s medical education system must prove its value. After all, he notes, public tax dollars provide more than $13 billion in funding each year.

He points out that GME funding has been buffeted by the weak economy, as well as by congressional sequestration measures that slashed money from the federal budget. “The report implies that we need to be more strategic in how we
train physicians because there is not a limitless pot of
money,” says Kozakowski. “Clearly, the way to attain work-
force reform in medicine is to purposely address the GME
environment, and that includes appropriately aligning
accreditation forces.”

**Report Recommendations**

The COGME report outlines six principal recommenda-
tions regarding GME:

- Increase and broaden GME funding;
- Prioritize funding to quickly align the physician work-
  force with population and health delivery needs;
- Work to improve training efficiency;
- Align medical student recruitment efforts with
  population health care needs;
- Realign clinical learning and curricula to reflect
  patient-centered, safe and effective care; and
- Invest in medical education research to improve GME
  quality and physician competencies.

In terms of GME funding, the report recommends that
Congress continue funding current GME positions,
increase funding for additional positions, aim to graduate
3,000 more physicians per year and look at funding sources
other than Medicare. “COGME also recommends that
training be expanded and prioritized to meet specific needs
of a US population that is growing and aging as an
increasing proportion of physicians reach retirement age,”
says the report.

In addition, GME funding increases should be directed to
high-priority specialties – family medicine, geriatrics,
primary internal medicine, general surgery, high-priority
pediatric subspecialties and psychiatry – and training
programs should emphasize new competencies. “Training
in nonhospital-based outpatient and office-based practices
needs to be incorporated into any new GME approach to
reflect the shift of medical care to outpatient settings,” says
the report.

Eliminating transitional postgraduate year positions could
improve efficiencies and reduce waste, according to the
report, which also urges accreditation and licensing
organizations to “permit flexibility in certain clinical
training in the fourth year of medical school to be credited
toward residency training.”

Report authors also call for a revision in medical student
recruitment criteria to help craft a physician workforce
that meets population needs. “Recruitment needs to target
students with the necessary personal attributes essential to
providing patient-centered care,” says the report.

“Achieving these goals requires changes in the interview
process as well as a willingness to accept students from a
variety of educational backgrounds.”

In addition, Congress should direct Health and Human
Services to develop and disseminate “innovative faculty
development programs to improve GME training across all
specialties,” says the report. The clinical learning environ-
ment of sponsoring institutions should be evaluated to
ensure that core competencies set out by the Institute of
Medicine – namely, patient-centered care that is safe,
timely, effective, efficient and equitable – are met. And
successful completion of each phase of medical education
should be based on an assessment of competence rather
than on the amount of time spent in training.

Lastly, the authors urge the nation to invest in medical
education research to improve the quality of GME and the
competencies of the physician workforce. Specifically, the
report asks Congress to authorize and finance an entity
dubbed the National Institute for Health Professions
Education that would “support innovative medical
education research that improves both learner and patient-
care outcomes.”

Although not perfect, many of the COGME report
recommendations dovetail with the AAFP’s own roadmap
for change in the nation’s GME system, according to
Kozakowski. He calls GME funding an “investment for the
country” and notes that funding should not be cut but
strategically expanded.

COGME report findings that align with AAFP priorities
include:

- Funding GME and aligning it with workforce priorities;
- Eliminating waste in the system;
- Getting the right people in the medical education
  pipeline;
- Setting priorities around competencies; and
- Creating a research agenda to ensure the right steps are
  being taken.

“The Twenty-First COGME report is important because it
drives federal policy,” says Kozakowski. “The information
in this report will be a touchstone for others. Those in the
accreditation world will have a hard time ignoring these
recommendations.”
Declaratory Rulings by the Board

Questions and concerns about safe medical practices routinely come to the South Dakota Board of Medical and Osteopathic Examiners (SDBMOE). Recent Board declaratory rulings have involved the use of lasers and immunizations. Currently the Board has been asked to interpret whether or not the scope of practice for a paramedic would allow them to work as a “community paramedic.” The hearing is scheduled for the Thursday, June 12 Board meeting at 10:30 AM CDT. Contact the Board staff with any questions regarding the current request or for general questions.

South Dakota law regarding declaratory rulings: 1-26-15. Declaratory rulings by agencies. Each agency shall provide by rule for the filing and prompt disposition of petitions for declaratory rulings as to the applicability of any statutory provision or of any rule or order of the agency. No inmate as defined in § 1-15-20.1 may petition an agency for a declaratory ruling on the applicability of statutory provisions, rules, or orders of the agency. Rulings disposing of petitions have the same status as agency decisions or orders in contested cases. A copy of all such rulings shall be filed with the director for publication in the Administrative Rules of South Dakota.

Complaint and Contested Case Procedures

There are currently over 8,877 health care providers licensed and regulated by the Board in South Dakota. Of these, there are 3,699 medical licenses, and more than 44 percent have at least one South Dakota work address.

The South Dakota administrative rules that apply to complaints and contested cases involving licensees and applicants can be found in Chapter 20:78:04 and Chapter 20:78:05. An investigative file, for any professional licensed and regulated by the Board, is confidential under South Dakota codified law, Chapter 1-26. Physicians have an additional and unique confidentiality statute, SDCL 36-4-31.5, which gives the physician the privilege of release for any circumstance short of public Board action.

A person filing a complaint can submit it to the Board office. Complaints are not public records but may be sent to the physician identified in the complaint for review and response to the complaint. Non-jurisdictional complaints, for example those involving fees, non-licensees, or medical facilities, will be dismissed and the complainant is likewise informed. For those complaints where the Board has jurisdiction, an investigation is initiated by notifying the physician of the nature of the complaint, requesting a response, and outlining the physician’s due process rights including the right to notice, to be heard, and to be represented by counsel.

Steps to Respond to a Complaint

First and foremost, do not panic and do not call the complainant, especially if the individual is a patient. Keep in mind anyone can file a complaint regardless of the circumstances. The board staff is used to handling complaints so take the time to go through the following steps:

- Review complaint and allegations;
- Prepare response;
- Decide whether to get an attorney;
- Gather records; and
- If more time is needed, please ask, and an email is acceptable.

If the physician chooses not to renew a license after a complaint investigation has been initiated, then the failure to renew under investigation will be reported as “withdrawn under investigation” in the Board's permanent license files, and in any national databases to which the board is required to report licensure action.

A Board member will be appointed to the investigation to assist as well as make the final recommendation to the full board. Once the investigation is completed, there are several outcomes involving either actions which are non-public, or board actions which are public.

The two non-public (non-board action) outcomes include:
1. The complaint can be dismissed; and
2. A letter of concern can be placed in the physician’s permanent record.

The three public board action outcomes include:
1. A public reprimand;
2. A modification and conditioning of the license; and
3. A suspension or revocation of the license.

For a complaint dismissal, both the complainant and physician are notified that the case is closed. For a letter of concern, the complainant is notified only that the complaint is closed. Only the physician receives the letter of concern.

When a public board action is recommended, the physician is notified and given the right to contest the recommendation. If contested, a petition of hearing will be signed by the executive secretary, and a copy of the petition is provided to the physician. The physician may enter into a settlement agreement regarding the recommendation to be presented to the Board.
Antibiotic stewardship programs are an effort to improve usage, reduce resistance and ultimately decrease the morbidity, mortality and the cost of health care associated with bacterial infections. The appropriate and timely use of these agents has emerged as a significant clinical challenge requiring providers, patients and society as a whole to adapt to this new model. Antibiotics are unique when compared to almost all other medications and medical interventions. The development of resistance renders them less effective or useless, and thus, hinders future use for infection control in the community at large. The Centers for Medicare and Medicaid Services (CMS) continues to focus on reducing hospital and nursing home acquired infections and thus antibiotic usage plays a large role in this aim.

Antibiotic resistance has been enhanced from the overuse, underuse and misuse of these agents by providers in multiple settings. New antibiotic development has been slow and has resulted in fewer new agents that have significant high cost. In addition to the approximately 3 million kilograms of antibiotics prescribed to humans yearly in the U.S., there are over 13 million kilograms given to livestock, an area also in need of more appropriate use to try and limit resistance. Another complication of antibiotic use is Clostridium difficile infection. Diarrhea caused by forms of this organism is linked to 14,000 deaths in the U.S. each year. Reducing inappropriate antibiotic use would lessen the risk of unnecessary exposure with its increasing resistance as well as serious complications such as C. difficile.

A major challenge of stewardship lies in overcoming a historical reliance on antibiotics as a readily available tool to fight infection whether ultimately bacterial in etiology or not. The Centers for Disease Control and Prevention (CDC) estimates that one-third of Vancomycin use and one-third of antibiotics for urinary tract infection were ordered without proper testing or evaluation. Overcoming psychological pressure for antibiotic use from patients and providers alike will take significant education and behavioral change.

A wide variety of resources designed to affect use have been put in place in many areas of the country. Stricter guidelines for prescribing as well as restrictions being placed as to who can order and what type of antibiotics are available on hospital formularies. Stewardship is a process that needs to involve physician leaders, pharmacists, nursing staff and administrative support. Antibiotic usage data per prescriber as well as patterns of resistance need to be frequently updated and transparent. Education will likely become the most important element affecting antibiotic usage.

In the past couple of years, various programs by health systems and hospitals in our state have been created to ensure antibiotic use remains effective. It has involved a number of entities, including infection control staff and infectious disease specialist physicians with the goal to promote appropriate antibiotic use. The South Dakota Department of Health has worked with selected health care facilities to reduce carbapenem resistant enterobacteriaceae (CRE) infections. This effort received national attention from the CDC. Promoting antibiotic stewardship will remain a challenging undertaking. It will require a significant expenditure of money and time. As with many aspects of health care quality improvement, it will take an effort from multiple entities to ensure that antibiotics remains a useful tool. Please continue to follow further updates on this endeavor.

**Further Reading**


“Quality Focus” is a monthly feature presented by SDFMC, South Dakota’s Quality Improvement Organization. For more information about the SDFMC, visit their website at [www.sdfmc.org](http://www.sdfmc.org).
As a “doctor for adults,” I find it eye-opening to delve into the study of infant deaths. It makes sense to learn how and why bad outcomes occur in order to develop ways to get good outcomes and prevent suffering.

To put this in perspective, we estimate that prior to understanding about forceps delivery, clean surgical C-section, the value of clean water, proper hygiene, antibiotics, and vaccinations, we lost something-like half the children born before they turned 6, and many of the mothers. By 1911, we know that the U.S. recorded 135 infant deaths per 1,000 live births. That’s better.

Now, more than 100 years later, the infant death rate is even lower. There are about two deaths per 1,000 live births for the countries of Monaco, Japan, and Norway, and in the U.S. it is at about six per 1,000 right next to Serbia and Poland. Looking at South Dakota, we are 35th in the 50 states, at about seven per 1,000, which is about the same as Chile and Russia. And while the rate in South Dakota Indians has improved in recent years, it is still almost twice as high as whites, more than 12 per 1,000, and is the highest Indian rate per state in the country, right there with the worst poverty.

Why is the rate so high in the U.S. and especially South Dakota?

Experts explain that infant deaths increase when babies are born too early and immature, or malformed; often because mothers are too young, are smoking, are drinking alcohol, are not getting enough folic acid, and are not receiving enough prenatal advice and monitoring from a health care provider. After delivery, deaths happen because parents lack knowledge of safe baby-sleep practices, or enough Dad, family and community support when times get tough.

So what can we do better in this state and country in keeping our babies safe? The most important effort should be to nourish, educate, protect and empower the girl or young woman who will be a mother, and by enhancing her health prior to getting pregnant, which is called “preconception care.”

After all, it’s up to Mom. She chooses to protect her future baby by delaying pregnancy until her body is mature enough, by avoiding smoke and alcohol, and by taking vitamins with folic acid, all before pregnancy might happen. Then, once pregnant, she should carry through with what is called “prenatal care,” getting the advice and monitoring of a health care professional, all in keeping her baby safe. How can we better empower her?

Studying how babies can die will help us keep them safe.
DAKOTACARE Update:
Formulary Exclusions: Why Health Plans Embrace this Strategy in our Current Marketplace

By Daniel Weiss, PharmD

For three-quarters of a century, our pharmaceutical industry has been regulated by the Food and Drug Administration (FDA). This agency was founded with the intent to require medications be proven safe and effective. Those two basic principles are still the fundamental guidelines governing each medication approval. Where the FDA is solely focused on public health and safety, our managed care industry must expand our focus to include value and quality. Applying these additional foci is the main challenge for the DAKOTACARE Pharmacy and Therapeutics Committee.

During the approval process, the FDA identifies when a medication is considered to be a “new molecular entity” (NME). By their definition, a NME is an active ingredient that has never before been marketed in the U.S. in any form (FDA, 2012). In the time period from 1992 through 2011, there were 2,341 new drug applications received by the FDA for processing. Of these, 1,793 were approved and only 544 were distinguishable as a new molecular entity. Over this 20 year span, this equates to an annualized average of 117 submissions, 90 approvals and 27 new molecular entities. (FDA, 2013)

What do these statistics mean to a Pharmacy and Therapeutics Committee? More than two-thirds of all approved products consist of medications available elsewhere in the pharmaceutical industry. A large portion of these products could be determined to have minimal value compared to existing products. The existing products frequently include generics or soon-to-be generics. In many cases, these low value products are an attempt to resurrect a patent that is close to expiration. When a manufacturer reformulates a product to resolve a significant issue found in the original formulation, our Pharmacy and Therapeutics Committee will typically be more accepting of these desirable improvements.

Our pharmacy and therapeutics philosophy had been to arrange products into the formulary as a means to assign a “value” designation. The most cost effective therapies available, generic options, are deemed tier-1 and granted the lowest copayments. The next option includes preferred brands or tier-2 products. While these are higher cost than generics, they are deemed valuable and appropriate, especially in classes where no generic options are available. Historically if a product offered little benefit compared to the cost, the product would be assigned a non-preferred or tier-3 designation. This designation resulted in the highest copay obligation as an incentive to members to reconsider their lower cost options.

This was an effective strategy for many years, until pharmaceutical manufacturers began to offer coupons and rebates for high copays. By refunding the member their copay, a pharmaceutical company is able to undermine the intentions of formulary management. This rebate or coupon lowers the member obligations from the punitive level of $100 or $150 to $5 or $10, which is comparable to generic copays. Since this pricing strategy is considered prior to launch, the additional costs of these rebates are most likely added into the original product pricing.

In the face of this situation, what can any health plan do to prevent additional costs from undesirable products? The easiest solution to this circumstance is to exclude the product in question. This assures that our members are incentivized to consider the higher value products.

In our current evolution of formulary management, we are more prone to move low value products to our excluded list immediately upon review. This approach has also been implemented by both CVS (2013) and ESI (2014) as they struggle with the impacts of rebate/coupon cards on their formulary efforts (Silverman, 2013).

Historically, our exclusion list consisted of products that were mostly related to plan coverage exclusions such as cosmetic products or services that were not covered by the plan (such as infertility). As the pharmaceutical industry adopted new rebate/coupon strategies, plans found the only way to continue assigning a “low value” designation for a medication is to exclude the product in question. This is not a unilateral policy by any means. When faced with an excluded product, please consider alternative options, or consider contacting our pharmacy team to discuss your formulary exception request options!

REFERENCES


June 2014
Your silence could be harmful.

Speak up..
Each year, 1,000 South Dakotans die from tobacco attributable causes.
Annual health care costs in South Dakota directly caused by smoking total over $274 million.
Research shows that when providers are involved in helping patients quit, patient success increases substantially.
At current use levels, 18,000 South Dakota children age 0-17 are projected to die from tobacco use.

Hey, it doesn’t hurt to Ask.
Most tobacco users want to quit. And every year, about half of them try... and fail... because they are not getting the help they need when they make their quit attempt.
As their health care provider, you can help.
But first, you have to take the time to talk about it.
Just ask, “Do you use tobacco?”
Simple.

Take a good look. Advise.
Once you’ve broached the subject, document their tobacco use along with their other vital signs.
Then ask them if they’re willing to make a quit attempt at this time.
Patients not ready to quit may need additional motivational counseling. Refer them.

Give them the tools. Refer.
There are great resources in South Dakota, specifically designed to help you help your patients quit tobacco. For your convenience, we’ve prepared a special guide to help you answer the most typical patient questions. If you would like to have copies mailed to you, please contact us at 1-866-737-8487. You can also find important provider information at SDQuitLine.com/providers.

Remember...AA&R Ask. Advise. Refer.
The Internet has created the ability for physicians and medical students to communicate and share information quickly and to reach millions of people easily. Participating in social networking and other similar Internet opportunities can support physicians’ personal expression, enable individual physicians to have a professional presence online, foster collegiality and camaraderie within the profession, and provide opportunities to widely disseminate public health messages and other health communication. Social networks, blogs and other forms of communication online also create new challenges to the patient-physician relationship. Physicians should weight a number of considerations when maintaining a presence online.

The same confidentiality rules apply to patient communications and information facilitated or posted online as in any other setting. Social media sites open to the public should never be used to communicate with a patient or to post information concerning patients. Once a post is made online, the posting physician loses control of the post. A physician should use separate social media sites for his or her practice and his or her personal life.

Just as in the hospital or ambulatory setting, patient privacy and confidentiality must be protected on social media and social networking websites. These sites have the potential to be viewed by many people and any breaches in confidentiality could be harmful to the patient and in violation of federal privacy laws, such as HIPAA. Physicians should not discuss their professional experiences on social media available to the general public, and should never in any setting, especially social media, provide any information that could be used to identify patients.

Social networking websites may be useful places for physicians to gather and share their experiences, as well as to discuss areas of medicine and particular treatments. These types of professional interactions with other physicians represent an ancillary and convenient means for peer-to-peer education and dialogue. While such networks may be useful, it is the responsibility of the physician to ensure, to the best of his or her ability, that professional networks for physicians are secure and that only verified and registered users have access to the information.

A social media use policy for employees is important to protect a physician’s practice and reputation and to give employees fair notice of what is and is not permissible. If the physician maintains a website in connection with his or her practice, the physician should set limits on the persons who may post on that website.

For more information, download the SDSMA legal brief The Use of Electronic and Social Media at www.sdsma.org. Through the SDSMA Center for Physician Resources, the SDSMA develops and delivers programs for members in the area of practice management, leadership and health and wellness.

Source: SDSMA staff
CMS Launches Restructured Quality Improvement Program

The Centers for Medicare and Medicaid Services (CMS) is restructuring the Quality Improvement Organization (QIO) Program that aims to improve patient care, health outcomes, and save taxpayer resources.

This first phase of the restructuring will allow two beneficiary and family-centered care (BFCC) QIO contractors to support the program’s case review and monitoring activities separate from the traditional quality improvement activities of the QIOs. The two BFCC QIO contractors are Livanta LLC, located in Annapolis Junction, Maryland, and KePRO, located in Seven Hills, Ohio. They will be responsible for ensuring consistency in the review process. South Dakota case reviews will be done by KePRO. CMS says it aims to restructure the QIO Program to gain efficiencies, to eliminate any perceived conflicts of interest, and to better address the needs of Medicare beneficiaries using BFCC QIOs to focus on providing patients a voice through conducting quality of care reviews, discharge and termination of service appeals, and other areas of required review in various provider settings.

In the program’s second phase — expected in July — CMS will award contracts to organizations that will directly work with providers and communities on data-driven quality initiatives to improve patient safety, reduce harm, and improve clinical care and transparency at local, regional, and national levels.

Source: CMS

Headline: South Dakota Medicine Receives Grant for 2015 Special Issue

South Dakota Medicine will publish a special issue in the spring of 2015. The special issue will be dedicated to disease prevention and preventive medicine.

The special issue is supported by grant funding from the South Dakota Department of Health/South Dakota QuitLine.

Other South Dakota Medicine special issues previously published have been dedicated to the topics of end-of-life care, obesity, tobacco use and cessation, cancer and immunizations. For more information about previously published issues, visit www.sdsma.org.

Source: SDSMA staff

Headline: New to EHR Meaningful Use? Begin by July 1 to Avoid Penalties

First-time participants in the Medicare and Medicaid meaningful use electronic health records (EHR) program should begin the 90-day reporting period no later than July 1 to avoid payment penalties in 2015.

Physicians who attest to meaningful use for the first time by Oct. 1 are eligible for an incentive payment and can avoid payment penalties for the following year. Physicians who miss the Oct. 1 attestation deadline but still attest to meaningful use in 2014 are eligible for an incentive payment, but will be subject to a 1 percent payment adjustment in 2015.

Physicians who begin participation in the program this year can earn up to $11,760 if they demonstrate 90 days of Stage 1 meaningful use. Successful demonstration of meaningful use each year, beginning in 2014, could earn a physician up to $23,520, according to the Centers for Medicare & Medicaid Services (CMS).

Those who begin the meaningful use program after 2014 are not eligible for any incentive payments. Starting in 2014 all physicians, no matter when they began the meaningful use program, must use Version 2014 of certified EHR software, otherwise they face a penalty.

Source: AMA staff
SDSMA Foundation Offers Matching Gift Endowment for Districts

The SDSMA Foundation Board has announced an exciting new Matching Gift Endowment Program for district medical societies (DMS). The board allocated funding from the SDSMA Foundation’s general endowment as a great investment opportunity for DMS. This opportunity gives DMS the ability to offer scholarships to South Dakota medical students and impact the future of medicine in our state.

DMS may request matching funds from the SDSMA Foundation where each contribution meeting a minimum giving level will be matched dollar for dollar. The goal of this program is to grow scholarship funds to sizable amounts where scholarship awards are at a level to make an impact on the students who receive them. DMS investing in medical student scholarships can double that potential with the SDSMA Foundation match.

The SDSMA Foundation is currently accepting requests for matching funds and giving first consideration to requests received by July 1, 2014. Requests will be accepted on an ongoing basis until allocated funds are committed.

Visit the SDSMA website at www.sdsmia.org and click on SDSMA Foundation to review program eligibility, criteria and to download the request form.

Questions about the Matching Gift Endowment Program should be directed to the SDSMA office at 605.336.1965 or Laura Olson at lolson@sdsmia.org.

Source: SDSMA staff

SDSMA 2015 Member Directory – Updates Needed

The SDSMA staff is in the process of developing the 2015 Member Directory. More than 2,500 copies are distributed annually and provided to all members. Directories are also purchased by health-related agencies and referral organizations across the region. This is a widely-used and often-referenced publication with continuous use throughout the year.

Your help is needed to ensure the member profile information listed for you in the directory is accurate and your photo is current. Update your information today by logging onto the SDSMA website at www.sdsmia.org. Select Update My Profile and review and update your contact information for home and office.

Please email a recent professional photo or headshot to membership@sdsmia.org.

Any questions about the directory or updating your information, please contact Laura Olson, director of administrative and member services, at 605.336.1965 or lolson@sdsmia.org.

Source: SDSMA staff

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If not, contact us to reach over 2,000 physicians!

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Elizabeth Reiss, South Dakota Medicine
PO Box 7406, 2600 W. 49th Street, Suite 200
Sioux Falls, SD 57117-7406
605.336.1965
E-mail: ereiss@sdsmia.org
## CME Events

Continuing Medical Education events which are being held throughout the United States (Category 1 CME credit available as listed)

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<tr>
<th>June 2014</th>
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<td>Internal Medicine Grand Rounds: Genetic Counseling</td>
<td>Surgery/Trauma Grand Rounds: Trauma</td>
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<td>Internal Medicine Grand Rounds: TAVI Update</td>
<td>Mayo Clinic Oncology Review</td>
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<td>June 16-20</td>
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<td>Mayo Clinic Gastroenterology and Hepatology Board Review</td>
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<td>Internal Medicine Grand Rounds: Nephrology</td>
<td>Mucha Symposium: Meeting the Needs of the Acute Care Surgery and Injured Patient</td>
<td>Mayo Clinic Nutrition and Wellness in Health and Disease</td>
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<td>Internal Medicine Grand Rounds: AIDS</td>
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<td>VA Medical CME Activity: Pharmacy Clinical Pearls II</td>
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### July 2014

- **July 9**: Internal Medicine Grand Rounds: Update on C. diff and Fecal Microbiota Transplantation  
  - AMA PRA Category 1 Credit(s)™ available  
  - Register online: www.usd.edu/cme

### August 2014

- **Aug. 7-8**: Mucha Symposium: Meeting the Needs of the Acute Care Surgery and Injured Patient  
  - AMA PRA Category 1 Credit(s)™ available  
  - Register online: www.mayo.edu/cme

### September 2014

- **Sept. 4-7**: Mayo Clinic Gastroenterology and Hepatology Board Review  
  - Register online: www.mayo.edu/cme
- **Sept. 18-19**: Mayo Clinic Nutrition and Wellness in Health and Disease  
  - Register online: www.mayo.edu/cme
- **Sept. 26**: VA Medical Center CME Activity: Suicide Prevention  
  - AMA PRA Category 1 Credit(s)™ available  
  - Register online: www.usd.edu/cme

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**DO YOU HAVE A CME EVENT COMING UP? WOULD YOU LIKE TO HAVE IT LISTED HERE?**

**Contact**: Elizabeth Reiss, South Dakota Medicine, 2600 W. 49th Street, Suite 200, Sioux Falls, SD 57105  
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Fax: 605.274.3274  
Email: ereiss@sdasma.org
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Assistant Dean, Medical Student Services

The Sanford School of Medicine (SSOM) seeks candidates for an Assistant Dean of Medical Student Affairs (www.usd.edu/med). SSOM is a community-based medical school with a tradition of excellence, and is highly ranked in family and rural medicine.

The Assistant Dean will work in the Office of Medical Student Affairs in the areas of student records, diversity affairs, admissions and recruitment, career counseling, academic counseling, personal counseling, and financial aid. Specific responsibilities may include: monitoring of student achievement and preparation of the Medical Student Performance Letters; coordination of academic and career advisor programs; ensuring student affairs portions of accreditation and other surveys are completed in a timely fashion; and assisting with recruitment and admissions, financial aid and scholarships, and records maintenance. The successful candidate will have an earned doctorate in a health care related field. The individual will have leadership experience in a medical school or similar environment. Experience in student services in an academic environment is preferable. The Assistant Dean reports to the Dean of Medical Student Affairs and is expected to work effectively with colleagues throughout the medical school and with our clinical affiliates.

Apply online at https://yourfuture.sdbor.edu and attach current curriculum vitae, a list of three references, and a letter of interest. First review of application will begin May 23, 2014. Questions may be directed to: Paul Bungre, PhD, Dean, Medical Student Affairs, Office Phone: 605-677-5233, Paul.Bungre@usd.edu.

The University of South Dakota Sanford School of Medicine (SSOM) seeks candidates for an Assistant Dean of Medical Student Education (www.usd.edu/med). SSOM is a community-based medical school with a tradition of excellence, and is highly ranked in family and rural medicine. Diversity and inclusiveness are values that are embraced and practiced at the University of South Dakota.

The Assistant Dean will work in the Office of Medical Student Education providing direction, guidance and oversight for the Longitudinal Integrated Clerkships; collaborating with the Parry Center and faculty to plan and design new instructional strategies using simulation; developing and implementing curriculum in emerging areas required to maintain accreditation and meet the educational objectives of the school. This position will represent the institution and its innovative curriculum at the national level. The successful candidate will have an MD or DO with current SD licensure or ability to obtain one and appropriate certification for field of specialty. The individual will have leadership experience in a medical school or similar environment. Experience in student services in an academic environment is preferable. The Assistant Dean reports to the Dean of Medical Student Education and is expected to work effectively with colleagues throughout the medical school and with our clinical affiliates.

Apply online at https://yourfuture.sdbor.edu and attach current curriculum vitae, a list of three references, and a letter of interest. First review of application will begin June 23, 2014. The University of South Dakota is an equal opportunity/affirmative action employer.

Questions may be directed to: Janet Lindemann, MD, MBA, Dean of Medical Student Education, 605-357-1364, Janet.Lindemann@usd.edu.

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