

RADIOLOGY MANAGEMENT

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The Journal of AHRA: The Association for Medical Imaging Management

Improving Customer Service with Accommodations and Recognition

By Debra Parrish, MBA, CRA



Accounting Basics Part 1: Application in Healthcare

By Carole A. South-Winter, EdD, CNMT, RT, FAEIRS and Jason C. Porter, PhD



Current Employment Practices and Future Preferences for Multicredentialed Technologists in Nebraska

By Kimberly Michael, MA, RT(R), RDMS, RVT, Conner Coffin, BS, RT(R)(CT), RDMS, Rhonda Sudbeck, BS, RT(R), RDMS, RVT, Harlan Sayles, MS, and Tammy L. Webster, MPA, RT(R)(M)

Employee Incentives in Healthcare: An Eight Year Comparison

By Richard McKinnies, MEd, RT(R)(T), CMD, Sandra Collins MBA, PhD, Sandra Watts, MHA, RT(R), and Cristian Lieneck, PhD, FACMPE, FACHE, FAHM, CPHIMS



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CONTENTS

SEPTEMBER / OCTOBER 2016 • VOLUME 38:5

• features

15 Improving Customer Service with Accommodations and Recognition



By Debra Parrish, MBA, CRA

Sometimes in life it is the little things that provide for a positive reputation with patients and our communities. There is little money required for each of us to place ourselves in the patient's role and ask ourselves how we would like to be treated.

23 Accounting Basics Part 1: Application in Healthcare



By Carole A. South-Winter, EdD, CNMT, RT, FAEIRS and Jason C. Porter, PhD

Accounting terminology and methods are essential parts of management and can be used to improve the efficacy of communication with other managers and executives. While learning these terms and methods can seem daunting, the rewards are well worth the effort.

31 Current Employment Practices and Future Preferences for Multicredentialed Technologists in Nebraska

By Kimberly Michael, MA, RT(R), RDMS, RVT, Conner Coffin, BS, RT(R) (CT), RDMS, Rhonda Sudbeck, BS, RT(R), RDMS, RVT, Harlan Sayles, MS, and Tammy L. Webster, MPA, RT(R)(M)

There is a trend among Nebraska hospital radiology managers toward needing or hiring multicredentialed radiologic technologists. There appears to be a greater emphasis in the pairing of credentialing in diagnostic radiography with CT, ultrasound, and mammography in current and future needs.

43 Employee Incentives in Healthcare: An Eight Year Comparison

By Richard McKinnies, MEd, RT(R)(T), CMD, Sandra Collins MBA, PhD, Sandra Watts, MHA, RT(R), and Cristian Lieneck, PhD, FACMPE, FACHE, FAHM, CPHIMS

As healthcare costs and quality continue to be investigated by industry professionals, previous research continues to support the direct relationship between the overall patient experience and employee job satisfaction levels.



Cover: Attendees at the AHRA 2016 Annual Meeting in Nashville, TN.

• departments

54 Index to Advertisers

55 The Marketplace

CONTENTS

• columns

- viewpoint **6** **Care and Costs**
Debra L. Murphy
Patient driven care. It matters to healthcare administrators in a very complimentary way that it matters to the patient.
- editorial **7** **Leadership 2016**
Paul Dubiel, MS, RT(R), CRA, FAHRA
Be a leader and an example to everyone you come in contact with and you'll have a productive and happy team.
- regulatory affairs **9** **Perspective: Election 2016**
Bill Finerfrock and Nathan Baugh
Federal healthcare policy may be significantly altered as a result of this election – understand what to expect given the potential outcomes.
- in the industry **21** **Four Ways to Enable, Educate, and Engage Patients**
Randy Blue
Securing payment in the age of patient consumerism includes utilizing estimates, tech partners, intuitive tools, and prioritizing the POS.
- workforce planning **29** **Bobbie O'Brien**
Mark Lerner
Bobbie was the embodiment of customer satisfaction and someone who went out of her way to make a project a success.
- coding **38** **Getting Better Data from Referring Physicians**
Melody W. Mulaik, MSHS, CRA, FAHRA, RCC, CPC, CPC-H
This issue can create concerns around patient care and employee productivity and creates overall frustration for all stakeholders.
- coding: ICD-10 **41** **ICD-10: Internal Injuries**
Melody W. Mulaik, MSHS, CRA, FAHRA, RCC, CPC, CPC-H
Within each category are subcategories for individual organs, and within each subcategory are codes for specific types of injury, such as contusion and laceration.
- management findings **49** **“Getting Off the Wall” —An Interview with Angie McDonald**
Carrie Stiles, MBA, CRA, RT(R)(CT)
Get to know a little bit more about AHRA's 2016–17 President-Elect.
- on that note **56** **It Was a Phone**
Gordon Ah Tye, FAHRA
There was a time when a phone was simpler, when the world was a smaller place.



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Care and Costs

By Debra L. Murphy

I'm having knee surgery. Since I made the decision to have it done, I've felt like a secret shopper. I did the research, checked quality ratings, looked at costs, and conducted all around due diligence. Instead of going undercover to see if a waiter is attentive or a store clerk is knowledgeable, I paid attention to how the MRI tech made me feel (comfortable), how friendly the scheduler was (boy, was she chatty), and how well the surgeon listened to my concerns (he even made eye contact!). Ultimately, I wanted to know—how much do I matter to this particular hospital and physician's office?

Patient driven care. It matters to you, as healthcare administrators, in a very complimentary way that it matters to me, the patient. While I'm looking to have a successful surgery with out of pocket costs kept to a minimum, you want to assure quality and get paid for the services you provide—synergistic, perhaps, but not at all simplistic.

The content that AHRA produces centers around the work you do to provide the best care with an eye on the bottom line. In this issue of *Radiology Management*, "Improving Customer Service with Accommodations and Recognition," (p. 15) drives home the point that there is little money required to place yourself in the patient's role and ask how you would like to be treated. However, the article on accounting basics (p. 23) is a straight forward reminder of how it does take some financial savvy to actually provide that care.

If you read this before October 14, be sure to join us for the virtual Fall Conference keynote webinar by Dr. Zeke Silva: "Patient Centered Care: The Right Thing To Do and Why Not Get Paid for It." It's not sufficient to assume the patient is the core focus of the work being done in hospitals every day. It has to be demonstrated and measured. Current and future payment models depend on it. Find out more at www.ahraonline.org/FallConference.

And if you need me, I'll be busy filling out my post-op patient satisfaction survey. 🍷

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Leadership 2016

By Paul Dubiel, MS, RT(R), CRA, FAHRA

I sat in front of my TV this summer watching the two political conventions followed by what seemed to be endless network coverage all critiquing, criticizing, and looking for any sign of weakness or inconsistency. I was struck by the overall negativity that turned what should be an uplifting and positive display into something more akin to preschool children arguing over which superhero would win in a fight.

While I watched this mess unfold in front of mine and the country's eyes I couldn't help but find myself drifting away from the speeches and rhetoric to think about what really does make a good leader. And wondering if I live up to the same expectations I have for our next president, regardless of who ultimately wins the race.

When I think about what I expect in a leader, especially someone who needs to lead in a time of change and uncertainty, I don't just think about technical knowledge or credentials that someone has acquired through years of schooling or how long they have been in a role. Letters after your name don't mean much when you are faced with making difficult decisions about staffing or services that you may need to cut to make budget. When I think of qualities I want to see in a leader I think about the intangibles—how they represent themselves and the organization, how they interact and treat everyone around them, not just their superiors or their equals in title.

While book knowledge and experience in management are extremely important in running a department, those features alone will not make you a successful manager or a good leader. What you do or say to the staff member struggling to get competent, or who is having family issues that are impacting their work, or the person who needs all your attention and energy to get through the day is what makes a great leader. It isn't enough anymore to only know numbers, formulas, and regulations. Being a leader means making the hard and difficult decisions and being able to present them to the staff in a mature and compassionate way. It means being available to your staff, being open to their suggestions and ideas, it means listening before speaking, and it means being there when they need you to listen to them vent about life.

I have a rule that I don't go out with my staff for after work outings. I don't friend any of my co-workers on Facebook or Instagram or follow any of them on Twitter. I like to keep work and family separate. That doesn't mean I don't care about my staff or don't know anything about them and their lives away from the hospital. It doesn't take much to be the leader who your staff can trust. A friendly and sincere hello in the morning, asking how a child did in school or some sporting event, asking how a sick parent is feeling are all examples of how a leader works with their staff to show compassion and empathy. It isn't always

the grand gestures or actions that a staff person needs to see from their leaders to realize that they care about them. Sometimes it's the small things that matter the most to an associate and what turns a manager into a leader.

It's not always easy to make that leap from manager to leader. There are plenty of times when I am not in the mood to be that person available to staff. On more than one occasion I would be in my office when someone would come in to talk and my first thought would be, "Why didn't I close the door?" You could be dealing with a huge problem or catastrophe and you feel like you are just rearranging the deck chairs on the Titanic and this person wants to show you pictures of their cat being cute and all you want to do is tell them to go away. But you don't because you know that they are one of your better employees willing to do anything they can to make the department run as smooth as possible so you stop what you are doing to look at the video of a cat chasing a Doberman up a tree. And you realize that you just made that person's day a little better and that they will go out there and be an advocate for your department, your patients, and for you.

In the end, while volumes, expenses, productivity targets, regulations, requirements, etc. etc are all important and need to be addressed, nothing is more important than relationships and keeping staff engaged and feeling part of the process

and part of the team. While your job is to manage all the technical and financial aspects of the imaging department it is also necessary to lead the people within the department. To be an example to them of what it means to be in health-care, to be in imaging, and to be a part of other people's lives. I am an avid reader of the AHRA Forum (www.ahraonline.org/connect). I read the posts daily and try to contribute whenever I can. One of the things I most enjoy about it is Jim Sutton's management quotes of the day. In a recent post there were a few examples of what I hope I communicated in this column:

"People want to know how much you care before they care how much you know."
—James F. Hind

"It's not true that nice guys finish last. Nice guys are winners before the game even starts."
—Addison Walker

"Goodness is the only investment that never fails."
—Henry David Thoreau

Be a leader and an example to everyone you come in contact with and you'll have a productive and happy team. You can't do it alone no matter how many degrees or years of experience you have as a manager. Your most critical and precious assets are the people you work with. For you to be successful they need to be successful. Learn to lead them and the managing stuff will be easy. 🍏

Paul A. Dubiel, MS, RT(R), CRA, FAHRA has been the senior director, imaging at Seton Family of Hospitals in Austin, TX since 2002. An AHRA member since 1993, he is currently editor-in-chief of Radiology Management and has volunteered for numerous other task forces and committees. Paul can be contacted at pdubiel@seton.org.



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Perspective: Election 2016

By Bill Finerfrock and Nathan Baugh

You may know where Donald Trump stands on building a wall, or where Hillary Clinton stands on mandating equal pay for women, but what about their healthcare proposals? While perhaps not the dominant issue it once was during the Affordable Care Act (ACA) debate, federal healthcare policy may be significantly altered again as a result of this election. While it is not our role to promote Trump over Clinton or vice versa, we do feel that AHRA members should understand what to expect given the potential outcomes of the election.

Of course, any true election analysis is complicated by the numerous potential combinations of who controls the White House, Senate, and House of Representatives. While the presidential candidate's platforms are important to examine, the make-up of the Senate and the House will play a large part in determining what policy proposals actually make it across the finish line.

No Matter What

MACRA Implementation

There are certain policies that, regardless of what happens in November, are widely expected to continue. Most notably, the Medicare payment reforms initiated by last year's passage of MACRA

(Medicare Access and CHIP Reauthorization Act) enjoy bipartisan support. However, the implementation of these reforms will continue to be a hot topic in the healthcare industry for the foreseeable future. The legislation gives the administration significant authority to develop the granular details for how the law will function. A new administration would be able to tweak those provisions—ie, reducing the reporting period from a year to 90 consecutive days. Barring an act of Congress, MACRA is here to stay.

Cadillac Tax Delay or Repeal

One aspect of the ACA that we expect to be revisited is the 40% excise tax on expensive employer health benefit plans colloquially referred to as the Cadillac Tax. The tax has already been delayed for two years by Congress and both business and labor interests have joined forces to support eliminating the tax altogether. The tax was designed to discourage individuals from picking the most expensive (and most generous) health insurance. Such "Cadillac" plans often had low deductibles and co-pays which economists argued led to overutilization of healthcare and higher healthcare costs. While the Cadillac Tax is certainly unpopular, Congress may find it difficult to replace the \$87 billion of

revenue the tax is projected to generate over ten years.¹

Site-Neutral Payment Policies

Another issue that will likely be revisited by Congress is the so-called "site-neutral" payment policies. You may recall that in 2015 Congress passed a budget deal which stated that newly established off-site hospital outpatient departments (HOPDs) would no longer get paid via the hospital outpatient prospective payment system (HOPPS), but rather under the physician fee schedule. Earlier this year, the House Energy and Commerce Committee sought feedback from the healthcare community on further site-neutral provisions which is indicative of Congressional appetite to revisit these payment policies. AHRA remains opposed to further cuts to imaging payments and is working with other organizations to ensure that the Medicare payment for the technical component of imaging is economically viable.

Democratic Landslide

Lowering the Medicare Enrollment Age to 55

Hillary Clinton represents, in many ways, the continuation of Obama's healthcare policies. She is proposing to retain the

core components of the ACA such as the individual mandate and the laws against denial due to pre-existing conditions. One of her more significant proposals is to allow Americans 55 or older to enroll in Medicare. The concept is that the younger, healthier enrollees could opt-in to Medicare which would bring in additional premium dollars to the program, while simultaneously costing Medicare less than the older beneficiaries enrolled. This could also help stabilize the State and Federal Health Insurance Exchanges by removing a significant portion of the most expensive population from the risk pools.

Public Option

An item that most Democrats pushed for in the initial debate around the ACA, the public option would involve the creation of government insurance to compete against commercial insurance plans in the individual market and potentially the group market. Republicans see this as a stepping stone towards a single-payer system and are very much opposed to the concept. This would require a very large democratic landslide to be feasible.

Republican Landslide

Repeal of Affordable Care Act

This would be very likely if Republicans sweep the White House, Senate, and House of Representatives. Even if Republicans did not have the votes to replace the ACA, they could use a procedure known as “reconciliation” to effectively halt the ACA in its tracks. Most notably, Republicans could use this process to eliminate the individual mandate and would no longer penalize employers if they don’t offer health insurance to their employees. They would also be able to eliminate the federal funds for states that expanded Medicaid, which may force states that chose to expand Medicaid to go back to their old eligibility requirements.

Selling Insurance across State Lines

Republicans may push to change the law that currently prohibits the sale of

health insurance across state lines. Such a change would allow small businesses, associations, or groups more purchasing power when negotiating with insurance companies on behalf of their employees. Proponents argue that this would also allow for more competition among insurance companies.

Block Grants to States for Medicaid

Block-granting Medicaid involves devolving power to the states regarding Medicaid coverage decisions. Republicans argue that a block grant system would be more efficient and provide states the opportunity to innovate their Medicaid programs. The federal government would provide a lump sum payment to each state based on their Medicaid enrollees, and it would be up to the states to design the rest. The block grant payments, while indexed for inflation and population growth, would reduce federal spending on Medicaid. Democrats argue that states would be forced to reduce benefits and would not be able to make up in innovation what they lose in federal dollars. It would likely require strong Republican majorities to pass.

Divided Government

Perhaps one of the most likely outcomes, a divided government would halt many of the above policy proposals and largely retain the status quo. However, one significant piece of legislation that could emerge from a divided government is the 21st Century Cures Act, which dramatically reforms and streamlines the FDA drug approval process while simultaneously increasing funding for research at the National Institutes for Health.

Happy election year! 🍀

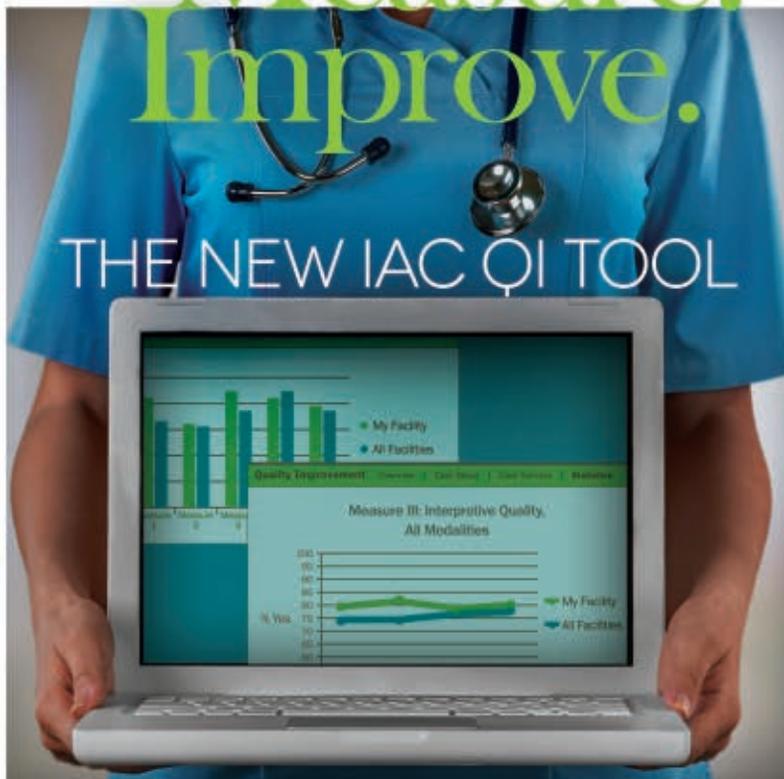
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Diabetic nephropathy may predispose to acute renal impairment following intravascular contrast media administration. Acute renal impairment following contrast media administration may precipitate lactic acidosis in patients who are taking biguanides. Preparatory dehydration is dangerous and may contribute to acute renal failure in patients with advanced vascular disease, diabetic patients, and in susceptible nondiabetic patients (often elderly with preexisting renal disease). Patients should be well hydrated prior to and following iopamidol administration.

The possibility of a reaction, including serious, life-threatening, fatal, anaphylactoid or cardiovascular reactions, should always be considered. Patients at increased risk include those with a history of a previous reaction to a contrast medium, patients with a known sensitivity to iodine per se, and patients with a known clinical hypersensitivity (bronchial asthma, hay fever, and food allergies).

*The Isovue Imaging Bulk Package is for use with an automated contrast injector or a contrast management system approved or cleared for use with it.

Please see abbreviated ISOVUE IBP Prescribing Information on the following page. You are encouraged to report negative side effects of prescription drugs to the FDA. Visit www.fda.gov/medwatch or call 1-800-FDA-1088.

Reference: 1. Ma X, Singh A, Fay J, Boland G, Saltani DV. Comparison of Dual-Syringe and Syringeless Power Injectors in Outpatient MDCT Practice: Impact on the Operator's Performance, CT Workflow, and Operation Cost. *Journal of the American College of Radiology*. 2012;9(8):578-582.

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Isovue® Imaging Bulk Package

For use only with an automated contrast injection system or contrast management system approved or cleared for use with this contrast agent in this Imaging Bulk Package.

ISOVUE®-300 **ISOVUE®-370**
lopamidol Injection 61% **lopamidol Injection 76%**

NOT FOR INTRATHECAL USE

Rx ONLY

CONTRAINDICATIONS None.

WARNINGS Severe Adverse Events-Inadvertent Intrathecal Administration Serious adverse reactions have been reported due to the inadvertent intrathecal administration of iodinated contrast media that are not indicated for intrathecal use.

These serious adverse reactions include: death, convulsions, cerebral hemorrhage, coma, paralysis, arachnoiditis, acute renal failure, cardiac arrest, seizures, rhabdomyolysis, hyperthermia, and brain edema. Special attention must be given to insure that this drug product is not inadvertently administered intrathecally.

General Nonionic iodinated contrast media inhibit blood coagulation, in vitro, less than ionic contrast media. Clotting has been reported when blood remains in contact with syringes containing nonionic contrast media.

The use of plastic syringes in place of glass syringes has been reported to decrease but not eliminate the likelihood of in vitro clotting.

Caution must be exercised in patients with severely impaired renal function, those with combined renal and hepatic disease, or anuria, particularly when larger doses are administered.

Radiopaque diagnostic contrast agents are potentially hazardous in patients with multiple myeloma or other paraproteinemia, particularly in those with therapeutically resistant anuria. Myeloma occurs most commonly in persons over age 40. Although neither the contrast agent nor dehydration has been proved separately to be the cause of anuria in myelomatous patients, it has been speculated that the combination of both may be causative. The risk in myelomatous patients is not a contraindication; however, special precautions are required.

Contrast media may promote sickling in individuals who are homozygous for sickle cell disease when injected intravenously or intraarterially.

Administration of radiopaque materials to patients known or suspected of having pheochromocytoma should be performed with extreme caution. If, in the opinion of the physician, the possible benefits of such procedures outweigh the considered risks, the procedures may be performed; however, the amount of radiopaque medium injected should be kept to an absolute minimum. The blood pressure should be assessed throughout the procedure and measures for treatment of a hypertensive crisis should be available. These patients should be monitored very closely during contrast enhanced procedures.

Reports of thyroid storm following the use of iodinated radiopaque diagnostic agents in patients with hyperthyroidism or with an autonomously functioning thyroid nodule suggest that this additional risk be evaluated in such patients before use of any contrast medium.

PRECAUTIONS General

Diagnostic procedures which involve the use of any radiopaque agent should be carried out under the direction of personnel with the prerequisite training and with a thorough knowledge of the particular procedure to be performed. Appropriate facilities should be available for coping with any complication of the procedure, as well as for emergency treatment of severe reaction to the contrast agent itself. After parenteral administration of a radiopaque agent, competent personnel and emergency facilities should be available for at least 30 to 60 minutes since severe delayed reactions may occur. Caution should be exercised in hydrating patients with underlying conditions that may be worsened by fluid overload, such as congestive heart failure.

Preparatory dehydration is dangerous and may contribute to acute renal failure in patients with advanced vascular disease, diabetic patients, and in susceptible nondiabetic patients (often elderly with preexisting renal disease). Patients should be well hydrated prior to and following iopamidol administration.

The possibility of a reaction, including serious, life-threatening, fatal, anaphylactoid or cardiovascular reactions, should always be considered (see **ADVERSE REACTIONS**). Patients at increased risk include those with a history of a previous reaction to a contrast medium, patients with a known sensitivity to iodine per se, and patients with a known clinical hypersensitivity (bronchial asthma, hay fever, and food allergies). The occurrence of severe idiosyncratic reactions has prompted the use of several pretesting methods. However, pretesting cannot be relied upon to predict severe reactions and may itself be hazardous for the patient. It is suggested that a thorough medical history with emphasis on allergy and hypersensitivity, prior to the injection of any contrast medium, may be more accurate than pretesting in predicting potential adverse reactions. A positive history of allergies or hypersensitivity does not arbitrarily contraindicate the use of a contrast agent where a diagnostic procedure is thought essential, but caution should be exercised. Pre-medication with antihistamines or corticosteroids to avoid or minimize possible allergic reactions in such patients should be considered. Recent reports indicate that such pretreatment does not prevent serious life-threatening reactions but may reduce both their incidence and severity. Pre-existing conditions, such as pacemakers or cardiac medications,

specifically beta-blockers, may mask or alter the signs or symptoms of an anaphylactoid reaction, as well as masking or altering the response to particular medications used for treatment. For example, beta-blockers inhibit a tachycardiac response, and can lead to the incorrect diagnosis of a vasovagal rather than an anaphylactoid reaction. Special attention to this possibility is particularly critical in patients suffering from serious, life-threatening reactions.

General anesthesia may be indicated in the performance of some procedures in selected patients; however, a higher incidence of adverse reactions has been reported with radiopaque media in anesthetized patients, which may be attributable to the inability of the patient to identify untoward symptoms, or to the hypotensive effect of anesthesia which can reduce cardiac output and increase the duration of exposure to the contrast agent.

Even though the osmolality of iopamidol is low compared to diatrizoate or iothalamate based ionic agents of comparable iodine concentration, the potential transitory increase in the circulatory osmotic load in patients with congestive heart failure requires caution during injection. These patients should be observed for several hours following the procedure to detect delayed hemodynamic disturbances. Injection site pain and swelling may occur. In the majority of cases it is due to extravasation of contrast medium. Reactions are usually transient and recover without sequelae. However, inflammation and even skin necrosis have been seen on very rare occasions.

Extreme caution during injection of contrast media is necessary to avoid extravasation.

INFORMATION FOR PATIENTS Patients receiving injectable radiopaque diagnostic agents should be instructed to:

1. Inform your physician if you are pregnant.
2. Inform your physician if you are diabetic or if you have multiple myeloma, pheochromocytoma, homozygous sickle cell disease, or known thyroid disorder (see **WARNINGS**).
3. Inform your physician if you are allergic to any drugs, food, or if you had any reactions to previous injections of substances used for x-ray procedures (see **PRECAUTIONS-General**).
4. Inform your physician about any other medications you are currently taking, including nonprescription drugs, before you have this procedure.

Drug Interactions Renal toxicity has been reported in a few patients with liver dysfunction who were given oral cholecystographic agents followed by intravascular contrast agents. Administration of intravascular agents should therefore be postponed in any patient with a known or suspected hepatic or biliary disorder who has recently received a cholecystographic contrast agent.

Other drugs should not be admixed with iopamidol.

Drug/Laboratory Test Interactions The results of PBI and radioactive iodine uptake studies, which depend on iodine estimations, will not accurately reflect thyroid function for up to 16 days following administration of iodinated contrast media. However, thyroid function tests not depending on iodine estimations, e.g., T₃ resin uptake and total or free thyroxine (T₄) assays are not affected.

Any test which might be affected by contrast media should be performed prior to administration of the contrast medium.

Laboratory Test Findings In vitro studies with animal blood showed that many radiopaque contrast agents, including iopamidol, produced a slight depression of plasma coagulation factors including prothrombin time, partial thromboplastin time, and fibrinogen, as well as a slight tendency to cause platelet and/or red blood cell aggregation (see **PRECAUTIONS-General**).

Transitory changes may occur in red cell and leucocyte counts, serum calcium, serum creatinine, serum glutamic oxaloacetic transaminase (SGOT), and uric acid in urine; transient albuminuria may occur. These findings have not been associated with clinical manifestations.

Carcinogenesis, Mutagenesis, Impairment of Fertility Long-term studies in animals have not been performed to evaluate carcinogenic potential. No evidence of genetic toxicity was obtained in *in vitro* tests.

Pregnancy: Teratogenic Effects Pregnancy Category B Reproduction studies have been performed in rats and rabbits at doses up to 2.7 and 1.4 times the maximum recommended human dose (1.48 g/kg in a 50 kg individual), respectively, and have revealed no evidence of impaired fertility or harm to the fetus due to iopamidol. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nursing Mothers It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when iopamidol is administered to a nursing woman.

Pediatric Use Safety and effectiveness in children has been established in pediatric computed tomography (head and body). Pediatric patients at higher risk of experiencing adverse events during contrast medium administration may include those having asthma, a sensitivity to medication and/or allergens, cyanotic heart disease, congestive heart failure, a serum creatinine greater than 1.5 mg/dL or those less than 12 months of age.

ADVERSE REACTIONS Adverse reactions following the use of iopamidol are usually mild to moderate, self-limited, and transient.

The following table of incidence of reactions is based on clinical studies with ISOVUE in about 2246 patients.

System	Estimated Overall Incidence	
	> 1%	< 1%
Cardiovascular	none	tachycardia hypotension hypertension myocardial ischemia circulatory collapse S-T segment depression bigeminy extrasystoles ventricular fibrillation

Nervous	pain (2.8%) burning sensation (1.4%)	angina pectoris bradycardia transient ischemic attack thrombophlebitis vasovagal reaction tingling in arms grimace faintness
		Digestive
Respiratory	none	throat constriction dyspnea pulmonary edema rash
Skin and Appendages	none	urticaria pruritus flushing headache fever chills excessive sweating back spasm
		Body as a Whole
Special Senses	warmth (1.1%)	taste alterations nasal congestion visual disturbances urinary retention
Urogenital	none	

The following adverse reactions have been reported for lopamidol: **Cardiovascular:** arrhythmia, arterial spasms, flushing, vasodilation, chest pain, cardiopulmonary arrest; **Nervous System:** confusion, paresthesia, dizziness, temporary cortical blindness, temporary amnesia, convulsions, paralysis, coma; **Respiratory:** increased cough, sneezing, asthma, apnea, laryngeal edema, chest tightness, rhinitis; **Skin and Appendages:** injection site pain usually due to extravasation and/or erythematous swelling, pallor, periorbital edema, facial edema; **Urogenital:** pain, hematuria; **Special Senses:** watery itchy eyes, lacrimation, conjunctivitis; **Musculoskeletal:** muscle spasm, involuntary leg movement; **Body as a whole:** tremors, malaise, anaphylactoid reaction (characterized by cardiovascular, respiratory and cutaneous symptoms), pain; **Digestive:** severe retching and choking, abdominal cramps. Some of these may occur as a consequence of the procedure. Other reactions may also occur with the use of any contrast agent as a consequence of the procedural hazard; these include hemorrhage or pseudoaneurysms at the puncture site, brachial plexus palsy following axillary artery injections, chest pain, myocardial infarction, and transient changes in hepatorenal chemistry tests. Arterial thrombosis, displacement of arterial plaques, venous thrombosis, dissection of the coronary vessels and transient sinus arrest are rare complications.

GENERAL ADVERSE REACTIONS TO CONTRAST MEDIA Reactions known to occur with parenteral administration of iodinated ionic contrast agents (see the listing below) are possible with any nonionic agent. Approximately 95 percent of adverse reactions accompanying the use of other water-soluble intravascularly administered contrast agents are mild to moderate in degree. However, life-threatening reactions and fatalities, mostly of cardiovascular origin, have occurred. Reported incidences of death from the administration of other iodinated contrast media range from 6.6 per 1 million (0.00066 percent) to 1 in 10,000 patients (0.01 percent). Most deaths occur during injection or 5 to 10 minutes later, the main feature being cardiac arrest with cardiovascular disease as the main aggravating factor. Isolated reports of hypotensive collapse and shock are found in the literature. The incidence of shock is estimated to be 1 out of 20,000 (0.005 percent) patients.

Adverse reactions to injectable contrast media fall into two categories: chemotoxic reactions and idiosyncratic reactions.

Chemotoxic reactions result from the physicochemical properties of the contrast medium, the dose, and the speed of injection.

All hemodynamic disturbances and injuries to organs or vessels perfused by the contrast medium are included in this category.

Idiosyncratic reactions include all other reactions. They occur more frequently in patients 20 to 40 years old. Idiosyncratic reactions may or may not be dependent on the amount of drug injected, the speed of injection, the mode of injection, and the radiographic procedure. Idiosyncratic reactions are subdivided into minor, intermediate, and severe. The minor reactions are self-limited and of short duration; the severe reactions are life-threatening and treatment is urgent and mandatory.

The reported incidence of adverse reactions to contrast media in patients with a history of allergy is twice that for the general population. Patients with a history of previous reactions to a contrast medium are three times more susceptible than other patients. However, sensitivity to contrast media does not appear to increase with repeated examinations. Most adverse reactions to intravascular contrast agents appear within one to three minutes after the start of injection, but delayed reactions may occur. Delayed reactions, usually involving the skin, may uncommonly occur within 2-3 days (range 1-7 days) after the administration of contrast (see **PRECAUTIONS-General**). Delayed allergic reactions are more frequent in patients treated with immunostimulants, such as interleukin-2.

In addition to the adverse drug reactions reported for iopamidol, the following additional adverse reactions have been reported with the use of other intravascular contrast agents and are possible with the use of any water-soluble iodinated contrast agent: **Cardiovascular:** cerebral hematomas, petechiae; **Hematologic:** neutropenia; **Skin and Appendages:** skin necrosis; **Urogenital:** osmotic nephrosis of proximal tubular cells, renal failure; **Special Senses:** conjunctival chemosis with infection; **Endocrine:** thyroid function tests indicative of hypothyroidism or transient thyroid suppression have been uncommonly reported following iodinated contrast media administration to adult and pediatric patients, including infants. Some patients were treated for hypothyroidism.

OVERDOSAGE Treatment of an overdose of an injectable radiopaque contrast medium is directed toward the support of all vital functions, and prompt institution of symptomatic therapy.



Improving Customer Service with Accommodations and Recognition

By Debra Parrish, MBA, CRA

The credit earned from the Quick Credit™ test accompanying this article may be applied to the CRA operations management (OM) domain.

EXECUTIVE SUMMARY

- Sometimes in life it is the little things that provide for a positive reputation with patients and our communities. There is little money required for each of us to place ourselves in the patient's role and ask ourselves how we would like to be treated.
- Some areas where little to no cost customer service improvements can be made are in scheduling, face-to-face-encounters, and with setting and managing expectations.
- Employees should be encouraged to end each conversation with an expression of gratitude, whether ending a telephone call or showing a patient to the exit—the tone with which a patient encounter ends is as important as how it begins.

In the current healthcare arena, many facilities are strapped for the capital funds required for large scale changes in service delivery, whether it be improved patient parking designs, faster scanners, additional equipment, etc. Also, many department level managers do not have immediate control over requested capital funds, or control over competing capital projects, so measures within the scope of a manager's responsibility should be considered for immediate implementation rather than waiting for future capital funds release. Take action where there is direct control and provide accommodation for patients, families, and providers. This article will explore a few opportunities that should be within direct departmental control and cost little, if anything, to implement.

Scheduling

It all starts with training schedulers to realize that their jobs exist because of our patients. When a patient calls to schedule an appointment, and the scheduler provides an appointment date and time, are patients asked if the dates and times are convenient for their personal schedules? This inquiry sends a clear message to the patient that we are here to serve them,

not for the patient to work around a rigidly set timetable. Additionally, when a representative from a provider's office is calling to schedule a procedure, does the conversation end by asking that the patient contact the imaging facility if the provided appointment date or time is not convenient? Providers and their staff are also consumers. If the facility places value on each patient's time, the providers and their staff will surely take notice and consider the facility when they personally require imaging services.

Schedulers should be encouraged to report any special patient requests or trends to radiology directors so that scheduling changes can be made, or at least considered, in order to accommodate patients. Many special patient requests are readily met when appropriate communication takes place. Examples centered on placing value on each patient's time which schedulers and departments may explore include:

- Screening Mammography: Many working women prefer to have screening mammography procedures performed prior to 8:00 am or after 5:00 pm or even on a lunch break. While a department may not be able to provide that special service five days a week, usually

- one or two days each week or perhaps a Saturday each month should not present an overly burdensome request.
- Abdomen/Pelvic CT scans: If oral contrast for a CT scan of the abdomen is required, is the patient offered the option to pick up the sealed container of oral contrast ahead of time so as not to spend several hours in the department drinking oral contrast? Allowing patients to have a choice in this process gives patients control over their personal schedules. Due to certain state regulations, pharmacies should be consulted to assure compliance with dispensing guidelines.
- Assessing kidney function within department: If intravenous contrast needs to be administered for an MR or CT procedure and the required renal function has not been assessed, does the department use Point-of-Care (POC) testing or call the lab staff and ask that they come to your department to perform POC testing? Implementing this process prevents the patient from going to several departments. Having the patient come an hour or more ahead of time in order to go to the laboratory for blood testing sends a message that the patient is working around standard and perhaps inflexible protocols. Again, focusing on the patient's time should be the goal—consider changes for the convenience of patients. Note that for POC testing to be reimbursable, provider's order and laboratory accreditation may be required; verification of each hospital's or clinic's regulations should be researched.
- At scheduling, are patients provided with proper education that subsequently places value on their time? A few examples to consider may include:
 - Is a patient for a PET scan, bone scan, or small bowel x-ray study informed that several hours may be required for the test? This measure allows patients to provide for appropriate transportation or perhaps time off from work.

- Is a patient for a trans-abdominal pelvic ultrasound study asked to consume a quantity of liquids and have a full urinary bladder at the appointment time? This can prevent a lengthy stay in the department.
- Are mammography patients instructed to bring, or have sent to the facility, any comparative mammography studies? This protocol allows for timely and accurate results reporting.
- Are MRI patients screened ahead of time for the existence of a pacemaker or any other contraindications for MRI scanning? Implementing this protocol may save the patient an unnecessary visit as well as increase staff productivity by alleviating a cancelled appointment.

Face-to-Face Encounters

Studer Group's Five Fundamentals of Communication is AIDET®, an acronym that stands for Acknowledge, Introduce, Duration, Explanation and Thank You.¹ Those who utilize AIDET consistently find it to be a tremendously valuable tool for organizing patient communication and providing patients with the information and caring relationship that they want and need. Most healthcare professionals should be familiar with it:

- A: Acknowledge each patient as a valued customer
- I: Introduce yourself by name
- D: Define what procedure and time interval that will be required
- E: Explain the procedure and ask if there are questions or concerns
- T: Thank the patient and/or family

With this in mind, while providing customer education for the reception of patients, consider scripting the following:

“Good Morning Mr. Jones. My name is Wendy and I will be providing registration for your procedures today. It should only take a few minutes to gather this information, requiring that you read and sign

a few forms. [After explaining the forms and completion of the required protocol.] Thank you for choosing to have your imaging services with us today, we know you have a choice in your healthcare. If you will have a seat one of our technologists will be with you shortly. If you wait more than 15 minutes or if you should have questions, please feel free to step up to the desk and ask me.”

Many technologists express hesitation when a 15 minute time interval is stated. A 15 minute standard does not imply that schedules do not run behind from time to time, but rather the fact that if a patient has to wait 15 minutes past their designated appointment time, they should be provided with an explanation. Defining a time expectation acknowledges that value is placed on each patient's time.

When scripting is implemented, it is important to be sincere and not sound robotic or rehearsed, noting that proper scripting provides for the conveyance of required information at each and every encounter. Appropriate body language, eye contact, and a positive attitude convey a message beyond words, so it is important that the total message be conveyed with sincerity, respect, and professionalism. One practice perhaps of a generational or geographical nature is addressing patients in terms other than by name—eg, when professionals refer to patients as sweetheart or honey. While notably unprofessional, it can also be dangerous, implying an overly personal relationship. Addressing this improper communication practice upon the first encounter is essential for the delivery of reputable and proficient service delivery.

Setting and Managing Expectations

Noted in recent news stories or maybe even in our own emergency departments, there have been reported encounters of distracted people walking onto busy highways, running into brick walls, or maybe stepping off of a curb while texting. What message is being sent to patients if staff are allowed to text in the

The priority while in the presence of patients and visitors should be centered on the patient.

presence of patients? Maybe a secure text is being sent to a provider concerning a patient, but the patient does not know what communication is taking place. They only think the staff member is preoccupied with some social encounter (which maybe they are). Think about the last time you walked down the hallway in the hospital or in your department, how many staff were ignoring visitors and/or patients while texting or talking on their cell phones? The priority while in the presence of patients and visitors should be centered on the patient not on a communication device. If we must use a communication device, inform the patient and/or family regarding why the communication is necessary.

Social media has allowed many staff to avoid the development of good communication skills—that may be the reason, but it certainly is not a defensible excuse. Many patients, particularly elderly patients, are outraged by an employee's use of electronic devices during communication sessions or imaging procedures. Recently, while a patient was in a provider's office having a physical examination, a medical assistant answered a personal cell phone call twice, not to mention the audible text alert sounding throughout the period of time that blood was being drawn. Upon entry of the provider, the patient asked if he was aware that his staff was taking personal calls while attending to patient care routines, to which he replied, "Yeah, it's hard to get good help these days." The patient's outspoken reply was, "It was harder to get paying patients than good help." The patient permanently left the services of the provider after that visit. Two important ideas should be taken away by this encounter: acknowledge patient concerns and know the behavior of staff.

It is hardly ever a good idea to claim a patient is wrong, especially if they are

reporting staff behavior that is described as being inappropriate. Thanking the patient for bringing the situation to your attention is the best idea for improving the circumstances as well as diffusing the situation. Think of a time that you were a customer and complained or brought an issue to a manager's attention. Human nature wants to be validated, so if the complaint was met with a positive reception, you probably have a customer that will return. If complaints are commonly defended or excuses made for inappropriate staff behavior, you will likely lose patients to competition.

We do not always know the practices of staff. Therefore, managers should:

- Define expectations
- Inspect behavior
- Accept whatever behavior management is willing to tolerate

For new staff, on the first day of work, customer service expectations should be defined. Should this expectation be left up to co-workers, less than stellar customer standards may be replicated. After instructions have been provided, managers should verify that staff are implementing the organization's values. Ronald Reagan's motto was, "Trust but verify." Perhaps the best strategy is to trust that our staff are performing appropriately but inspect this behavior on a random but routine basis. Customer service can be evaluated periodically by observation as well as by talking with patients after their procedures. If staff members have dialogue with patients that a manager observes as being inappropriate or requiring improvement, and the manager does not provide the necessary correction, approval is being made by the manager's silence. *Qui tacet consentiret* is the Latin maxim for "Silence gives consent."

Often situations of this nature tend to get out of hand quickly with staff pushing limits when expectations are not enforced.

How many times have senior staff members with an extensive knowledge base gotten somewhat slack regarding the importance of developing and maintaining excellent customer service skills, believing their value to the organization cannot be replaced? This particular paradigm can be challenging because often these employees are informal leaders and their attitudes can rapidly become contagious. New managers frequently inherit this type of employee because previous management tolerated the behavior, allowing an unacceptably low standard to be recognized. The best strategy in this scenario is to start back from the beginning, attempting to retrain the employee: defining expectations in very direct terms (written action plan); inspecting performance for needed improvement (written periodic evaluation); and making a decision if performance has risen to a level allowing for continued employment. Unfortunately, learned behavior can be difficult to modify. Employees requiring behavior modification often rectify performance expectations under the watchful eye of a manager, but with time tend to gravitate towards previous habits. Therefore, ongoing evaluation is necessary if the employee retains employment.

True Gratitude and Encouragement

Over the past few years some patient-centered facilities have concentrated on sincere expressions of true gratitude towards patients and family members. After all, patients have choices and our jobs exist because patients choose our facilities, a fact that should be reinforced with staff. Employees should be encouraged to end each conversation with an expression of gratitude, whether ending a telephone call or showing a patient to the exit—the tone with which a patient encounter ends is as important as how

it begins. While not a requirement, but an opportunity to demonstrate appropriate staff engagement, notes with the facility's logo can be provided for staff communication with patients. For example, an appropriate and simple hand-written note might say: "Thank you, Ms. Jones, for allowing us to serve you yesterday. We hope you choose us the next time you need to have imaging tests performed."

Examples of encounters in which notes may be encouraged include:

- Women undergoing their first screening mammography at the facility, encouraging them to consider the facility's services for their next mammography study
- New patients to the facility, welcoming them to the facility's services
- Get well cards to sick children; children love to get letters in the mail and parents appreciate efforts to recognize children as occupying an important role in service delivery
- If patients are seen on their birthday, sign a birthday card and give it to them before they leave the facility
- And, sadly, extension of sympathy can be made by sending cards to families of patients who pass away

Sometimes in life it is the little things that provide for a positive reputation with patients and our communities. Patients have little idea if our equipment is the latest and greatest, or whether our staff and providers have advanced credentials, but they do know if we acknowledge them on a personal level and place value on their time, emotions, and physical vulnerability. Whether taking the time to acknowledge a lonely patient waiting on transportation, an overwhelmed mother with a crying infant, or a patient concerned about being late for work, each patient is important and should be treated as a priority. There is little money required for each of us to place ourselves in the patient's role and ask ourselves how we would like to be treated. 🌱

Reference

¹Rubin R. AIDET® in the Medical Practice: More Important than Ever. The Studer Group. November 17, 2014. Available at: <https://www.studergroup.com/resources/news-media/healthcare-publications-resources/insights/november-2014/aidet-in-the-medical-practice-more-important-than>. Accessed May 23, 2016.

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Improving Customer Service with Accommodations and Recognition

Home-Study Test

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Carefully read the following multiple choice questions and take the post-test at AHRA's Online Institute (www.ahraonline.org/onlineinstitute)

The credit earned from the Quick Credit™ test accompanying this article may be applied to the AHRA certified radiology administrator (CRA) operations management (OM) domain.



QUESTIONS

Instructions: Choose the answer that is most correct. Note: Per a recent ARRT policy change, the number of post-test questions has been reduced from 20 to 8.

1. **Schedulers can improve service delivery by:**
 - a. Offering appointment dates and times that are in the afternoon so that inpatients can have examinations in the morning
 - b. Accommodating special requests of providers and patients
 - c. Informing patients that special requests are not accepted due to staffing models
 - d. None of the above
2. **When a facility provides screening mammography, service delivery can be increased by:**
 - a. Offering appointments prior to 8:00 am, after 5:00 pm, or during lunch periods
 - b. Offering screening appointments on weekends
 - c. Obtaining previous mammography prior to the patient's appointment
 - d. All of the above
3. **In Studer's Five Fundamentals Communication, the E stands for:**
 - a. Excellent service all the time
 - b. Explanation
 - c. Exceed expectations
 - d. Effort
4. **Defining a time expectation acknowledges that value is placed on each patient's:**
 - a. Time
 - b. Finances
 - c. Injury
 - d. Family
5. **Which of the following conveys a message beyond words?**
 - a. Body language
 - b. Eye contact
 - c. Positive attitude
 - d. All of the above
6. **Managers should:**
 - a. Secretly monitor each time a staff member goes to the restroom
 - b. Ask staff to wear body cameras so the managers can observe all staff actions
 - c. Define the expectations of each staff member on the first day they begin work
 - d. Trust staff to act appropriately, without verification
7. **Qui tacet consentiret applied to the context of this article means:**
 - a. Staff get recognition in exchange for superior performance
 - b. If a manger remains silent, knowing a staff member is not performing appropriately, the manger is essentially approving of the action
 - c. Allowing more experienced people to mentor less experienced people
8. **Employees requiring behavior modification often rectify behavior, but tend to gravitate towards learned behavior over time.**
 - a. True
 - b. False

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Four Ways to Enable, Educate, and Engage Patients

By Randy Blue

High deductible insurance plans are on the rise, and patients are increasingly expected to pay for more and more of their own healthcare expenses. HDHPs (high deductible health plans) tripled between 2009 and 2015, while average out of pocket costs per worker increased by 230%.¹

In the age of healthcare consumerism, the old school focus on insurance companies as primary payers has been replaced with a modern approach: treat patients as your primary customers. Patient satisfaction reports factor heavily into performance bonuses and penalties for healthcare providers.² This means that it's crucial to make patient friendly billing a priority.

Enabling the healthcare consumer to self-engage with their payment process and responsibility has become the new goal. A key to succeeding today is to make it easy for consumers to make a comfortable, well-informed purchasing decision. Patients crave information up front and are prepared to reward practices that provide them educated choices: 52% of consumers surveyed indicated that they would pay \$200–\$500 or more via debit or credit card if an estimate was provided during their visit.³

To create more engaged patients, there are four key areas on which to focus. The tenets of securing a higher percentage of payment in the age of patient consumerism

include utilizing estimates, tech partners, intuitive tools, and prioritizing the POS.

Estimates

One of the ways that the healthcare industry is well behind the curve in the age of consumerism is in failing to treat care as a service to be purchased. Similar to nearly every other purchasing situation, consumers want to know the cost of their healthcare up front. According to a recent TransUnion survey, 80% of respondents would be more likely to use a healthcare provider that offers cost estimates up front. Despite that, only 30% were offered estimates prior to care.⁴

Though it's impossible to give an exact quote, high-performing practices are providing customers with estimates based on their unique situation, including insurance coverage and any other relevant factors. By answering the clear demand for pre-treatment cost estimates, practices give patients an important piece of the information necessary to purchase healthcare services.

Tech Partners

Practices that get sucked down into the bad debt cycle end up paying for their mistakes. All too often, staff members wind up inundated with paperwork and they, or third party agencies, are left to

chase small balances from non-payers. It's inefficient and a major hindrance to profitability and time efficiency.

Technological advances spare practices significant administrative costs and free staff members to focus on providing excellent customer service, in both patient care and other core duties. Software solutions provide unparalleled accuracy, security, doggedness, and cost efficiency for both practices and ambulatory care centers.

Intuitive Tools

The effectiveness of the technology used is correlated with the ease of use. If patients aren't comfortable adopting a new system because it doesn't function simply or provide added benefit, practices can't capitalize on it—no matter how wonderful its features may be.

Enable a user-friendly device, system, or portal and reap the rewards. Patients will easily see the value of getting accurate information up-front without having to stumble through complicated software or difficult tools. Providing choices of which devices to use (like a mobile app or tablet compatibility) puts the power in the hands of the healthcare consumer.

Check-in kiosks are one way to meet consumer demand for transparency in a way that's easy to use. Patients can arrive

at an office, enter their relevant information, and receive an estimate immediately. Their information, including a credit card number for later payment, can be stored securely on file. This eliminates redundancy and administrative burden while making it much easier and more likely to collect on a bill.

Prioritize the POS

Practices that intend to secure only the copay during the visit and then follow up months later (expecting to see full payment on patient bills) are setting themselves up for failure. However, did you know that greater than 90% of all patients are willing to pay for their care at the point of service—yet more than 30% walk out of a practice without paying a dime?⁵ Clearly, there is a tremendous opportunity that is missed when practices or ambulatory centers aren't prepared to collect from the outset.

The solution to this revenue loss is in collecting payment information up front. Why wait months and hope they're still prepared to pay when consumers are ready, able, and willing to pay on the spot? Your automated, easy-to-use system should collect payment information prior to a patient visit immediately after they've seen an estimate. Consumers appreciate the transparency and are more likely to pay when they feel as if accepting care is their choice and they are getting a fair deal.

Implement the usage of estimates, tech partners, intuitive tools, and prioritizing the POS and you'll see a significant uptick in revenue and a rapid decline in bad debt. These operational changes could be enough to make a struggling practice profitable, or an average practice thrive. 🌱

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Accounting Basics Part 1: Application in Healthcare

By Carole A. South-Winter, EdD, CNMT, RT, FAEIRS and Jason C. Porter, PhD

The credit earned from the Quick Credit™ test accompanying this article may be applied to the CRA fiscal management (FM) domain.

EXECUTIVE SUMMARY

- Accounting terminology and methods are essential parts of management and can be used to improve the efficacy of communication with other managers and executives. While learning these terms and methods can seem daunting, the rewards are well worth the effort.
- Accounting terminology can seem almost as complex as medical terminology: revenues, expenses, IRR, net present value, and profit. However, managers and supervisors don't need to understand all of those terms, just those most commonly used. Once those basics have been mastered, they will provide sufficient background to understand the many forms, information requests, and questions accounting and finance leaders will provide and request.
- Imaging supervisors and directors can use these terms and methods to successfully communicate with management about resources needed and their impact on the community and the bottom line of the organization. The reward for the time spent is well worth the effort.

Budgeting, payroll, spreadsheets, tables, finances. For many newly promoted imaging managers and even some seasoned administrators these words invoke more stress than a Code Blue. It can be a struggle to work through the numbers senior leaders request or that need to be reviewed on a regular basis. However, numbers don't have to be intimidating. In fact, with a little training and the right attitude, they can help get the job done more efficiently and make arguments for resources more effective.

Imaging departments are a major component of healthcare systems in the United States. They also have some of the most expensive equipment, which takes up a significant portion of an organization's budget. However, the typical career progression for an imaging administrator has been promotion because of outstanding performance as a technologist or therapist, which has a completely different skill set from a managerial position. These leaders, when promoted into management, "often become managers by default, learning on the job in a reactive method rather than a pro-active fashion."¹ Imaging administrators are promoted because of their successes as technologists in technical aspects of radiology, and in deference to their years of

experience dealing with administration, especially accounting.

This three part series will walk through accounting basics that will provide some basic context, walk through an example that demonstrates basic accounting methods, and discuss how to organize and present numbers more effectively. Throughout the series, how one can effectively support the need for capital resource purchases for successful department outcomes will also be addressed. While there are many other areas where attention could be focused, capital budgeting requests are often one of the most difficult areas to champion without financial justification. You have to know and use the numbers more carefully when asking for the funds to make big purchases than in making many other arguments. With that in mind, why the numbers are so important will be discussed, as well as how to gather them and put them to work and how to use them to make a compelling argument.

Why Learn about the Numbers?

It's usually at about this point that many health providers experience conflict—eg, jobs should be about saving lives, not bottom lines; the focus on numbers and not people is part of the problem;

attention should be on trying to fix the problem, not becoming part of it, etc. In a way, these arguments are accurate. Healthcare providers should be focusing time and energy on helping patients, not fighting for resources. But part of patient care is providing appropriate resources to serve them. Without funding, organizations can't keep their doors open to provide prevention, diagnosis, and treatments for patients. Without growth, equipment can't be purchased or services can't be provided that are needed to help the community (or patients and their families) more effectively. Without controls, costs can't be kept down so that resources are focused where they should be: on patient care. Without numbers, administrators at all levels struggle to communicate what they need and why they need it to the board of trustees and financial staff. The numbers may not be part of actual healthcare, but it makes care more effective and allows for successful outcomes.

Decisions in health services are driven by both quantifiable and qualitative information. Administrators lacking quantifiable justification, options, or sustainability projections often find their pleas ignored or discounted because they are missing an important part of the information upper management needs to make effective decisions. This approach is not only inefficient but potentially detrimental to departments and careers, since it wastes time and damages credibility when executives aren't convinced to invest in worthwhile projects. Because the numbers are so important, especially to the executives that make the final decisions, they are not going away. That means there is a choice: develop accounting skills and use the numbers effectively, thus reducing the amount of time spent fighting them, or continue to hate and ignore the numbers, thus increasing the time spent arguing and losing battles.

So, how can the numbers be used to provide greater health service instead of simply giving everyone headaches, stress, and hours of frustration? The first step is to take a little time for a refresher

on basic accounting terms and techniques. Once a few basics are mastered, then move on to providing budgets and numbers when considering the affordability and sustainability of a procedure, equipment, or service line. Administrators will also be able to "talk the talk" when they need to quantify, compare, and justify decisions. As a side benefit, this knowledge makes managers look more competent and can provide an "in" with executive administration.

Common Terminology

Accounting is the process of tracking all of the numbers in a business or other organization and putting them together in forms and reports that can be used effectively by decision makers. These forms and reports include the departmental forms that are seen on a regular basis, special forms and summaries of internal numbers that go to senior management and the board of directors, formal financial reports that go to the bank and external investors, and specialized reports that go to the IRS, Medicare, Medicaid, and other insurers and regulators. The accounting department may request a lot of information, but they are taking care of tons of paperwork so that other departments don't have to see it at all.

When imaging administrators get those forms and requests there are a lot of specific terms that may not be familiar. For example, accountants refer to the money going out of the healthcare institution as "outflows," "fees," "costs," and "expenses" and the money coming in as "inflows," "gains," and "revenues." While there are some small distinctions that accountants keep track of, others can interpret and use these terms pretty much interchangeably, since they all refer to funds coming in or going out. Along with these inflows and outflows are the terms "profit," "income," and "loss." Each of these typically refers to the net difference between inflows and outflows. They can be applied to particular procedures (eg, the profit on each EKG

performed is \$40), departments (eg, this month radiology lost \$15,000), or the whole organization (eg, the hospital's net profit for the year is \$76,000). Profit and income mean that money was made and are shown without special marks or sign; losses mean that money was lost and are typically shown in parentheses. So, if the final number on an accounting form is \$15,500, then that's a good thing because more came in than went out, but if it's written as (\$15,500) then that's bad because more went out than came in. Management focuses on profit and income because it demonstrates the ability to keep the doors open, meet payroll, and keep providing care, and for many organizations they are funds that can be reinvested in new equipment or other growth.

The next set of terms that are likely to be dealt with are "rates." Tax rate, for example, is the percentage of profit that goes to the government. Accountants also talk about tax rates for sales tax or income tax (in a for-profit practice or organization), and they discuss several other important rates as well. For example, a "rate of return" refers to how much an investment brings in each year. If someone were to invest in a CD with a bank at 3% interest, then the accounting phrase would be that person has a 3% rate of return on the CD. If a facility invests \$1,000,000 in a new piece of equipment, and the profit on that equipment is \$100,000 each year, then that's a 10% rate of return ($\$100,000 / \$1,000,000$). Accountants will also talk about an "internal rate of return," which is the goal for all investments. Usually, this internal rate of return is based on the interest being paid on debt (eg, 5%), the amount of growth the organization wants to make (eg, 3%), and in for-profit practices the amount the owners want to earn (eg, 4%). To accomplish all three of these goals, each new project would need to earn 12% interest, so they would use that 12% as a threshold for each new project or piece of equipment being considered. Management focuses on rates of return because they help insure

repayment of debt obligations, future growth, and stakeholder involvement (if they walk away, the facility may close).

There are two more accounting terms worth discussing at this stage. The first term is a “payback period.” The payback period is how long it will take to get an investment back out of a large capital expenditure. To use a simple personal example, assume that a couple decided to buy a small house for \$200,000, and each year of owning the house they saved \$20,000 in rent expense and spent \$15,000 in mortgage payments and maintenance. That produces a saving or “profit” for each year of \$5,000, which would lead to a payback period of 40 years: $\$200,000 / \$5,000 = 40$. In other words, if the couple were to save that \$5,000 in reduced costs each year, they would have the money to buy a new \$200,000 home in 40 years. Not the best payback period (waiting for 40 years to get the money back would be difficult), but it demonstrates how the method works. Because it is relatively easy to calculate, payback period is used by many groups as a way to sort through capital budget proposals quickly, and then they can do a detailed analysis for the four to six proposals with the best payback periods.

The last term to be defined in this article is “net present value.” This is probably the most abstract of the terms laid out here, but it is also one of the most commonly used methods for determining whether or not to invest in a new project, so it’s worth understanding. “Present value” is how much the funds received in the future are worth today. Say, for example, that you have been promised that when Great Aunt Martha dies you’ll get \$5,000, but Great Aunt Martha is in great shape and will probably be with us for at least another 10 years. Most of us tend to start thinking about what we would do with \$5,000,

but that could lead to disappointment. You won’t get that money for at least 10 years (or longer). By the time 10 years has rolled around, that \$5,000 won’t buy as much as it would have today. Think about what has happened to food prices, rent, insurance costs, utility prices, etc. in the last 10 years. That \$5,000 would have bought a lot more 10 years ago than it will today, and it will buy less in 10 years than it will now. Present value is a way to adjust the \$5,000 received a future time to today dollars.

Present value is used all the time in society. The bank uses it to figure out how much they will charge on a loan, an investment manager uses it to help make decisions on where to invest so a client will be ready for retirement, and companies use it to help decide when and where to invest funds now to get the best return in the future. And that’s where “net present value” comes in. The net present value is an accounting calculation that uses the organization’s internal rate of return (often abbreviated “IRR”) to compare the cash outflows over the life of the project to the cash inflows. If the net present value is positive, then the project is a good deal because it means that we will have more buying power at the end of the project than we do now. If the net present value is negative, then the project is not a good deal because it means that we will have less buying power at the end of the project than we do now. If the net present value comes out as “0,” then the project is a neutral deal because there will be the same buying power at the end of the project as there is now.

Financial management focuses on payback periods, net present values, and other accounting decision-making methods because they provide a way to compare the large number of capital budget proposals seen every year. They also use them to make sure that investments today will

not hurt the organization, or as a way to see how much they need to make in fundraising to offset negative values and still retain the ability to grow. Keep in mind that most business decisions, as least from a healthcare perspective, have to balance the needs of current patients with those that they want to be able to serve in the future. The numbers provide information not on “filthy lucre,” but on whether or not the facility can be kept running for the next 50 years to help the community as much as possible.

Developing Accounting Skills

Today’s imaging administrators have the opportunity to help improve healthcare for the community they live in, not just for today but for years to come. However, in order to make those improvements, they will need to have a full set of business skills to go along with healthcare skills. To achieve effective results, managers need to acquire skills (conception/creative, leadership, interpersonal, administrative, and technical) before they attempt to apply those skills to the work situation.² Many managers in the radiological sciences began as staff technologists and moved up into management because of their technical skills. With those basics, many can move forward, picking up the other essential skills, such as accounting, as they go along if they have the desire to progress as leaders. Accounting is commonly referred to as “the language of business.” Since it is a separate language, one studied by business majors and accountants, not necessarily healthcare professionals, it’s okay to not yet be fluent in accounting speak.

With the basic terms in this article, and the methods to be discussed in parts two and three of this series, a beginner will be well on his or her way to acquiring the accounting skills necessary for a successful career in imaging administration. In addition, there are many books dedicated to helping individuals learn these important skills, and they are worth time and effort to study them. One good example is *Financial Management*

Today’s imaging administrators have the opportunity to help improve healthcare for the community they live in, not just for today but for years to come.

in Radiology (2nd Edition), which provides a reference to expand on the basics in this first part in the series and offers practice creating and analyzing financial statements, coding and billing reporting, pro formas, business plans, and corporate compliance plans.³ 

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Accounting Basics Part 1: Application in Healthcare

Home-Study Test

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Carefully read the following multiple choice questions and take the post-test at AHRA's Online Institute (www.ahraonline.org/onlineinstitute)



The credit earned from the Quick Credit™ test accompanying this article may be applied to the AHRA certified radiology administrator (CRA) fiscal management (FM) domain.

QUESTIONS

Instructions: Choose the answer that is most correct. Note: Per a recent ARRT policy change, the number of post-test questions has been reduced from 20 to 8.

- 1. Decisions in healthcare are driven by:**
 - A. Quantitative information
 - B. Qualitative information
 - C. Both A and B
 - D. None of the above
- 2. Which of the following refers to money going out of a healthcare institution?**
 - A. Gain
 - B. Revenue
 - C. Cost
 - D. Inflow
- 3. Which of the following denotes a loss in profit or income?**
 - A. \$15,500
 - B. (\$15,500)
 - C. +\$15,500
 - D. (-) \$15,500
- 4. Internal rate of return refers to:**
 - A. The interest being paid on debt
 - B. The amount the employees want to earn
 - C. Amount an investment will bring in every year
 - D. A threshold for each new project or piece of equipment being considered
- 5. The payback period is how long it will take to get the initial investment back out of a capital expenditure.**
 - a. True
 - b. False
- 6. Which of the following statements is not true regarding net present value?**
 - A. Uses the organization's internal rate of return to compare the cash outflows over the life of the project to the cash inflows
 - B. Used by many groups as a way to sort through capital budget proposals quickly
 - C. Is not used as an accounting calculation today
 - D. Is one of the most commonly used methods for determining whether or not to invest in a new project
- 7. Financial management in healthcare must:**
 - A. Create a method for shameful profit
 - B. Balance the needs of current patients with those that they want to be able to serve in the future
 - C. Predict staffing shortages
 - D. Rely on federal interest rates to determine profit
- 8. Accounting is often referred to as:**
 - A. The bane of my existence
 - B. A predisposing factor to stroke
 - C. A necessary evil
 - D. The language of business

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Bobbie O'Brien

By Mark Lerner

Approximately 16 years ago I met Bobbie O'Brien, an implementation specialist for Powerscribe, the voice recognition software company. About a year and a half later, Ms. O'Brien passed away when she had an undiagnosed abdominal aneurysm burst while at home painting one of the rooms of her house with her husband. She left behind her spouse and two children. To this day I am grateful for how she helped me at my job. Please allow me to explain.

In the year 2000, my physician chairman of radiology and I were trying to prepare the next year's budget. The way the budgeting process worked at the hospital where we worked was that each department was given a specific margin goal built around revenue minus expenses. The leadership of the facility did not care how you met the financial target. In other words, if you could bring in added revenue to meet the number then that was acceptable. Alternatively, reducing expenses was another strategy for getting to the same end point. It really didn't matter what path was chosen, but department heads were held strictly accountable for meeting the bottom line number.

My boss and I were at a point that we really felt we could not reliably commit to attracting new business, and we believed that we had reduced costs to the lowest possible level. However, there was one step we thought we could take to meet the margin. For the creation of radiology reports of exam interpretations we were utilizing an outside transcription service that was costing us over \$100,000 a year. The quality of this service was

poor in that it could take an hour to receive a typed report back to us or it could be days. Despite multiple conversations with the transcription company there was never any significant lasting improvement in turnaround times.

My chairman and I therefore determined that we would propose eliminating the cost of the service by converting to reports completed by the radiologists themselves utilizing voice recognition technology. Although this tool was fairly new at the time we understood that Powerscribe was the market leader in the field. The change was incorporated into the following year's operational budget.

Information technology projects were managed by the hospital's central IT department. So we set up a kickoff meeting with their staff. Bobbie O'Brien took a three hour flight to come in for the session. She had created an agenda that would last most of an eight hour day. However, within ten minutes of the conference starting one of the three IT department representatives announced that they had too much work already on their plate to take on the Powerscribe implementation, and as a group they stormed out of the room.

The chairman and I looked at each other in shock. We didn't know what to do. Meeting our budget was contingent on completing this installation and now there was no one to help us. Ms. O'Brien immediately came to our aid. She announced that she would complete the project herself as a Powerscribe turnkey installation. The only thing that she would need the hospital staff

for, she asserted, was the assigning of IP addresses. We quickly and graciously accepted her offer.

Ms. O'Brien bought the servers and workstations herself and loaded the necessary software. She also trained the doctors in its use. When we were about a week from our go-live date and Ms. O'Brien was back with her family I walked around the department and tried to boot-up the computers. To my surprise and consternation most of them did not work. I then placed a panicked call to Ms. O'Brien explaining my dilemma, leaving a message on her company's voicemail. She was not scheduled to return to my hospital until the day before we started using the new technology.

The next morning I arrived at my office at my usual time of 8:00 AM. As was my ritual I started checking emails, but I was startled by the sound of someone passing in front of me. I looked up and smiled. It was Bobbie O'Brien at my door. She must have recognized my uneasiness and decided to immediately travel to my hospital. She didn't even bother to tell me she was coming.

The transition to voice recognition for the creation of radiology reports went practically flawless. Of course, that never would have happened if not for the superior efforts of Bobbie O'Brien. I think of her often, perhaps because nothing would make me prouder than to be the next Bobbie O'Brien for someone else. 🙏

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EXPERIENCE
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Current Employment Practices and Future Preferences for Multicredentialed Technologists in Nebraska

By Kimberly Michael, MA, RT(R), RDMS, RVT, Conner Coffin, BS, RT(R)(CT), RDMS, Rhonda Sudbeck, BS, RT(R), RDMS, RVT, Harlan Sayles, MS, and Tammy L. Webster, MPA, RT(R)(M)

EXECUTIVE SUMMARY

- A study was conducted to determine the current employment practices and future preferences of Nebraska hospitals regarding multicredentialed technologists.
- A survey was mailed to 104 hospital radiology departments in the state of Nebraska, asking for voluntary and confidential responses by radiology managers charged with hiring of radiologic technologists with a response rate of 51%. Nearly all respondents (93%) said it was very likely or fairly likely that they would hire a multicredentialed technologist in the future.
- Results suggest that there is a trend among Nebraska hospital radiology managers toward needing or hiring multicredentialed radiologic technologists in the future. There appears to be a greater emphasis in the pairing of credentialing in diagnostic radiography with computed tomography, ultrasound, and mammography in current and future needs.

Constant advancements in healthcare and medical imaging technology necessitate continuous learning and updating of skills, along with a flexible, multiskilled, and multicredentialed workforce.¹⁻⁴ As far back as the 1990s, radiology department managers have reported the need to increase the number of cross-trained radiologic technologists to improve workforce utilization, particularly in hospitals with fewer than 100 beds.⁵

Although the highest volume of examinations conducted in most radiology departments involves diagnostic radiography, the clinical usefulness of computed tomography (CT) and magnetic resonance imaging (MRI) has led to increased volumes of these studies and a greater emphasis on the need for skilled personnel.⁶ This need for skilled personnel is further increased with the growing use of ultrasound, which offers a cost-effective, nonionizing imaging option, but is highly operator dependent.^{7,8} Today, as the industry and many radiology departments are stressing the fusion of technology, individuals who are multicredentialed could become highly desirable.⁹ Research in 2012 stated that

technologists with skills in more than one modality have the best employment opportunities.¹⁰

Financial pressures related to efficient staffing and utilization of the workforce have not eased.¹¹ In fact, radiology departments continue to operate with expectations of improving healthcare quality while lowering costs.¹² Results of these pressures have been shown in workplace staffing surveys, in which a majority of radiology departments have reported budgeted full time equivalent (FTE) numbers remaining static from one year to the next.³

Smaller and rural radiology departments in particular are faced with demands to meet budgetary goals while offering the greatest range of subspecialty services necessary to meet community and patient needs and to keep pace with imaging technology.^{11,12} In 1995, Nielsen reported on approaches in northeast Iowa in which technologists learned new modalities to acquire a broad skill set.² This approach met the hospitals' needs for multiple competencies or specialties without requiring hiring of additional radiology department staff.²

Nebraska's population is distributed in such a way that only three cities in

the state have populations greater than 50,000 people, and all of these cities lie in the eastern quarter of the 430 mile wide state; 13 communities have between 10,000 and 50,000 residents; and 181 towns have fewer than 10,000 residents.¹³

The state of Nebraska has 104 hospitals and a total of 7103 licensed beds.¹⁴ Of these, 64 (61%) are classified as critical access hospitals, with 25 or fewer inpatient beds.¹⁴ The hospital make-up reflects the state's population. As of January 2014, 95% of the state's geographic area was designated as eligible for Medicare-certified rural health clinics.¹⁵

Nationally, the number of RTs with a single certification dropped from 63% in 2000 to 57% in 2015, according to the American Registry of Radiologic Technologists (ARRT). The most common combination of certifications in 2015 was radiography and mammography, and radiography and CT.¹⁶ Becoming multi-skilled or multicredentialed is considered an asset to both technologists and their employers.¹⁷

A literature review using a National Library of Medicine PubMed search revealed a lack of published research related to education and employment practices regarding multicredentialed radiologic technologists. Further, most of the literature on the topic is dated. Survey data gathered in the late 1980s and early 1990s supported the increasing demand for multicredentialed technologists and the need to develop educational programs to address the demand.^{1,2,18,19} Several factors were identified in the literature as contributing to the need to provide education aimed at multicredentialed radiologic technologists. These included: an increase in available technology, advancement in technologies, and new applications for existing technologies.¹ In particular, survey data revealed a need for multicredentialed technologists in smaller or rural hospitals.^{1,5,18} The subspecialty and scheduling needs of remote rural locations, in particular, can be quite different from those in academic medical centers or large urban hospitals.¹²

Graduation data from the past 15 years has shown that approximately 65% of the radiography class continued into an additional imaging modality program to become multicredentialed.

Past studies also have looked at the best methods for radiologic technologists to acquire training necessary for multicredentialed. In the past, on-the-job training and cross-training on modalities was acceptable, and often the only method available to train technologists on additional modalities. This type of informal training is expensive for employers, time consuming, and inefficient.²

In response to the published data, the potential employment needs of a predominantly rural state, and the increasing complexity of the imaging profession, the University of Nebraska Medical Center established the Division of Radiation Science Technology Education in 1988. In its infancy, the division offered a 24 month accredited radiography program with the option of earning additional education and training in a second imaging modality; CT/MRI, diagnostic medical sonography, nuclear medicine technology or radiation therapy. This additional 12 month multicredentialed option culminated in a bachelor of science degree. Over the years, the division has continued to evolve along with the needs of the imaging sciences profession, including the addition of cardiovascular-interventional technology, separation of CT and MRI programs, and advancement to a postbaccalaureate professional certificate. Graduation data from the past 15 years has shown that approximately 65% of the radiography class continued into an additional imaging modality program to become multicredentialed. This number closely reflects trends in the industry.

Methods

In March 2015, a survey was mailed to all 104 radiology departments in Nebraska.

The list of eligible hospitals was obtained from the Nebraska Department of Health and Human Services. The survey was accompanied by a letter explaining the survey's purpose and requesting that recipients forward the survey to the hospital's radiology manager in charge of hiring radiologic technologists. This request was made to ensure consistency in responses. A presurvey postcard had been mailed to each radiology department approximately five days before mailing the survey to alert recipients.

In the survey, managers were asked to respond to 13 questions related to imaging services offered; number of credentialed technologists; current practices and future hiring projections regarding multicredentialed technologists; training for additional credentialing; and community and facility demographics. The efforts resulted in a total of 54 surveys being returned. One respondent left most of the questions blank, however, and the survey was discarded. This resulted in a completed survey response rate of 53 of 104, or 51%. The 104 hospital radiology departments contacted constitute all of the hospitals in the state.

Results were evaluated using descriptive statistics such as frequencies and percentages. This included evaluating results for each question and cross-tabulating responses to several questions. Institutional Review Board approval was granted through the University of Nebraska Medical Center, where the investigators are based.

Results

The 54 responding managers' hospitals represented a range of bed sizes, but most of the responses came from hospitals with fewer than 100 beds (85%).

■ **TABLE 1.** Community and Facility Demographics

	n (%)
Community Population	
<10 000	37 (70)
10 000–50,000	7 (13)
> 50 000	9 (17)
Number of Credentialed Technologists Employed	
0	0(0)
1–5	28(53)
6–10	9(17)
11–20	4(8)
>20	12(23)
Number of Credentialed Technologists Who Are Multicredentialed	
0	2(4)
1–5	31(58)
6–10	10(19)
11–20	3(6)
>20	7(13)

■ **TABLE 2.** Services Offered by Responding Hospitals and Credential Pairings

Service/modality	n (%) ^a
Diagnostic radiography	53 (100)
Ultrasound	52 (98)
Computed tomography	51 (96)
Magnetic resonance imaging	51 (96)
Mammography	46 (87)
Nuclear medicine	46 (87)
Cardiac catheterization lab / interventional radiology	14 (26)
Radiation therapy	9 (17)
Current Credential Pairings	
	n(%)
Radiography with computed tomography	35(69)
Radiography with mammography	18(35)
Radiography with ultrasound	6(12)
Radiography with magnetic resonance imaging	5(10)
Radiography with nuclear medicine	0(0)
Radiography with radiation therapy	0(0)
Radiography with cardiac cath lab/ interventional radiology	0(0)

^aMultiple responses were allowed.

Of respondents, 29 (55%) reported 1 to 24 beds in their facility; 16 (30%) reported bed sizes of 25 to 100; and only 8 respondents (15%) reported having more than 100 beds. The sample represents the largely rural nature of Nebraska's population and hospital distributions. About 70% of responding managers reported that they work in communities with fewer than 10,000 people. Table 1 shows demographics for the responding facilities. Most of the respondents (53%) reported that they employ between one and five credentialed technologists. Only two respondents employ no multicredentialed technologists, and 10 (19%) employed more than 10 multicredentialed technologists at the time of the survey. Respondents were asked to select the radiology services offered and multiple responses were allowed (see Table 2). The most common services offered were diagnostic radiography (100%), ultrasound (98%), CT (96%), and MRI (96%). A total of 31 respondents (58%) selected six services, or modalities, and eight respondents (15%) selected eight services.

Respondents who employed multicredentialed technologists were asked about their most common credential pairings. Most (69%) said they employ technologists who were credentialed in both diagnostic radiography and CT. The next most common multicredential pairing was diagnostic radiography with mammography (35%), followed by diagnostic radiography with ultrasound (12%), and diagnostic radiography with MRI (10%). Only 11 (22%) of respondents checked more than one response, or multicredential pairing.

When asked about the importance of technologists being multicredentialed, 31 (61%) of the respondents reported that multicredentialed was very important (Table 3). The survey also asked whether radiology departments or facilities provide salary incentives for multicredentialed technologists. Most respondents (34, or 67%) reported that they provide incentives, while 17 (33%) said they do not.

■ **TABLE 3.** Importance of Technologists Having Multiple Credentials

Importance rating	n (%)
Very important	31(61)
Fairly important	11(22)
A little important	7(14)
Not at all important	2(4)

■ **TABLE 4.** Manager Preference for Multicredential Education

How would manager prefer that technologists receive training?	n (%)
Formal professional program	28 (56)
On-the-job training	22 (44)

■ **TABLE 5.** Likelihood of Future Hiring of Multicredentialed Technologists

Likelihood	n (%)
Very likely	37 (73)
Fairly likely	10 (20)
A little likely	4 (8)
Not at all likely	0 (0)

■ **TABLE 6.** Most Likely Multicredential Combinations for Future Hiring

Service/modality	n (%) ^a
Diagnostic radiography with computed tomography	31 (58)
Diagnostic radiography with ultrasound	21 (40)
Diagnostic radiography with mammography	15 (28)
Diagnostic radiography with magnetic resonance imaging	7 (13)
Diagnostic radiography with nuclear medicine	2 (4)
Diagnostic radiography with cardiac catheterization lab / interventional radiology	0 (0)
Diagnostic radiography with radiation therapy	0 (0)
Would not hire a multicredentialed technologist	0 (0)

^aMultiple responses were allowed.

Two questions focused on how technologists receive training for multiple credentials, and how the managers would like for them to receive training. The first question revealed that the majority (73%) of managers report most of their sites' multicredentialed technologists obtain their multiple credentials through on-the-job training, and that only 27% receive multiple credentials through formal professional programs. When managers were asked how they preferred their technologists to receive training, most (28, or 56%) selected formal professional programs (see Table 4). When asked about the preferred level of technologist education, eight (16%) of managers said they prefer that technologists have an associate degree, and 11 (22%) prefer a bachelor's degree. Most of them (32, or 63%), expressed no preference.

In regards to future hiring of multicredentialed technologists in Nebraska, 47 respondents (93%) reported they were very likely or fairly likely to hire a multicredentialed technologist in the future (see Table 5). The most common multicredential pairing predicted by managers for future hire was diagnostic radiography with CT (58%), followed by radiography with ultrasound (40%). Table 6 shows the most likely multicredential combinations for future hire. Respondents were allowed to select more

■ **TABLE 7.** Cross-tabulation: Number of Multicredentialed Technologists in Department x Number of Beds in Facility

No. Multicredentialed Technologists	No. of Beds in Facility				
	Frequency Column Percent	1–24 beds	25–100 beds	>100 beds	Total
0		1 (3.45)	1 (6.25)	0 (0)	2
1–5		25 (86.21)	6 (37.50)	0 (0)	31
6–10		3 (10.34)	7 (43.75)	0 (0)	10
11–20		0 (0)	1 (6.25)	2 (25)	3
>20		0 (0)	1 (6.25)	6 (75)	7
Total		29	16	8	53

than one combination of credentials; a total of 41 (77%) selected only one multicredentialed combination, and five (9%) selected two pairings.

Nearly all (98%) of respondents offer four or more services in their radiology departments, yet slightly more than half (53%) employ between one and five credentialed technologists. Further, by evaluating the number of multicredentialed technologists according to the

number of beds in a facility, it became clear that the smallest hospitals (1 to 24 beds) employ the most multicredentialed technologists (see Table 7). When results regarding likelihood of hiring multicredentialed technologists in the future are cross-tabulated with facility size, nearly 93% of managers report they are very or fairly likely to hire a multicredentialed technologist in the future (see Table 8).

In addition to 83% reporting multicredentialed to be very important or fairly important, 71% provide salary incentives for their multicredentialed technologists (See Table 9). There was a disconnect between how many managers prefer that their technologists receive training for multicredentialed from formal programs and how many reported that technologists in their departments received on-the-job training for

■ **TABLE 8.** Likelihood of Future Multicredentialed Technologist Hiring

Likelihood of Hiring Multi-Credentialed Tech	No. of Beds in Facility				
	Frequency Column Percent	1–24 beds	25–100 beds	>100 beds	Total
Very Likely		23 82.14	12 80.00	2 25.00	37
Fairly Likely		3 10.71	2 13.33	5 62.50	10
A Little Likely		2 7.14	1 6.67	1 12.50	4
Total		28	15	8	51

■ **TABLE 9.** Cross-tabulation: Importance of Multicredentialed Technologists x Financial Incentives for Multicredentialed Technologists

Importance of technologists being multicredentialed	Department/Facility offers salary incentive for multicredentialed technologists	
	Yes n (%)	No n (%)
Very Important	24 (71)	7 (41)
Fairly Important	8 (24)	3 (18)
A Little Important	2 (6)	5 (29)
Not At All Important	0 (0)	2 (12)

multicredentialed. It is possible that many currently employed technologists began working in the field at a time when on-the-job cross-training was the only route to multicredentialed.

Discussion

The data gathered in the survey of Nebraska hospitals regarding multicredentialed of radiologic technologists closely represented the sample population of Nebraska hospitals and how they serve the state’s population distribution. The sample also is in line with the fact that 61% of Nebraska facilities are classified as critical access hospitals.

The findings indicate a need for continued multicredentialed, as do results to questions regarding current employee credentials and future needs for multicredentialed technologists. In fact, those departments in hospitals with the smallest number of beds had the highest rating for “very likely” to hire. In addition, it is clear that managers place a tangible value on multicredentialed of radiologic technologist staff. The “ideal” pairings of credentials for technologists are likely to be influenced by the size, location, and hiring needs of a particular facility. Examining the trends of credential pairing both through a national and state lens, the data suggests that diagnostic radiology coupled with CT holds the strongest association among imaging modalities.

Although managers prefer formal education to on-the-job training, they appear to have little preference regarding degree level. At this point, multicredentialed appears to be more important to managers than does degree, and could be an additional subject for further study among radiology managers and technologists.

In the future, government agencies, such as the Centers for Medicare and Medicaid Services (CMS), and accrediting organizations, such as The Joint Commission, might influence the type of training and education a technologist needs to become multicredentialed. Currently, The Joint Commission is investigating the elements of performance set forth for hospital and critical access facilities associated with the credentialing requirements of technologists performing diagnostic CT procedures.²⁰ Although it is difficult to predict at this point how the language will evolve and what requirements will be set, it is evident that accreditation bodies are paying close attention to the education and credentialing standards of imaging technologists performing exams.

A limitation of the research included some confusion over common pairing of radiologic technologist credentials in Nebraska hospitals. An additional area of research could include exploring whether the reason for the lack of ultrasound multicredentialed reported compared with services offered is related to

sonographers receiving certification in ultrasound only from the American Registry for Diagnostic Medical Sonography or confusion about nomenclature that refers to “multicredentialed” for sonography specialties. Although the question asked respondents to provide the most common combination of credentials in their departments, it allowed multiple responses. Further, there are more possible combinations of credentials than was reasonable to list in a brief survey. In future research, this question could allow for only one response and then ask follow-up questions about other credential pairings if necessary.

Conclusion

Small Nebraska hospitals currently employ, need, and emphasize importance of multicredentialed technologists. Results suggest that regardless of hospital bed size or department size, there is a trend among Nebraska hospital radiology managers toward needing and hiring multicredentialed radiologic technologists in the future. There appears to be a greater emphasis in the pairing of credentialing in diagnostic radiography with CT, ultrasound, and mammography in current and future needs. Additional research could explore in greater depth future credentialing combinations, preferences for obtaining multiple credential education, multicredentialed for sonographers, and degree

preferences of managers and technologists in regards to obtaining education for multiple credentialing. 🌱

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Getting Better Data from Referring Physicians

By Melody W. Mulaik, MSHS, CRA, FAHRA, RCC, CPC, CPC-H

One of the greatest operational challenges in diagnostic imaging is getting complete and detailed clinical information from referring physicians for every exam for every patient. When not appropriately addressed this issue can create concerns around patient care and employee productivity and creates overall frustration for all stakeholders. Addressing this critical issue takes time, but the rewards are well worth the efforts. Ideally the treating physician will always order the right exam, we will perform exactly what was ordered, the radiologist will dictate exactly what was performed, the coders will assign the correct codes to match what was dictated, and the payor will provide the appropriate reimbursement with no rejections or denials the first time the claim is submitted for payment.

Any time I give a presentation and take a room survey and ask, “How many of you would say that you always get complete information on orders?” no one raises their hand. Now you could say it’s because I put the word “always” in the question or you could interpret it to mean that this is a big problem that everyone in the industry struggles with on a daily basis. Arguably, both are true. Even in our world of electronic medical records (EMRs) and computerized physician order entry (CPOE) it is still very challenging to get the right information at the right time to ensure the right exam is performed for the benefit of the patient. It’s easy to point fingers and blame the

referring physicians, but if we really take the time to evaluate the process and systems we will see that it is not that straightforward. Finding errors is easy, identifying how they happened is the real challenge!

To solve a problem you must first define it and then determine its root cause. Why do you not get complete information on all your orders? To address this question you must first segment your patient populations into: emergency department, outpatient, and inpatient. The processes, issues, and concerns are different for each group of patients so how you will evaluate and address these populations and referring physicians will be different as well.

Before you immediately accept the fact that you don’t have the needed clinical information it is important that you evaluate your current systems to see what you have access to and what changes you can make. How does the order relate to what is in the RIS/PACS system? Who puts this information in? How do errors occur when the information does not match or is absent? For example, if the clinical information indicates “breast cancer with bone mets” why does the information in the RIS state “bone mets with a history of breast cancer?” History of versus current cancer is a very important distinction. Also, if information is dropped from the order when it’s entered into the system, how and why does that happen? Sometimes detailed clinical information is

dropped in the name of efficiency. There is a big difference between “Primary cutaneous diffuse large cell B-cell lymphoma” and “lymphoma.”

With the implementation of ICD-10 some organizations have begun sending a code on an order instead of clinical information. This is not appropriate. Diagnosis codes have value in the coding and billing process but do not provide what is needed to clinicians. Codes lack clinical value and do not always translate into the patient’s specific condition. The American Hospital Association (AHA), the entity responsible for diagnosis coding guidelines for all types of providers, addressed this as recently as 2015 in a Q&A in the *Coding Clinic® for ICD-10-CM*. “Question: ... Is there an official policy or guideline requiring providers to record a written diagnosis in lieu of an ICD-10-CM code number? Answer: Yes, there are regulatory and accreditation directives that require providers to supply documentation in order to support code assignment. Providers need to have the ability to specifically document the patient’s diagnosis, condition and/or problem. Therefore, it is not appropriate for providers to list the code number or select a code number from a list of codes in place of a written diagnostic statement.”¹

When evaluating why an order is incomplete you need to identify whether it is a people problem or a system problem. Once this is identified you must determine whether or not it can be fixed.

■ **TABLE 1.** Additional Information from Referring Physician Depending on Specialty

Clinical Conditions	Areas of Concern
Infectious & Endocrine	<p><i>Context</i></p> <ul style="list-style-type: none"> - Any associated malignancies - Adverse effects from treatment <ul style="list-style-type: none"> - due to ... " " - eg, drug induced DM w/ hypoglycemia - Underlying disease - Associated manifestations
Neoplasms	<p><i>Location & Severity</i></p> <ul style="list-style-type: none"> - Quadrant / section (<i>review the options</i>) - Malignant: biopsy proven? - Primary vs secondary - Active disease vs personal history of ... <p>• Also</p> <ul style="list-style-type: none"> - Social history for specific malignancies (liver, lung, throat, etc) - Past treatments (chemo / radiation)
Cardiorespiratory	<p><i>Location, Severity & Context</i></p> <ul style="list-style-type: none"> - Name the vessel, which side - Traumatic vs non-traumatic - Acute vs chronic (occlusions, thrombosis) - Underlying disease <ul style="list-style-type: none"> - Hypertension vs hypertensive heart disease - Concurrent conditions <ul style="list-style-type: none"> - Atherosclerosis w/ rest pain - Specific manifestations of late effects
GI & GU	<p><i>Location & Severity</i></p> <ul style="list-style-type: none"> - Small / large intestine - Hemorrhage / perforation - Acute / chronic - Concurrent conditions <ul style="list-style-type: none"> - Diabetic chronic kidney disease - Concurrent treatment <ul style="list-style-type: none"> - Dialysis
Musculoskeletal & Skin	<p><i>Location, Severity & Context</i></p> <ul style="list-style-type: none"> - Laterality - Site specific <ul style="list-style-type: none"> - No more 'pain in limb' - Traumatic vs non-traumatic - Initial vs subsequent vs sequela imaging - Underlying conditions - Due to ...
Maternal & Newborn	<p><i>Location, Severity & Context</i></p> <ul style="list-style-type: none"> - "Routine" OB ultrasound - Separate/shared placenta/membranes reported differently - # of weeks in addition to trimester - Pre-existing vs gestational conditions

If it can't (really) then you need to change the process to accommodate the obstacle to ensure you get complete orders. The bottom line is that it is not acceptable to allow incomplete orders. Doing so potentially jeopardizes your patients and definitely frustrates your staff—neither is acceptable. Fear of losing business is not an appropriate reason to avoid addressing this issue.

Instead of viewing this challenge as a negative, take the opposite approach. The bottom line is that this issue is about patient care. Your referring physicians care about their patients so finding a way to communicate the importance of solving this problem for the patient's benefit is key. If done correctly an improved process for communicating patient clinical information can actually be a value add to your clients (aka, your referring physicians) by ensuring that they truly get the best care possible for their patients. There are published studies showing that relevant clinical information enables the radiologist to interpret imaging findings in the appropriate context, leading to more relevant differential diagnoses, more useful reports for clinicians, and a better outcome for the patient.²

When tackling a big challenge it is best to break the components into small pieces so that it is more manageable and measurable. In order to determine your true volume of "incomplete" orders due to missing or incomplete clinical information it is best to address by modality and then by specific services. For example, instead of trying to tackle every modality, address the biggest areas of opportunity first. For most organizations this is usually CT and/or ultrasound. Working with the managers and supervisors for the targeted area you should be able to come up with a reasonable mechanism to identify and track the biggest offenders by name and/or physician practice. This objective data can then be used to seek to modify behavior and/or change systems.

The details that are required in an imaging order are the same details required for the clinical assessment/progress note that the treating physician

captures during the patient visit. We are not asking for new information but rather what is already in, or at least definitely should be in, the patient's medical record. This is a very important point because it should help shape how you think about the data. How do we get it from Point A to Point B?

"Educating" referring physicians can be challenging but also very rewarding for all parties if approached correctly. As individuals, we want specific examples and data; not broad sweeping condemnations such as "your orders are incomplete." Consider what the value is to them and review the process of sharing data to see if there are ways that you can make it easier from a systems perspective. Broad statements are quickly dismissed due to their lack of relevance and reliability. You need to provide details to make a valid point if you really want to see change. If you need more specific information, define what specificity means to that physician or group. Table 1 has examples of types of additional information that you might need to request depending on the specialty.

As you evaluate the methods in which referring physicians provide information to your organization ensure you address manual processes. Many organizations still have referring physicians hand writing orders or completing a standard form. Do these mechanisms have enough room for the required information? Making the effort to update these types of tools can go a long way to helping referring physicians provide the needed information. Once you have identified your opportunities and made appropriate changes, whether manual or software related, it is valuable to perform small scale comparative studies on a regular basis to ensure that the changes had a lasting impact.

Summary

Clinical decision support (CDS) will be here soon and will address many of the concerns around orders and clinical information; however, it will not be an

easy or quick process.³ Changing systems and modifying behavior takes a lot of time and a lot of effort on everyone's part. Making changes now to improve the flow of clinical information can facilitate optimal patient care, improve efficiency, reduce frustration, and help you be the organization that you want to be! 🙌

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ICD-10: Internal Injuries

By Melody W. Mulaik, MSHS, CRA, FAHRA, RCC, CPC, CPC-H

ICD-10-CM codes for injuries to the internal organs of the chest, abdomen, and pelvis are found in the following categories:

S26	Injury to heart
S27	Injury of other and unspecified intrathoracic organs
S36	Injury of intra-abdominal organs
S37	Injury of urinary and pelvic organs

Within each category are subcategories for individual organs, and within each subcategory are codes for specific types of injury, such as contusion and laceration. A contusion or hematoma involves tissue injury without loss of continuity of the organ, while a laceration is a traumatic tear in the organ. For some organs, such as the colon, there are also specific codes for blast injuries, which are injuries resulting from an explosion. A primary blast injury is caused by the force of the shock wave striking the patient, while a secondary blast injury results when the patient is struck by flying debris or driven against a hard object.

The codes for injuries of internal organs are indexed under main term “Injury” or under the type of injury (contusion, laceration, rupture, etc). For example, the code for a contusion of the kidney is indexed under “Contusion, kidney.” There are separate subterms for major and minor kidney contusions, and notes in the Tabular List clarify that a major contusion is one that is larger than 2 cm. The code assignment for a 3 cm contusion of the right kidney, initial encounter, is:

S37.021A	Major contusion of right kidney, initial encounter
----------	--

The organ injury codes do not indicate whether the injury was penetrating or blunt. In a penetrating injury, an object such as a bullet, knife, or sharp tree limb enters the patient’s body. Blunt injury, such as the impact of air bag or a fall onto a hard surface, does not involve an object penetrating the body. Notes in the Tabular List under the codes for injury to internal organs tell you to “Code also any associated open wound.” A “code also” note indicates that an additional code is required and may be sequenced either first or second, depending on the circumstances. In radiology coding the organ injury code will most often be the primary diagnosis, and a secondary code should be assigned for the open wound if applicable. The wound codes are indexed under “Wound, open.”

For example, a patient is brought to the emergency department after being stabbed in the abdomen. A CT scan reveals that the wound penetrated the peritoneal cavity, and there is a laceration of the jejunum. The following codes should be assigned:

S36.438A	Laceration of other part of small intestine, initial encounter
S31.619A	Laceration without foreign body of abdominal wall, unspecified quadrant with penetration into peritoneal cavity, initial encounter

The ICD-10-CM guidelines indicate that injuries to nerves and/or blood vessels should be coded separately. The first-listed diagnosis code should represent the “primary injury,” and depending on the circumstances, this

might be either the internal organ injury or the nerve or blood vessel injury. For example, in a patient with a lung contusion and a traumatic tear of the thoracic aorta, the blood vessel injury would likely be the primary injury.

Here are some additional examples of internal injury coding:

Example #1: A pedestrian is struck by a motor vehicle with blunt trauma to the left flank. CT scan reveals a 4 cm laceration of the left kidney. The Index entry for “Laceration, kidney, major (greater than 3 cm)” refers you to S37.06-. The code assignment is:

S37.062A	Major laceration of left kidney, initial encounter
----------	--

Example #2: An elderly woman tripped and fell, landing on a rock, and now complains of chest pain and shortness of breath. CT scan reveals fractures of two right ribs and a contusion of the right lung, either of which could be considered the primary injury. The Index entry for “Fracture, traumatic, rib, multiple” refers you to S22.4-. This code requires an “X” placeholder before applying the 7th character. The Index entry for “Contusion, lung, unilateral” refers you to S27.321. The code assignment is:

S22.41XA	Multiple fractures of ribs, right side, initial encounter for closed fracture
S27.321A	Contusion of lung, unilateral, initial encounter

Example #3: A patient suffers blunt abdominal trauma in a skiing accident. CT scan reveals rupture of the spleen.

The Index entry for “Rupture, spleen (traumatic)” refers you to S36.09. The code assignment is:

S36.09XA Other injury of spleen, initial encounter

Example #4: A patient suffers a gunshot wound to the abdomen, and CT scan reveals a laceration of the liver that is 5 cm long by 2 cm deep. Both the liver laceration and the open wound should be coded, and the liver laceration should be the primary diagnosis for the radiology service. The Index entry for “Laceration, liver” refers you to S36.113, but the

Tabular List shows a more specific code. This laceration is considered moderate since it is less than 10 cm long and 3 cm deep, and moderate liver laceration is reported with S36.115. The Index entry for “Wound, open, abdomen, wall, with penetration into peritoneal cavity” refers you to S31.609. The code assignment is:

S36.115A Moderate laceration of liver, initial encounter
S31.609A Unspecified open wound of abdominal wall, unspecified quadrant with penetration into peritoneal cavity, initial encounter 🚫

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Employee Incentives in Healthcare: An Eight Year Comparison

By Richard McKinnies, MEd, RT(R)(T), CMD, Sandra Collins, MBA, PhD, Sandra Watts, MHA, RT(R), and Cristian Lieneck, PhD, FACMPE, FACHE, FAHM, CPHIMS

EXECUTIVE SUMMARY

- The healthcare industry continues to experience changes as initiatives related to the Patient Protection and Affordable Care Act of 2010 ensue. As healthcare costs and quality continue to be investigated by industry professionals, previous research continues to support the direct relationship between the overall patient experience and employee job satisfaction levels.¹⁻³
- This study was conducted to further analyze previous incentive data collected from 2007 and 2012 and compare it to an updated healthcare employee incentive survey completed in 2015.
- Descriptive results demonstrate how incentive packages have changed in healthcare over the past eight years among various lines of employment within the industry. Additionally, healthcare positions with creative incentive packages are further investigated in 2015, as compared to previous years.^{4,5}

In a competing market such as the healthcare industry, it is important to have a well thought out plan of how to draw new high level recruits and it is also important to understand what it takes to retain these individuals as an organization.⁶ A statistic that helps support this statement is the projected report that the healthcare industry is expected to see an increase of jobs from 2008 to 2018 of more than 3.2 million, which no other occupational field will come close to reaching with regards to new positions.⁵ It is also estimated that the American industry annually sustains a cost of about \$11 billion, simply due to the lack of retention and turnover that takes place in the United States.⁷ These statistics alone help one better understand the magnitude of the role strong retention rates and good incentives can play in helping one's bottom line and be considered relative in attracting high quality employees in today's healthcare field.

Knowing incentives are an important part of any recruitment plan is easy to comprehend, but knowing which incentives will draw the right employee to your organization and maintain a high level of employee retention is where some managers might struggle. For example, it is considered common knowledge that

financial incentives can be a good way to recruit employees and even be a positive factor for job satisfaction once an employee is with your organization, but this by itself will not ensure retention.⁶ There is a strong indication that financial incentives actually lose their effectiveness with relation to retention once the employee has been working for five or more years.⁶ One study specified 54% of employees are looking for better incentives while 35% of employees are looking for improved career development, and both reasons were given as the top reasons for why employees were looking for employment with another organization.⁸

As the healthcare field gets more and more competitive when trying to attract high level employees, it is important for an organization to understand what incentives are drawing employees and which are not. It has been reported that incentives can also help an organization distinguish between high and low performers within the industry, which is pertinent in recruiting.⁹ In this study, we will try to correlate the responses from our survey to help managers better understand how these incentive packages and combination of specific incentives are being used today in comparison to what has been used over the past eight years.^{4,5}

Methodology

This research is intended to be used to evaluate and compare the findings of previous research that was completed in 2007 and 2012, with concern to the incentives being used in the healthcare field.^{4,5} The search engine used to substantiate the literature review was EBSCO Host and some of the key words used were: employee incentives in healthcare, common incentives used in healthcare, and incentive packages in healthcare. A descriptive analysis was conducted to determine if there were any changes in employee incentives over the past eight years and which positions are actually receiving the most creative incentive packages within the healthcare field. The surveys were sent out to human resource managers that were identified by a national database of US human resource managers in the healthcare industry. The majority of respondents signified they work at community based hospitals or clinics. None of the respondents were from a university based hospital.

The instrument was sent out at two different times with the second mailing sent three weeks after the first mailing to non-respondents in order to guarantee the highest reply rate possible. The response rate for this study was 2.9%, which is a moderate return rate compared to other studies dealing with human resource managers.¹⁰

Types of Incentives

In the 2015 survey, respondents were asked to list the top three incentives they are offering to applicants in their healthcare organization. The incentives listed were: sign-on bonus, health insurance, child care, retirement benefits, housing allowance, relocation allowance, profit-sharing, health-club membership, student loan repayment, tuition reimbursement, professional development opportunities, professional dues reimbursement, and vehicle allowance. The survey also inquired about these same incentives and how they are being

offered to technical, managerial, and executive applicants. In the 2007 survey the top two incentives to attract technical applicants were health insurance and retirement benefits and this continued for the 2012 and the 2015 surveys. The incentives that were utilized the least for technical applicants in 2007 were vehicle allowance and profit sharing. For 2012, the least common incentives were housing allowance and vehicle allowance. In 2015, applicants indicated housing allowance as the least common incentive used followed up by both profit-sharing and vehicle allowance as the second least common.

When looking at managerial applicants for 2007, health insurance and retirement benefits were the two most common incentives given and this remained constant for the 2012 survey. For 2015, the most common was health insurance followed up retirement benefits and professional development opportunities as the second most common. The two least common incentives

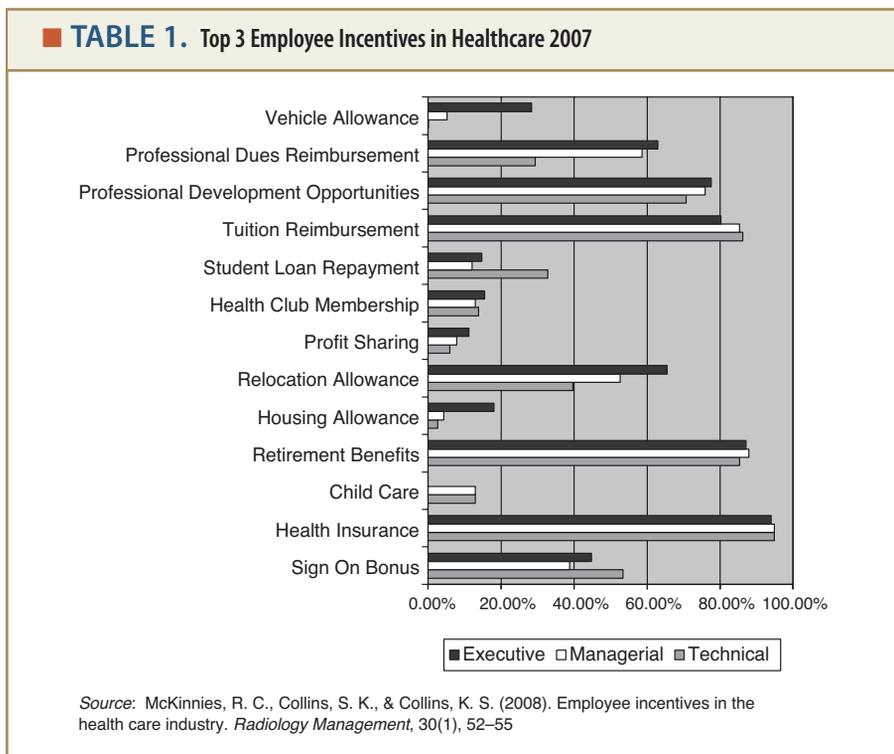
specified for managerial applicants for all three surveys were housing allowance and vehicle allowance.

When asked about incentives offered for executive positions at their healthcare organizations for 2007, health insurance and tuition reimbursement were the top two incentives. For 2012, executives were receiving health insurance and retirement benefits as the top two incentives. Now in 2015, executives are receiving health insurance as the top incentive followed up by professional development opportunities and retirement benefits. This data can be reviewed in Tables 1, 2, and 3 (2007, 2012, and 2015, respectively).

Positions Receiving the Most Creative Incentive Packages

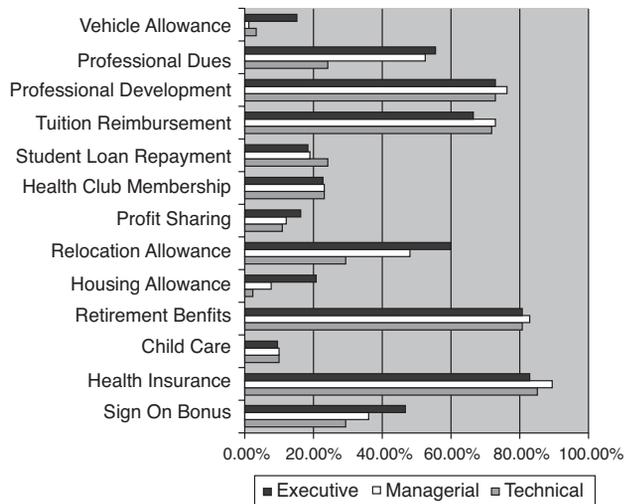
Another area of the survey examined which positions actually receive the most creative incentive packages based on the respondents, view at their organizations. Creative incentive packages include

■ TABLE 1. Top 3 Employee Incentives in Healthcare 2007



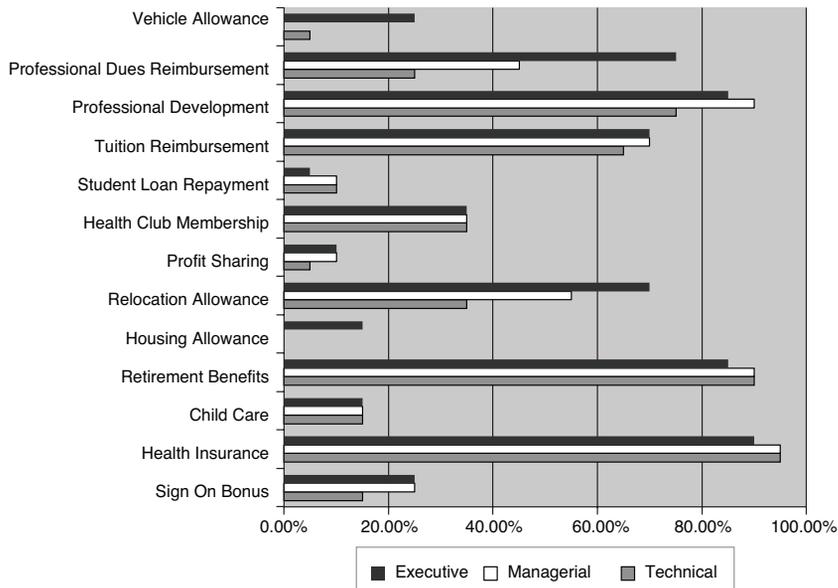
Source: McKinnies, R. C., Collins, S. K., & Collins, K. S. (2008). Employee incentives in the health care industry. *Radiology Management*, 30(1), 52-55

TABLE 2. Top 3 Employee Incentives in Healthcare 2012



Source: McKinnies, R. C., Collins, S. K., Collins, K. S., & Matthews, E. P. (2013). A Comparative Analysis of Employee Incentives in the Healthcare Industry. *Radiology Management, Leadership* 2013 Supplement, 40–44.

TABLE 3. Top 3 Employee Incentives in Healthcare 2015



financial incentives tied to reaching health standard goals like BMI and blood pressure.¹¹ This creativity is not one size fits all as multiple studies have noted different incentives for age group, location,

sex, etc.^{6, 11} While most studies will prove that financial incentives are key for recruiting, nonfinancial incentives often play key roles in retention. These types of incentives include opportunities for

collaboration, work environment, work-life balance, and even work design.⁶

In 2007, nursing was considered the most common response with 57% of the surveys indicating it receives the most creative incentive package followed by pharmacy (40.5%), executives (38.7%), physical therapy (25.8%), managerial (23.2%), radiology (22.4%), respiratory therapy (10.5%), occupational therapy (6.1%), radiation therapy (2.5%), and medical records (1.7%). See Table 4.

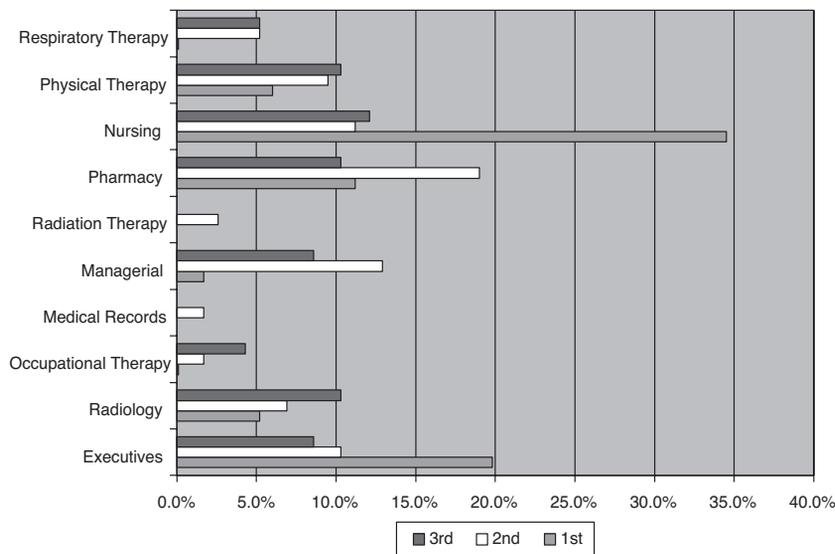
In the 2012 survey, the most creative incentive packages were indicated as follows: nurses again received most creative incentive packages (41.3%) compared to executives (40.2%), physical therapy (34.8%), managerial positions (30.5%), pharmacy (16.3%), occupational therapy (9.8%), radiology (4.4%), respiratory therapy (3.3%), medical records (2.2%), and then radiation therapy followed (1.1%). See Table 5.

Then in the 2015 survey, nurses again were indicated as receiving the most creative incentive packages, with 100% of the respondents signifying nursing receives the top three most creative incentive packages. Followed by executives at 92%, although a higher number of the respondents indicated executives as the number one creative incentive package at 75% compared to nursing at 57%. Managerial applicants then followed executive applicants at 89%, physical therapy (88%), pharmacy (75%) and then radiology, occupational therapy, medical records, and radiation therapy had no respondents select these professions as receiving creative incentive packages. See Table 6.

Incentives and Job Satisfaction

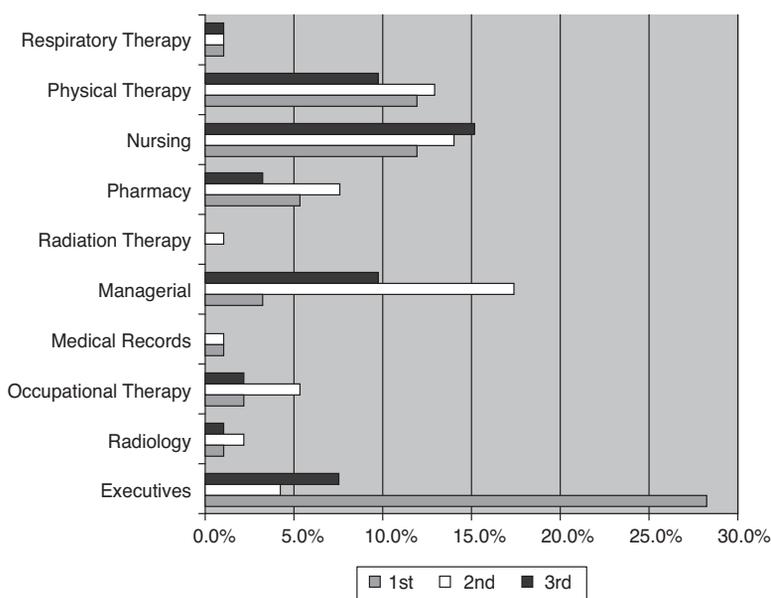
In order for an incentive package to motivate employees or draw new employees, the program must first fit the needs of the employee. In one study it was indicated that financial incentives interested 80% of the personnel, while less than 50% showed an interest in nonfinancial incentives.¹¹ In this same study the younger participants indicated

■ **TABLE 4.** Top 3 Positions Receiving the Most Creative Incentive Packages 2007



Source: McKinnies, R. C., Collins, S. K., & Collins, K. S. (2008). Employee incentives in the health care industry. *Radiology Management*, 30(1), 52–55

■ **TABLE 5.** Top 3 Positions Receiving the Most Creative Incentive Packages 2012



Source: McKinnies, R. C., Collins, S. K., Collins, K. S., & Matthews, E. P. (2013). A Comparative Analysis of Employee Incentives in the Healthcare Industry. *Radiology Management*, Leadership 2013 Supplement, 40–44.

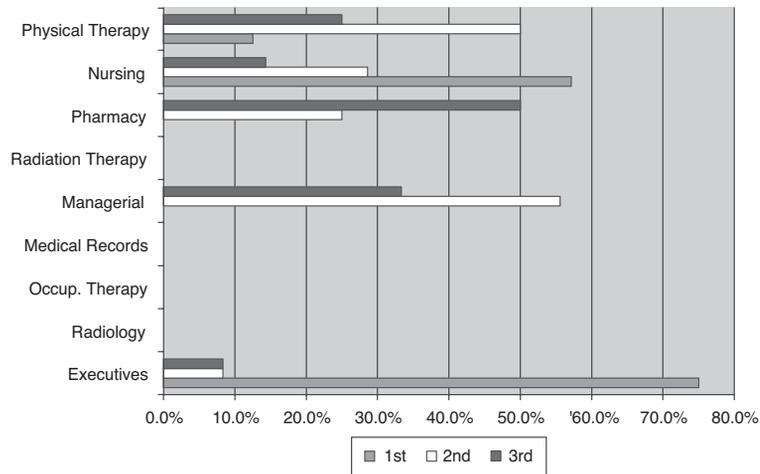
a greater interest in better food options, group fitness classes, gym memberships, and participation-dependent incentives in comparison to the older members.¹¹ It is fairly easy to understand different age groups are going to have different interests and be drawn by different incentives, but knowing what you are looking for as an organization in your employees can help you better direct your incentive packages. One interest that transcends different age groups is health insurance benefits. In the same aforementioned study, reduced health insurance copays and discounts on health insurance premiums were listed as two of the top four factors in likelihood of motivation by incentives.¹¹ Since this is independent of age, it can be used in incentive factors for all employees.

For most employees the incentives an organization maintains can play a major role in job satisfaction, but there are other factors that can and will play an important part in job satisfaction. For every organization it is important for them to ascertain what brings about job satisfaction for their employees. Early on in the courting process, compensation and benefits can be a crucial tool to land a high level employee, but in some cases this may not stand the test of time, especially when there is a poor work situation. More times than not the employee will need to feel valued and respected and want to see the promises made during recruitment be maintained and upheld once they become a part of the organization.¹²

In this study, while statistical significance was not achieved primarily due to a small sample size, the practical significance observed supports the ongoing use of the following incentives for executive, managerial, and technical employees across all three (2007, 2011, and 2015) studies:

- Professional dues reimbursement
- Professional development opportunities
- Tuition reimbursement
- Relocation allowance
- Retirement benefits
- Health insurance

■ **TABLE 6.** Top 3 Positions Receiving the Most Creative Incentive Packages 2015



In addition, an observable increase in health club membership in 2015 was also identified, possibly influenced by the initiatives of the Patient Protection and Affordable Care Act (2010), yet cannot be deduced from current survey results.¹³

Additional Factors

One of the major challenges facing managers today in their responsibilities is attracting and retaining qualified employees within their healthcare institution.¹⁴ Over the years there has been many factors that can affect a healthcare organization's ability to find and hire highly qualified individuals. However, there are some new factors that could possibly compound this issue, and the Affordable Care Act (ACA) is one such item. It is estimated the ACA will expand access to healthcare to more than 32 million Americans by 2019 and will expand shortages in the healthcare industry during this time.¹⁵ This statistic illustrates how over the next few years managers could face even greater struggles in finding and maintaining highly qualified healthcare professionals.

Another factor that continues to tax the healthcare base is the issue of our

growing and aging population. It was estimated by a Census Bureau release that from 2010 to 2050, the population of the US will grow by as much as 42%, from 310 million to 439 million over this 40 year period.¹⁶ To compound the issue, by 2030 this same release estimates one in five US citizens will be 65 years of age and by 2050 the number of Americans at age 65 will be 88.5 million compared to 40.2 million in 2010.¹⁶ The healthcare labor force is already older than many other sectors of the workforce in our economy. Meaning we are only going to increase this attribute of our healthcare industry, possibly leaving even more positions vacant and increasing the need for highly qualified employees that much more.¹⁴

Conclusion

Attracting the right employees to your organization is an important aspect of keeping the organization functioning at a high level. One study indicated that by implementing a compensation plan with no other resources, they saw an increase in productivity by 8% in the first year of implementing the plan.¹⁷ This statistic indicates that having incentives that work for your employees will even help in

certain aspects of production. However, the incentive that works today may not work tomorrow, so it is paramount that organizations are continuously evaluating their incentive packages to ensure they are still attracting and retaining high level employees.¹⁸ ☸

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“Getting Off the Wall”—An Interview with Angie McDonald

By Carrie Stiles, MBA, CRA, RT(R)(CT)

Angelic McDonald, MSRS, CRA, FAHRA, is the director of cardiovascular imaging at Houston Methodist DeBakey Heart and Vascular Center in Houston, Texas. She became a member of AHRA in 2007 and quickly became very involved. She was elected to the Board of Directors in 2012 and was recently voted in as our 2016–2017 President-Elect. She is a personal mentor and encouraged me to get involved with AHRA, which is something I will be forever grateful for. So, I was honored to sit down and get to know a little bit more about AHRA’s next president. I hope this interview inspires you to “get off the wall,” as Angie would say, and put yourself out there; both in your personal and professional life and certainly with AHRA.

[CS] Congratulations! How does it feel to be elected as AHRA’s next president? Several people have pointed out that it’s actually been six years since we’ve had a female president.

[AM] I was looking back over the past presidents and I think I am the first female Hispanic president. Considering that I am following Luann [Culbreth] I am tickled to death! Absolutely tickled to death! It’s very full circle for me. Luann and I were talking this morning and my very first AHRA conference was in Florida. When Luann was president she asked me to be her Design Team

Chair and her year of presidency was in Florida. And guess what? My year of presidency will be in Florida too! I need to buy a lottery ticket!

I guess because I have been working with such great leaders, regardless of sex, I honestly didn’t even realize it had been that long until it was pointed out to me. It seems like just yesterday Luann was president. While I am proud to represent my sex and my nationality in this role, what I hope people see first is simply a leader, and that they don’t see my race; my sex; my age. I want them to see a leader. I think when we, not only as an association but as a society as well, put more emphasis on that we create that. When we stop seeing someone’s hair color, skin color, age, or education level. When we stop looking at each other through those filters then we won’t judge each other by those filters. I finally got the courage to get off the wall and put myself at the table. I was the one holding myself back. It wasn’t my skin color or my sex. It was me. So, to answer your question I am really excited and honored that I was chosen to lead this association.

[CS] What plans do you have to help AHRA continue to evolve, grow, and become more successful?

[AM] If we are going to be the indispensable resource for medical imaging

leaders we have to constantly be looking over the fence. We can’t be reactive; we have to be proactive. So both as President-Elect, President, and Past-President, what I am going to be doing is constantly looking over that fence. And there are certain things that, as imaging managers, we tend to just want to shy away from and the reality is we can’t do that anymore. We have to find that spoon full of sugar that makes it palatable and find ways to help introduce it to our association. Things like regulatory affairs and financial management. Those are just two subjects, it doesn’t matter, they fill up every year because everyone knows they need to get involved. The next biggest thing that’s on the horizon: there are a lot of imaging managers who are being asked to take over areas that they don’t know anything about. And if you haven’t been tapped on the shoulder now, you will be tapped on the shoulder in the future. It’s going to happen. It’s happening now. So I plan to ensure and maintain that commitment of looking over the fence and down the horizon to see what’s coming next. To be quick and proactive about putting material and information in front of our membership to alert them before they are in the middle of that storm so they can slowly transition and get comfortable with whatever the environment is going to be, versus finding themselves in the middle of it without a plan.

management findings

[CS] What was your dream job as a child and why?

[AM] As a child I wanted two things: to go off to the military and also to be a doctor. My mom saved a paper prescription from when I was playing doctor that I had written out for my brother and signed Dr. Martinez. As I got older, I knew I wanted to be in healthcare, but at the time, the only jobs I knew of were doctors and nurses and I felt that my skin was too thin and I would become too emotionally attached to someone that didn't succeed and it would tear me apart. I knew that about myself. So, when I got into high school and the reality of actually entering the workforce was right there in front of me, I couldn't afford college. Through a series of events I discovered the field of radiology and I thought it was absolutely amazing. I could have enough interaction with the patient that really mattered; to really make a difference. It had technology and science involved. It was in healthcare. And guess what? The United States Air Force had, at the time, the only radiology program that was recognized by the ARRT. So I got to combine two interests of mine. The military and a healthcare career that I felt I could really become a part of. So being an x-ray technologist wasn't a dream of mine as a child. Being in healthcare and helping people was. Being in the military was a dream. So, I was lucky enough to be able to combine both.

[CS] What do you conceive leadership to be?

[AM] From my perspective, and I know there are several different types of very accomplished styles, my perspective is servant leadership. Truly great teams can only meet their fullest potential when the team is put first. That's what I liked about the military. It was always the team first. The leader cannot be in it for a title, or shouldn't be at least. It shouldn't be about their career; their next step; their ambition; their paycheck. You might be

able to get a good team leading that way, but you won't get a great team leading that way. And I think people see through that. The leader is only ever going to be as good as the people on their team. So if you give back to the team and make it about them, bringing out their strengths, their talent, their passion, they will want to follow you.

[CS] What advice would you give someone going into a leadership position for the first time?

[AM] First of all, if you are doing it for a title or another "buck fifty" an hour, in the end it's not going to be worth it to you. You're not going to be satisfied. You're going to give up too many weekends and holidays and you will be herding cats all day. You need to ask yourself, "Why are you doing this? What feeds your soul? What is it about that position, that role, that scope, that will make you want to get up on a Saturday, give up a holiday, and give back to the team?" If you're doing it because you want to build something. If you want to promote/create a dynamic work environment. If you're doing it from a servant's heart perspective, then it's the most rewarding job you will ever have. Because any accomplishment anyone on your team makes, you'll be accomplishing right beside them. But, don't get stuck on titles and don't let anyone else define for you what success is. Not everyone wants to be a CEO and that's ok. You don't have to be. If you want to be the best manager you can be, and that's the level you want to be at; if you want to be a supervisor/lead technologist, then stay there! Don't let anyone else tell you that you should be looking forward if you don't want to.

[CS] What is the best and worst decision you've made as a leader and why?

[AM] Best Decision - Coming to Florida in 2007 to my first AHRA Annual Meeting because had I not done that, I wouldn't be here. I know that. Every

good decision, even some decisions that I felt have been pretty pivotal since then, none of those would have happened had I not come to that conference and stayed connected.

Worst Decision—Stopping my PhD program. I got a year into a three-year program at Texas Woman's University and I stopped attending because I was giving so much to my job. I've tried multiple times to go back and I've never been able to find the momentum again. At this point, I don't think I will ever go back. Heck, it would be nice to just finish my second masters and get that over with!

[CS] What accomplishment are you most proud of?

[AM] The accomplishment that I am most proud of is that I've never left a job where someone under my supervision wasn't promoted into my role. That is something I am extremely proud of because I am hard to work for. I don't feel that I am unreasonable to work for, but I am training people to replace me. That's my job. As a parent my job is to have my children be successful in their own independent lives. My job as a leader is to have a strong succession plan. There should be nobody best suited for that role than someone who has already been working with me.

[CS] What woman inspires you and why?

[AM] I have two, a personal and a professional. In my personal life obviously it's my mother. She had a high school GED and the day she crossed the stage with her GED in hand she looked at a 12-year-old girl and said "If I can do it with three kids in tow there's no reason you can't do it the first time." That woman has a PhD in life because she had one hard thing after another happen to her and she never allowed herself to be a victim to the circumstances around her. She took it on the chin, got herself back up and she went on. So that taught

me to not allow myself to be victimized by race, sex, age, education, or finances. You hold your head up when you walk into a room, put your shoulders back, and you stand on your work ethic and values. I think that's what's gotten me to where I am at now.

In my professional life I am going to say Luann Culbreth, because she was my inspiration at my very first annual conference. I saw something in her and connected with her. As a professional MRI technologist herself and as a leader. She showed me what it was like to be an educated female and to be able to stand in a room with men as an equal. I saw that for the first time in her. The way she interacted. I never had that. I never saw that. Even my mother, yes she held her head high, but you could still tell that while she had dignity, she didn't feel like their equal. When Luann walks into a room she's like, "I'm sitting at the front of the table," and I love that about her.

[CS] What do you think is the most significant strength females bring to positions of leadership in healthcare?

[AM] I think that we bring reason to the business. I think sometimes there has to be a give-and-take, especially with the industry pushing on us "Finances-Finances" and "Bottom Line-Bottom Line." I think it's the heart of a woman. We have a strong backbone and we can stand toe-to-toe and have those discussions about finances, productivity, RVUs, and so forth, but at the end of the day if the true value is in the experience; if the true value is in the service line as a whole, even if it's zero revenue-producing, as long as it doesn't cost anything, I think a female can bring that voice of reason and balance to it. And I think when we are at the table, we won't leave the table until that voice is heard. We may not always get the overruling vote, but to be able to stand toe-to-toe with our counterparts on issues such as revenue and productivity. Yes, we know what it takes to run a business. Yes, we know that sacrifices

may have to be made in one service line versus another. But in the overall holistic view, I think we bring a sense of compassion. Heart. We make sure the heart is still part of that because healthcare is still about people. It is a business, but it's about people. The healthcare industry as a whole is about relationships and I think women have a natural tendency to build stronger, truer relationships versus just a business partner relationship.

[CS] What do you think is the most significant barrier to female leadership and why?

[AM] I think we are our own worst enemy. I think the moment we are confronted with an immovable force, whether it be a person, a business, or a project, we tend to concede first because we don't want to disturb the peace. I don't think we have to be bullies, but when we start to realize our own true value we will find ourselves stepping away from standing around the table to taking a seat at the table. When I first started in leadership I was very comfortable just standing around the table. When I was a manager we would go to the boardroom and I would stand leaning against the wall and I would whisper in my director's ear. When they would ask questions I would lean forward and pass off information; "Ask about this." "Ask about that." I lacked the self-confidence to have everyone's eyes on me. It came from multiple things. I told myself that I didn't have a degree and I didn't deserve to be in that room. I had very humble beginnings and if they knew what my beginnings were then I wouldn't be respected. It was from seeing role models like Luann that I thought, "No, I actually know what I am doing." And instead of whispering in someone else's ear I started speaking up. I started sitting at the table and then I started sitting at the front of the table. Each step was me making a decision. No one ever held me back. It was me that was holding myself back. And I think as females, we do that to ourselves.

[CS] What can AHRA members do to ensure continued growth and development as leaders?

[AM] Coming to the conferences and participating in the educational opportunities. You don't know what you don't know. You can choose to be in your own silo; in your own organization; in your own four walls and believe everything is functioning fine. And that may work for you, but to me that is a finger in the dam. Operations as usual. And it can be done, but if you're asking how to ensure continued growth, you're not going to grow if you just stay in those four walls. You have to come and see how other people are doing it, even if they are doing the same thing you are doing, you need to interact with other people. Open your visual scope. The same operations in an academic hospital versus a for-profit hospital are totally different. Stay involved. Open your mouth. Share where you are from and how you are doing. What the biggest pressing issue on your plate is today because you will probably find at least a half a dozen other people with that same biggest pressing issue and we need people surrounding us holding our ladders. That is why I come back every year. 🙌

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Mednovus-SAFESCAN®	www.mednovus.com	42
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It Was a Phone

By Gordon Ah Tye, FAHRA

When I was growing up in the 60s, I would call friends and tie up our phone line for an hour or more. Thank goodness we had a 30 foot extension cord, so I could take the phone into my parent's room and talk in the dark with my girlfriend about whatever. My parent's friends would tell them: "I tried to get a hold of you for over an hour last night, and the line was constantly busy." Hey, we were lucky not to have a "party line" that was shared by our neighbors.

Nothing much changed with phone technology for a couple of decades except for the fact that rotary converted to digital and it was easier to put in more extensions so that we could have phones in multiple rooms in the house. Unfortunately, that led to privacy issues—when I picked up the phone, so could my parents. I can still envision them listening to my conversations while covering the mouthpiece on the phone. The only give away was that "click" when they got tired of listening and hung up.

The first portable phone I saw was our hospital executive's, who had a pack about the size as my "murse" (yes, I have a manurse). The phone was cradled inside the unit, and I was amazed that he could get a connection without it being attached to a cord. My first cell phone was a Philips and cost me about \$350. It was about the size of the box you get an iPhone in. When it would ring, you would flip the mouthpiece down. It looked like a small tank, with a very cool leather cover. I very rarely got calls, but dude, I was like, way cool.

Cell phones got smaller and smaller, eventually evolving to flip phones, sometimes almost too small to hold. Nokia had a majority of the market at one point, and was a good utilitarian non-flip phone, and was very popular. We just called one another, and it was just a phone. My high tech idol, all of my working life, has been Roland Rhynus. We would go to an AHRA board meeting (before web conferences were standard), and Roland would always come up to me with the latest gizmo. "Hey, Gordo, you gotta see this new technology. It's called a Blackberry! You can put all of your meetings on an electronic calendar, and it links to your computer! I just tossed my Franklin Planner. It's amazing!"

The most memorable thing I recall about this era of earlier cell phones was the cost of phone calls. "Roaming" for calls outside of your local area was outrageous. One time I got a bill for about \$630. Numerous frantic calls to my wireless carrier (who was not very sympathetic about my plight) finally led to them cutting my bill in half. But still, it was an expensive lesson. Some of you have probably had the same freak out with your kids' usage.

Enter the next major evolution of phones: the Smart Phone. A phone? Camera? Computer? Texter? Tweeter? MySpacer? Googler? Paypaler? Online shopper? Facebooker? Pinterester? Instagrammer? Youtuber? Snapchat? Pokémon Goer? It's apps gone wild. I only use a few, mainly because my threshold for

usernames and passwords has been exceeded. The number of things you can do with your Smart Phone is clearly endless. What is not endless is your time. Furthermore, I refuse to be one of the "Walking Dead-Phoners" that you see shuffling blindly, in a general direction, staring at their phones. As we do more and more on them, they are truly losing their identity. The newest one I saw I couldn't even fit in my pocket. I would have to carry it in my purse.

So that's my historical CliffsNotes (side note: formerly Cliffs Notes, originally Cliff's Notes) of this world of mobile phones. (CliffsNotes you ask? Google it.) And to think it all started with a simple, analog phone. The world is a smaller place. Communication across the globe is like talking to someone across the street. It has made information, hobbies, entertainment, and intelligence available instantaneously, which is what we demand with today's technology. I admit I liked it simpler, when a phone was just a phone.

Sorry, gotta run, my son is texting me... 📶

Gordon Ah Tye, FAHRA is director of imaging and radiation oncology services for Kaweah Delta Health Care District in Visalia, CA. He holds a bachelor's degree in biological sciences from California State University in Fresno. Gordon is a past president of AHRA, received the AHRA Gold Award in 2001, and received the 2006 Minnie for Most Effective Radiology Administrator of the year. He may be contacted at gahtyes@aol.com.

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