THE COVENANT Chart

COVENANT HealthCare

COVENANT MEDICAL STAFF NEWSLETTER | DECEMBER 2015

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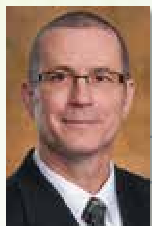


A Time To Be Thankful

Dr. James Hines, Covenant HealthCare Chief of Staff

As a teenager, I had my own dark room where I developed black and white photos. I remember mixing the chemicals and using a red light to see and yet not expose the film to white light. Occasionally, I struggled to get just the right time in the developing fluid and then fix the exposure. What fun!

Fast forward 15 years to 1985, and you find me in another dark room with no windows or air conditioning in a central African bush hospital. This time I was developing chest, abdominal and extremity x-rays using a WWII portable X-ray machine that sporadically went on the blink. I took, developed and read each film.

Our laboratory was primitive with three light microscopes for parasite identification, urine and blood evaluation. We had no blood bank, chemistries, nor tissue pathology for making a cancer diagnosis.

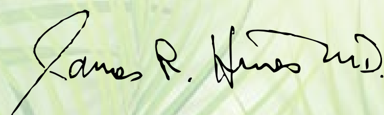
Consent forms for surgery and procedures were verbal only. I recall a Fulani herdsman who came in with a dead, smelly, necrotic left leg due to a snake bite. On arrival, he was septic with a high fever. He not only needed IV antibiotics, but his leg had to be amputated if he were to survive. He told me that he would rather die and go to paradise with two legs then to live and go into eternity with only one leg. I asked my nurse, “What would happen if I amputated his leg without his permission?” The nurse said, “You see his brother with the spear? He would stab your liver until you are dead!” I replied, “Oh, ok. I guess we don’t have his consent to do surgery, do we?” He went home to his village without the surgery.

How do you compare third-world medicine to Covenant HealthCare? Obviously, there seems to be no comparison, especially when you look at the innovative technologies at our fingertips, such as minimally-invasive robotic surgery, advanced cancer treatments, state-of-the-art radiology options, leading-edge heart and pulmonary care, and comprehensive intensive care – to name just a few.

However, one common denominator is good nursing care and bedside manners, which cross all ethnic, cultural and economic barriers. Doctors and nurses still need to address the physical, emotional and spiritual needs of their patients. Communication has never been more important as we strive to put their needs above our own.

This season reminds me how thankful we should be for the opportunity to deliver extraordinary care to our patients, for the many blessings of health, families and food, and for the partnership we have with the people of Saginaw and the surrounding counties. We have a great team, and I thank you for all that you do.

Happy Holidays and Best Wishes,



James R. Hines, Chief of Staff

Urgent HBO Indications

GUEST AUTHOR
Dr. Dennis Boysen, Medical Director, Covenant Regional Wound Healing and Hyberbaric Medicine Center

Hyperbaric oxygen (HBO) therapy is proven to be a powerful treatment for acute wounds, improving outcomes by correcting oxygen deficiencies in the wound – especially if we get to them fast enough. Unfortunately, in an emergency situation, HBO is often an after-thought and not implemented soon enough to make a difference. We can all address this problem, however, by understanding acute indications for HBO therapy and by consulting with the HBO Center before surgery is performed.

A Hypothetical Situation

Assume that a patient enters the Emergency Care Center (ECC) with an acute arterial injury or trauma that requires limb reattachment or repair, or even amputation (see Figure 1). This can include acute peripheral arterial insufficiency, acute traumatic peripheral ischemia, or crush injuries requiring reattachment or removal of severed limbs. Other conditions range from gas gangrene to carbon monoxide poisoning.

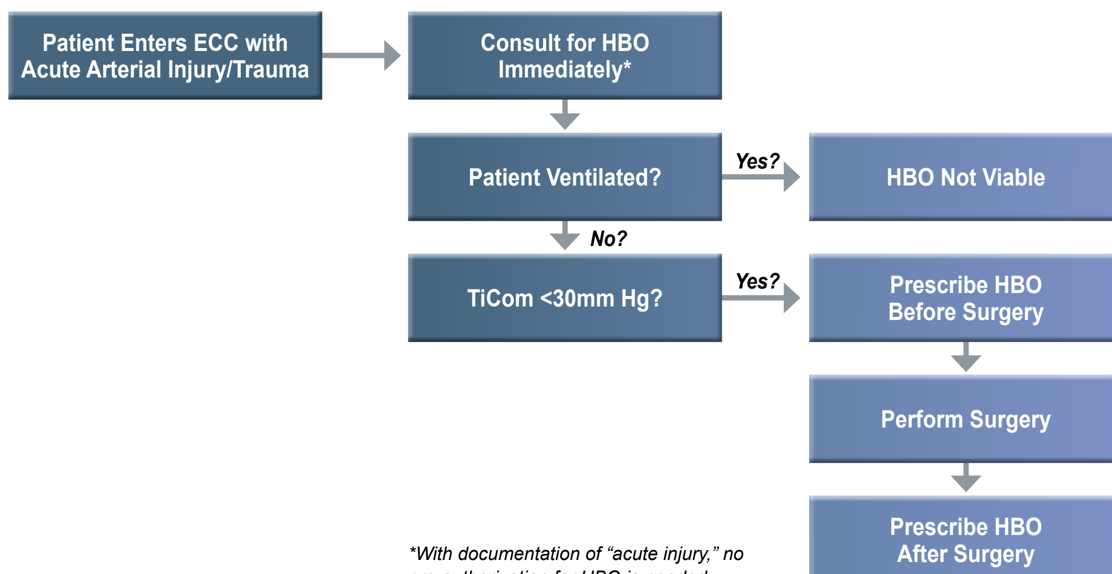
Aside from stabilizing the patient, the attending physician should also consult for HBO therapy immediately to see if the patient qualifies for HBO treatment. It is a valuable adjunct to treatment used in combination with accepted standard therapeutic measures when loss of function, limb or life could occur.

Criteria/documentation must include:

- The patient is an inpatient and does not require a ventilator.
- Documentation of the following:
  - Location of thrombus/embolus and confirming studies.
  - Sudden occlusion of major artery requiring emergent surgery with loss of function, limb or life-threatening situation due to fracture, dislocation, external injury and requiring emergent surgery documented as treatment of choice.
  - Studies used to diagnose injury and the medical intervention used.
  - HBO is a valuable adjunctive treatment in **preparation prior to surgery** and post-surgery to improve outcomes.
- Transcutaneous oxygen measurement (TiCom) less than 30mm Hg supports validation for the use of HBO to improve response to infection and healing.

Documentation of the specific condition must be thorough for medical reimbursement, but for **acute injuries**, there is no need to obtain pre-authorization for HBO.

FIGURE 1
URGENT HBO INDICATIONS SNAPSHOT



HBO Goal

HBO is utilized to enhance tissue viability until a definitive procedure can be performed. The goal is to:

- Increase oxygen delivery per unit of blood flow or enhanced tissue oxygenation
- Reduce edema
- Kill bacteria especially when used synergistically with antibiotics
- Increase endothelial cell proliferation, angiogenesis, epithelialization, stem cell proliferation and decrease reperfusion injury
- Reduce complication rates for infection, nonunion and amputation

HBO increases oxygen tension 10-13 times above normal and increases oxygen dissolved in plasma. HBO also:

- Causes vasoconstriction in normal vessels thus decreasing tissue edema effects
- Increases blood supply to acute dermal wounds by concomitant increase in systemic blood pressure
- Increases activation of MDAF and MDGF* growth factors and migration to hypoxic tissues
- Increases endothelial cell proliferation
- Reduces platelet aggregation
- Reduces reperfusion oxygen derived free radicals
- Increases levels of energy rich adenosine triphosphate (ATP) and phosphocreatinine (PCr)

**Macrophage-derived angiogenesis factor and macrophage-derived growth factor.*

Treatment Schedule

Repeated HBO treatments in the post-ischemic phase help stimulate aerobic metabolism. Treatment schedules depend on a patient's comorbid conditions and treatment response. For acute arterial sufficiency, a treatment schedule could look like this:

- Three 1.5-hour treatments daily for the first 48 hours
- Two 1.5-hour treatments daily for the next 48 hours if needed
- One 1.5-hour treatment on days 5 and 6
- HBO should be initiated early, e.g. within 4-6 hours after injury especially with flap of graft failure

Etiologies should be determined early with vascular workup and use of arterial doppler studies, CTAs, angiograms and other in-chamber TiCom, plus early consultation and transfer to the HBO Center. In addition to HBO, medical management should consider anti-thrombolytic therapy, vasodilatation drugs, inhibitors of platelet aggregation, stenting and revascularization procedures as necessary.

Summary

Unfortunately, it is not economically feasible to have an HBO Center open 24/7 to accommodate emergencies, nor is having an on-call staff. Hospitals have tried this and failed. Therefore, it is critical to patient outcomes to **make HBO an early part of the treatment protocol to maximize outcomes**. Remember to consider HBO immediately in an acute, vascular emergency and limb-threatening event. It should be clearly dictated in the work-up of a patient to ensure proper approval and early treatment, with indications for HBO therapy stated.

For more information, contact Dr. Boysen at 989.583.4473 or dboysen@chs-mi.com.

Flash Back and Flash Forward

Dr. John Kosanovich, Executive Vice President, Physician Enterprise

Today's physicians have amazing technologies at their fingertips. Change is all around us. Advances in computer and materials science, combined with huge leaps in medical knowledge, are creating an unprecedented surge of new-age inventions designed to improve quality of care while reducing cost, variability and hospital visits. They are also driving new models of care, fields of medicine and levels of collaboration never seen before.

Flash Back

As a case in point, flash back to the past few years at Covenant HealthCare. We've made significant, strategic investments to bring new capabilities to our community that improve diagnosis, treatment, access and outcomes along with efficiency and convenience. A few prominent examples include:

- ***Cancer:*** Covenant Cancer Care Center and Covenant Radiation Center, and the affiliation with MD Anderson Cancer Network®
- ***Cardiology:*** The beginning of transcatheter aortic valve replacement (TAVR)
- ***Emergency Medicine:*** Emergency Care Center expansion of space and services
- ***Children:*** Covenant Center for Autism
- ***Knowledge:*** CMU medical school, residency program and educational center
- **Collaboration:** Growth of Covenant Medical Group and PHO
- ***Safety Programs:*** Continued maturing of our HRO (High Reliability Organization) and a recent "Call Don't Fall" program focused on preventing falls

Flash Forward

Now flash forward to the coming year, and you'll see a pipeline of activities to further meet patient and physician needs. Examples at Covenant HealthCare include:

- ***Telehealth:*** Strategies and tools for remote medical and equipment monitoring (see article on page 5)
- ***Informatics:*** Restructuring to improve the efficiency and effectiveness of Electronic Medical Records (see article on page 12)
- ***Robotics:*** Advances in da Vinci surgery techniques and equipment
- ***Staff:*** Further recruiting to fill the gaps in specialty and primary care
- ***Population Health:*** Strategies that integrate personal health with community/population health
- ***Cancer:*** Nurturing the affiliation with MD Anderson Cancer Network®
- ***Partnering:*** Continued partnering with regional critical access hospitals and smaller hospitals in the region in ways that continue to meet their needs for seamless tertiary care

Such activities align to our six core strategies as follows:

- Pursue Clinical and Patient Excellence
- Invest in People and Culture
- Prepare for Population Health Management
- Pursue Operational and Financial Excellence
- Expand Scope of Services
- Extend Geographic Reach

Entering the "Next Frontier"

The next frontier of medicine is an exhilarating topic of conversation, and not just from the conceptual level. In many cases, the ideas once considered possibilities are now becoming realities as they move from the innovation stage to clinical trials and commercialization.

Learn About Medical Innovations on TEDMED

Medicine's Future? There's an App for That

https://www.youtube.com/watch?v=sNda62ZLN9o

The Wireless Future of Medicine

https://www.youtube.com/watch?v=w2s9Fv_j1eg

At a recent board retreat, guest speaker and physician-scientist Dr. Daniel Kraft spoke about the huge impact of the smartphone alone, and how real-time data monitoring and imagery can be integrated with diagnostics and treatment. His comments, and those of other respected experts such as Dr. Eric Topol, a cardiologist and geneticist, discuss the promise of more targeted and personalized treatment programs enabled by internet connectivity, social networking, computational bio-informatics and low-cost gene analysis among other drivers. These experts state that it's "out" with the stethoscope invented in 1816 and "in" with digital medicine by 2016.

We already have products like Wii Fit, FitBit and Zeo personal sleep manager designed to help prevent health issues and enhance wellness. Next, we will start to witness the power of smartphones to transmit all of our vital signs, special sensors that automatically monitor glucose levels, the growing capability to perform remote surgeries, wireless chest patches that replace Holter monitors, and virtual visits with patients.

While rapid changes in technology can be challenging, they are also liberating, lifting many barriers to treatment. Importantly, they will give greater populations of people access to quality health care – from the rural and underserved to the young and elderly – accelerating our vision to provide "extraordinary care for every generation."

For more information, contact Dr. Kosanovich at 989.583.7555 or jkosanovich@chs-mi.com.

A Cardiac Innovation to Reduce Hospitalization

GUEST AUTHOR
Dr. Mayar Jundi, Cardiologist, Covenant Cardiology

An innovative tool that can improve the outcomes of heart failure (HF) for patients is now available in our region. The CardioMEMS™ HF System is an implantable FDA-approved monitoring device that enables qualified HF patients to get proactive and personalized treatment from the comfort of their own home, reducing hospital admissions and improving quality of life.

The CardioMEMS HF System measures pulmonary artery pressure and heart rate. Both are early indicators of worsening HF that occur before symptoms present, and are considered a direct marker of HF progression. The system automatically transmits this data to a secure database for review by the patient's health care team, who can immediately take steps to adjust medications and stabilize the patient as needed. As a preventive tool, it can also help avoid future invasive procedures by stopping further damage to the heart. Clinical trials already show that the CardioMEMS HF System reduces hospital admissions by 37%, in addition to reducing visits to the emergency room and the clinic.

Eligibility

A patient is first screened for eligibility. Key selection criteria include patients who:

- Have been hospitalized for heart failure in the past 12 months
- Are classified as a New York Heart Class III heart failure patient (marketed limitation of physical activity, comfortable at rest, but less than ordinary activity causes problems)
- Are on appropriate medical management, and able to take blood thinners for one month after implant

A Fast and Easy Procedure

Starting at the groin, a trained cardiologist uses a minimally invasive, catheter-based procedure to implant a miniature, wireless pressure-sensing device – no larger than a dime – directly into a branch of the pulmonary artery. The procedure lasts between 30-45 minutes, which includes time to adjust the sensor after implanting. It can be performed with our without mild sedation, and is considered painless. Afterwards, the patient takes a blood thinner for one month, followed by a daily aspirin.

The sensor is designed to last the lifetime of the patient and is powered by radio frequency energy instead of batteries. It is completely sealed using microelectromechanical systems (MEMS) technology, which allows the sensor to measure and transmit data. It does not impair blood flow and does not include problematic leads.

A Simple System

The Cardio MEMS HF System includes a small portable electronic unit and a special pillow containing an antenna to take daily sensor readings. It is a simple process that takes only a few minutes and is devoid of sensation or pain. The patient simply turns on the unit and lies on the pillow, pressing a button to initiate a reading.

The wireless sensor transmits data to the secure database, where the patient's physician or clinician accesses the information. In addition, automated alerts are sent to the physician if pressure readings fall outside of designated ranges. Readings are also added to the patient's electronic medical record.

Proven Locally

If you have HF patients who are not responding well to medications, have been hospitalized in the past year, or require frequent visits to the clinic, you may want to recommend the CardioMEMS HF System. It is starting to transform how HF patients are managed, and is now available at Covenant HealthCare – currently the only hospital in the region to offer this capability. As of this publishing, five patients have undergone the procedure and were surprised at how easy it was.

Best of all, this is just the beginning of a bigger revolution. The future holds the possibility of collecting even more information for all types of ailments, making "digital medicine" an integral part of proactive health care.

For more information, contact Dr. Jundi at 989.583.4700 or mjundi@chs-mi.com.

Bucking the Trend

> **5.1 million** Americans have heart failure.

670,000 new cases are diagnosed each year.

The estimated direct and indirect cost of HF in the U.S. for 2012 was $31 billion, a number that will likely double by 2030. Patients with HF are frequently hospitalized, have a reduced quality of life and face a higher risk of death. The CardioMEMS™ HF System is designed to help turn that trend around.

Beware the Jibberish and Jabberwocky

GUEST AUTHOR
Dr. Michael Williams, Assistant Medical Director, Hospital Medicine

At the third-quarter Covenant HealthCare Active Medical Staff meeting, we heard a plea for accuracy in charting. We were admonished, and rightly so, to make sure we have read transcribed text (our EMR notes) prior to electronically signing it – to actually proofread it before putting it into the permanent record.

This has reappeared on the radar due to the increasing use of voice recognition dictation capabilities such as Fluency Direct available on so many workstations throughout Covenant HealthCare. It is a wonderful tool and its widespread adoption portends an increase in the efficiency we all desire. However, as with all technology, there are inherent risks of unintended consequences if not utilized properly. Such warnings as, "This note was prepared using voice recognition software and may contain sound-alike words and nonsensical phrases," do not grant immunity.

Actual examples of inaccuracies include:

Voice Dictation:
"The patient was transferred from critical care to the general ward for further treatment."
Translation Error:
"Genital warts" instead of general ward.

Voice Dictation:
"The patient had exertional angina."
Translation Error:
"Exertional vagina" instead of angina.

Voice Dictation:
"Given his quadriplegia, he states that usually digital stimulation or enemas have been needed to provoke a bowel movement."
Translation Error:
"Animals" instead of enemas.

While one can ruminate on the humorous (not humerus) aspect of this problem, we must consider the more serious legal and medical ramifications of blithely signing unread transcriptions. Imagine trying to explain this in front of a jury – "C'mon, everyone knows what I meant." That likely would not be well-received, but rather provoke angst.

The population we serve expects us to communicate accurately and effectively – it is important information, and we are professionals, after all. "Get out of jail free" phrases were generally not appended to traditional, human-transcribed dictations (except the infamous, "Dictated but not read"

Jabberwocky

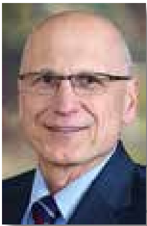
BY LEWIS CARROLL

ACTUAL VERSE	VOICE RECOGNITION TRANSLATION
Twas brillig, and the slithy toves	**Was relieved and the slight ketones**
Did gyre and gimble in the wabe;	**DD dire and gamble in the way back;**
All mimsy were the borogroves,	**All means he wore the board gross,**
And the mome raths outgrabe.	**And the moment routes out grade.**
"Beware the Jabberwock my son!	**"B where the job or walk my son!**
The jaws that bite, the claws that catch!	**The jaws that bite the closet catch!**
Beware the Jubjub bird and shun	**Be where the jump to L Byrne Biren Shah on**
The frumious Bandersnatch!"	**Before meals Benders patch!"**
He took his vorpal sword in hand;	**He took his work also ordered and hand;**
Long time the manxome foe he sought –	**Long-time the med and Soma follows he sought**
So rested he by the Tumtum tree	**She arrested he by the Tom Tom treatments**
And stood awhile in thought.	**Total while in follow-up.**
And, as in uffish thought he stood,	**And as an outpatient but he stood,**
The Jabberwock, with eyes of flame,	**Together walk with eyes inflamed,**
Came whiffling through the tulgey wood,	**Came with sling through the told he would,**
And burbled as it came!	**And garbled as it came!**
One, two! One, two! And through and through	**1, 2! 1, 2! And through and through**
The vorpal blade went snicker-snack!	**The whirlpool blade when sticker snack!**
He left it dead, and with its head	**He left the dead and with its head**
He went galumphing back.	**He went the 1 thing back.**
"And hast thou slain the Jabberwock?	**"And passed else landed job her walker?**
Come to my arms, my beamish boy!	**Come to my arms might be miserable a!**
O frabjous day! Callooh! Callay!"	**O fragilis day! Kella Liu! Talati!"**
He chortled in his joy.	**He short older than his GOA.**
'Twas brillig, and the slithy toves	**Was pearly and the slide the toes,**
Did gyre and gimble in the wabe;	**Good guy air and able in the way back;**
All mimsy were the borogroves,	**All means see where the board gross,**
And the mome raths outgrabe.	**And moments routes out grade.**

phrase – a tacit admission to favor expediency over accuracy). Usually, it is assumed by the reader that the note had been read prior to signing and that the physician would not try to blame inaccuracy on the transcriptionist – that is the definition of proofreading.

Just for fun, look what happens when we dictate one of the more bizarre works of fiction, Jabberwocky by Lewis Carroll – an appropriate example since jabberwocky means "invented or meaningless language; nonsense." You will find it above, and hopefully enjoy the diversion. See how the software tried to formulate medical jargon as well as organism and physicians' names to fit what was dictated. Recall that the context for this transcription, as far as Fluency Direct is concerned, is health care information that is tailored to Covenant HealthCare. When compared line for line, it is clear "what was lost in translation." But if the original record wasn't available, how many folks would really know Lewis Carroll's poem was the original text?

Therein lies the cold, harsh realization. How might Lewis Carroll's timeless work have suffered if he had published without proofreading? And how might OUR words cause suffering if we do the same?



2015 Provider Engagement Survey Results

Dr. Michael Schultz, Vice President of Medical Affairs

Good news! The 2015 provider engagement survey received a 55% response rate, up 1% from 2013. Many thanks to those who contributed, as your feedback is vital to achieving excellence at Covenant HealthCare.

Survey Context

As with 2013, survey results were calculated according to two survey paths – one for all physicians and advanced practice providers (APPs) employed by Covenant HealthCare, and another for all independent physicians and APPs who practice here.

- Level of **Engagement** was measured for the Covenant-employed group. Engagement rankings run from being highly engaged and loyal to the organization with the desire to go above and beyond, to being content, ambivalent or disengaged.
- Level of **Alignment** was measured for all independents. Alignment rankings run from being highly aligned strategically and financially to the organization with a strong commitment to admit or refer patients, to being loyal, at risk (for losing loyalty), or disaffected.

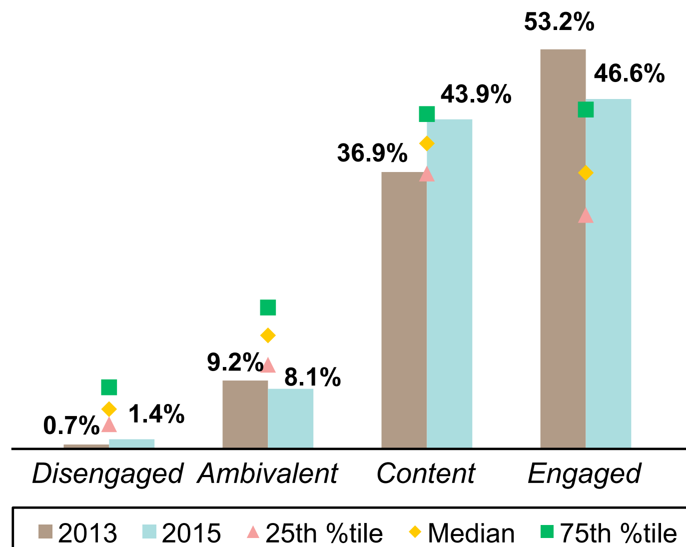
Snapshot of Results

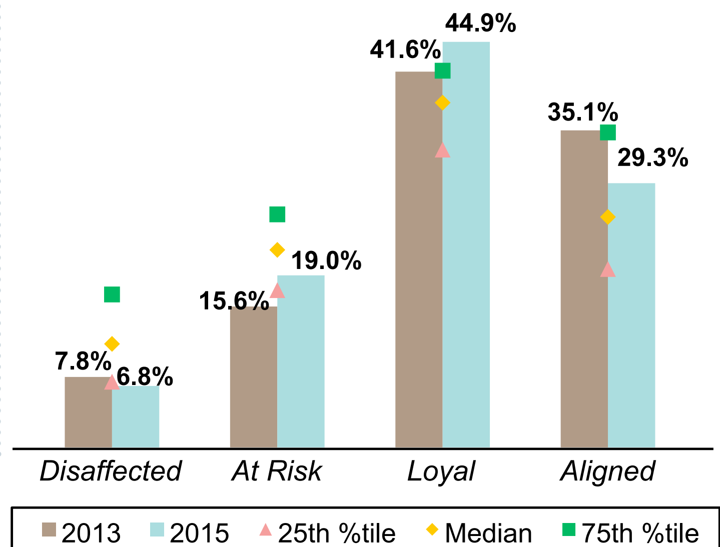
At the time of this publication, the Survey Team is still reviewing results and action plans, but Figures 1-2 offer views of key, high-level findings:

- Figure 1 shows how Covenant HealthCare continues to outperform the ABC (Advisory Board Company) national benchmarks for engagement and alignment. We performed better than most institutions surveyed across categories, with most Covenant-employed respondents ranking as "engaged" or "content" and most independents ranking as "loyal" or "aligned." That said, compared with 2013, we do see some declines in both engagement and alignment. For Covenant-employed respondents, there's a negative trend in those who are "disengaged" and "engaged," yet fewer are "ambivalent" and more are "content." For independents, there's a negative trend in those "at risk" and "aligned," but fewer are "disaffected" and more are "loyal."
- Figure 2 reinforces how physicians and APPs alike are ranked at the more positive end of the spectrum, in either the "engaged or content" range for Covenant-employed respondents or in the "loyal to aligned" range for independents.

FIGURE 1

WE CONTINUE TO OUTPERFORM THE BENCHMARK, BUT SEE SOME AREAS OF DECLINE VS. 2013





1) Benchmark contains 30,000 responses
2) Engagement N does not reflect removal of respondents who indicated they intend to retire or move out of the region in the next three years

Source: Healthcare Advisory Board Survey Solutions' national physician engagement database, 2015

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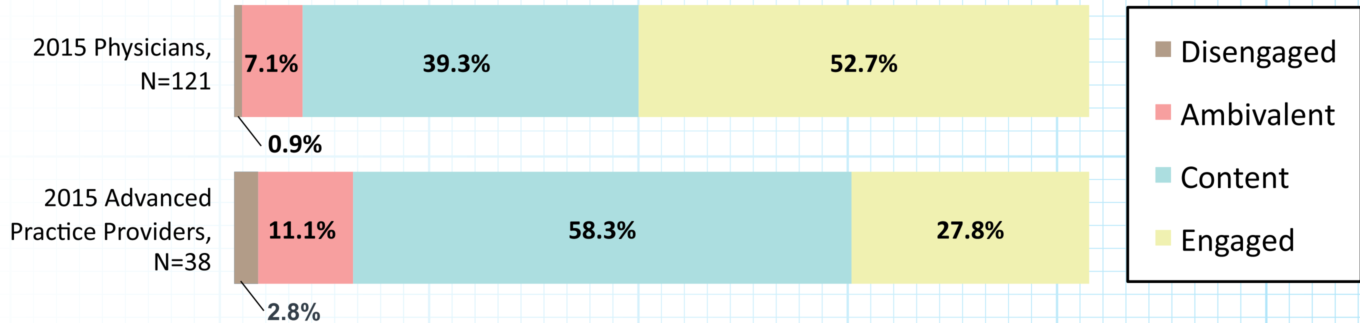
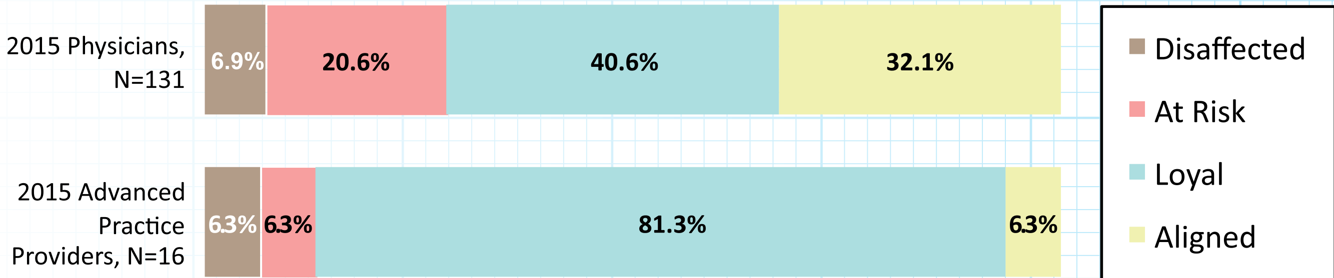
FIGURE 2

PHYSICIAN AND APP SCORES ARE AT POSITIVE END OF THE SPECTRUM





1) Groups with fewer than 3 responses not shown to preserve respondent anonymity

2) Engagement distributions reflect removal of respondents who indicated they intend to retire or move out of the region in the next three years

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Covenant HealthCare continues to outperform national benchmarks for engagement and alignment.

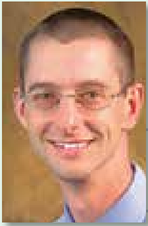
Opportunities Ahead

Additional findings reveal many perceived improvements since the last survey. We are doing better, for example, at:

- Keeping people informed about the organization's strategic plans and direction
- Ensuring that Covenant-employed physicians feel well supported and confident in the Executive Team's ability to reflect their goals and priorities

Broadly speaking, the focus of our action plan will be in two key areas: 1) continuing our efforts to address the issue of disruptive behavior, and 2) ongoing improvements to Epic – both of which are reinforced in open-ended feedback. These and other actions will help make Covenant HealthCare an extraordinary place in which to work.

For more information regarding survey details, contact Karen Schafer, Director of the Office of Physician Relations & Regional Outreach, at 989.583.4045 (kschafer@chs-mi.com). Or contact Dr. Schultz at 989.583.4103 (mschultz@chs-mi.com) for medical staff concerns.



The Value of Direct Primary Care

GUEST AUTHOR
Dr. Kevin Roy, Family Physician

The Direct Primary Care (DPC) model of healthcare, which charges patients a retainer and offers 24/7 access to a physician, is an alternative to the traditional fee-for-service insurance model and is growing in popularity.

While both models are important to healthcare, DPC is bringing more provider options to patients, physicians, employers and hospitals alike. Because a monthly retainer is charged and insurance is not a factor, issues with deductibles, copays, insurance paperwork and even HIPAA restrictions simply disappear. This, in turn, simplifies the process considerably, reducing healthcare costs while providing a greater patient-physician experience.

Key benefits to **patients** include:

- Virtually unlimited access to a physician, 24/7 and 365 days per year
- Extended, relaxed visits in the office or the patient's home (a plus for homebound patients)
- Less missed time from work for appointments
- Fewer trips to Urgent Care or the Emergency Room (ER)
- For those who are uninsured or have limited coverage with high deductibles, it can save money and provide peace of mind
- No mark-ups on labs, medications and diagnostic procedures
- Referrals to the best consultants and coordination with hospital specialists, when needed

Key benefits to **physicians** include:

- Flexibility to practice a personalized approach to medicine, spending more time with patients while reducing patient volume, over-documentation, stress and burnout
- Opportunity to decrease practice overhead and paperwork via zero insurance billings and fewer staff
- More time for researching patient treatment plans, performing patient follow-ups and obtaining meaningful CME
- More options to communicate with patients, including phone, text, email, Skype and webcam – all forms of telemedicine
- Home visits complete the picture with direct insight into unspoken environmental and lifestyle factors impacting a patient's health
- "Meaningful Use," insurance incentives and ICD-10 are non-players
- More personal time to spend with family and friends

Key benefits to **hospitals** and **employers** include:

- Hospitals can refer patients who can not afford fee-for-service to a qualified healthcare provider, helping to reduce unnecessary visits to the ER or Urgent Care
- Employers can reduce healthcare costs while providing a broader range of options, reducing absenteeism and promoting healthier employees

> "I loved the simplicity of the location, the personal feeling of the office, and the great personal service of this type of practice. My experience was reminiscent of my childhood doctor's visits when life was slower and much less complicated."
>
> – Direct Primary Care Patient

For most DPC practices, the monthly subscription covers nearly all primary care needs: annual physicals, chronic care management, acute visits and most in-office procedures. Because of the reduced overhead, financial success comes with a low 500-600 patient volume equating to five to six visits on an average day. The DPC model is even used by specialists for their chronic management patients.

Importantly, DPC is not synonymous with “concierge care.” The latter is a hybrid approach that typically couples a high retainer with pay-per-fee insurance billing; DPC is therefore much more affordable.

That said, most DPC practices recommend patients maintain a high-deductible policy to cover hospitalizations. Also, while not restricted by HIPAA, DPC practices do maintain a higher degree of patient privacy. For example, fewer third parties can access the patient’s information (and only with signed consent) and telecommunication venues are pre-approved by the patient.

The DPC model is certainly not for everyone, but most physicians do not go to medical school to fill out more paperwork. DPC brings value to the healthcare world with improved access, affordability, engagement, satisfaction and most importantly, excellent clinical outcomes.

Interested? Check out: http://www.aafp.org/practice-management/payment/dpc.html.

For more information, contact Dr. Roy at 989.395.5152 or kevinroymd@gmail.com.

What Exactly Is Nordic Anyway?

Dr. Michael Sullivan, Chief Medical Quality and Informatics Officer (left),
Guest author Frank Fear, Chief Information Officer (right), Covenant HealthCare

Since early 2015, there has been a lot of talk about Nordic throughout Covenant HealthCare. You may have heard it discussed at department meetings, Active Staff meetings or in the hallways. It is usually discussed in the context of information technology (IT) or Epic. To dispel rumors, it does not refer to a Norse God or superhero.

Nordic is the name of the consulting company that Covenant has engaged to look at how we do things in regards to IT. Nordic specializes in Epic customers and institutions that use Epic as their electronic medical record (EMR) platform. In fact, over 85% of their team members are former Epic employees or Epic-certified in one or more applications. Furthermore, they focus on IT processes and systems, IT governance and change management, plus the integration of all technologies with EMR. Covenant is tapping into both areas of expertise.

Covenant has used Epic as its EMR since 2007, making us one of the more mature customers in the Epic universe. Since then, there has been a tremendous explosion in the capabilities of the system throughout the IT arena, whether it is the unprecedented growth of handheld and mobile technologies, the digitization of support services, the increasing reliance on data or the myriad of data sources that are available.

In early 2015, Covenant was presented with an opportunity to look at how we deal with these forces and how we utilize Epic, with an eye toward improving our processes and capabilities. We entered into an agreement with Nordic Consulting in April 2015. During May and June, more than 20 members of the Nordic team were at Covenant assessing our organization, processes, utilization of Epic and IT governance structure. In July, they delivered a detailed report and recommendations.

After a thorough discussion and reflection on these deliverables, a comprehensive plan was developed by IT and clinical leadership with the help of Nordic, and implementation commenced in November. The work is centered on two major areas of engagement:

1) Restructuring of our IT governance and change management process and

2) Epic optimization

IT Governance

IT governance refers to how changes are made, who makes decisions, and how requests for changes are made and prioritized. The goals of a well-positioned governance structure are transparency, a clearly defined pathway, decision-making at the appropriate level and a robust change management process. This allows us to effectively prioritize projects and change requests so that can better use our resources in ways that maximize the safety and efficiency of patient care. With this in mind, we are implementing several improvements. Examples include:

- **We have outlined a new committee structure to more effectively integrate decisions across departments and service lines.** This will focus our efforts from an enterprise-level view downwards. This is critical as the continuum of care expands beyond the acute care episode. We are utilizing several of our existing committees who have done such great work over the years, as well as expanding or changing the scope of others. The new structure can be seen in the accompanying visual.
- **We have defined how requests are prioritized and where decisions will be made.** This structure brings together all of our technology systems, not just Epic. Each committee has a robust charter, which will be clearly communicated throughout the organization. We have also redesigned our change management process and how requests are processed. The process will be more transparent and accountable and will allow for more efficient and attentive decision making at the most appropriate level.
- **We are forming a Clinical Informatics Team to focus our efforts on the most critical needs.** This team will harness both the clinical expertise and IT knowledge that is increasingly demanded in the work that we do. An additional area of focus has been on our training models and how we educate and communicate changes. This model will be more responsive and relevant to end users.

With all of this activity, we hope to move from a reactive, fire-fighting mentality to a more proactive mindset capable of taking advantage of all the advancements and emerging technologies that enable us to provide extraordinary care for our patients.

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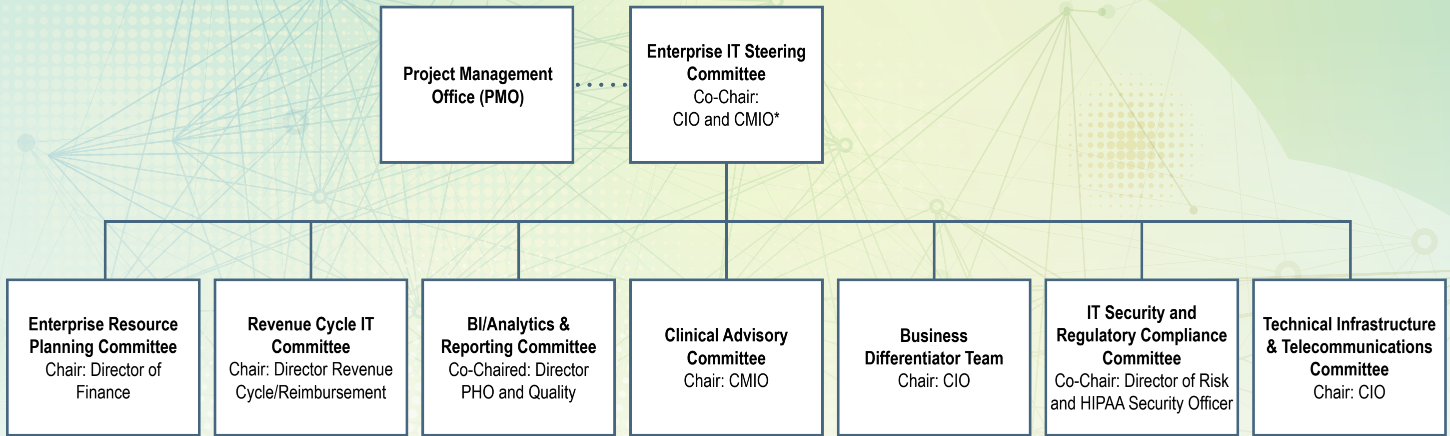


Epic Optimization

The second major area of engagement is optimizing the way that we use Epic, our EMR. This began with a comprehensive review of the workflows, processes, pathways and features of the EMR that we utilize, including back office analysis, at-the-bedside observations and discussions with many clinicians.

The Nordic team was able to identify areas where we are not using the full capabilities of the system or following best practices. They provided 296 improvement recommendations, which touch every application and area where Epic is utilized. We have been diligently prioritizing these suggestions and integrating them into the existing work plans of the eCovenant team. The revamped governance structure and change management process have greatly enhanced this work.

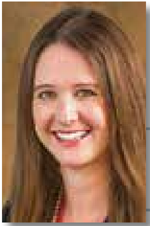
We are beginning to deploy teams to implement these suggestions, and the pace of improvement should only accelerate in the coming months.

Summary

Technology is becoming increasingly integral to providing care for our patients. We have been given the opportunity to objectively examine ourselves and how we should be harnessing these technologies.

Over the coming months you will see many changes and the positive effect that they have on how we make decisions, communicate, educate and implement change. We hope to better capture the capabilities of Epic and all of our healthcare technologies to provide the best possible care for our patients in the most efficient and productive ways.

For more information, contact Dr. Sullivan, CMIO, at 989.583.7351 (msullivan@chs-mi.com) or Frank Fear, CIO, at 989.583.0224 (ffear@chs-mi.com).



Advances in Treating Colorectal Liver Metastases

GUEST AUTHOR
Dr. Elizabeth Paulus, Surgical Oncologist and Assistant Professor, CMU Health, Division of Surgery

Colorectal carcinoma is the third most common cancer for men and women in the United States, with about 150,000 Americans diagnosed every year. Notably, more than half of the patients with colorectal cancer develop metastases. Not only is the liver the dominant metastatic site, but 20-30% of patients have synchronous liver metastases at the time of initial presentation. Furthermore, approximately two-thirds of patients will experience a recurrence of liver disease even after surgical resection.

Colorectal carcinoma is the **third most common cancer** for men and women in the United States, with about 150,000 Americans diagnosed every year.

Historically, colorectal liver metastases has carried a dismal prognosis. Fortunately, recent data suggests that due to treatment advances, survival is significantly improved. Cure is possible in this population and should be the goal. Five-year, disease-free survival rates are now 20% for all patients who undergo resection of liver metastases with a median of 38% survival, and some patients with solitary liver metastases have five-year overall survival rates of up to 70% after surgery. Therefore, it is critical that all patients with metastatic colorectal cancer are evaluated for suitability for surgical resection.

Treatment Advances

Over the past decade, treatment options have expanded, subsequently increasing the disease-free interval.

In the surgical arena, mortality rates for liver resection (hepatectomy) have significantly declined due to surgical expertise and techniques that improve safety while minimizing blood loss, surgical morbidity and mortality. Operative mortality rates have dropped from 20% before 1980 to 1-5% in recent years, and hospital stays have shortened. Favorable outcomes now allow hepatobiliary surgeons to be more aggressive, treating larger tumors, multiple lesions and metastases in both lobes of the liver using a staged approach. Surgery is now considered the standard of care for resectable metastases and the only modality that can potentially lead to a cure for some patients with this disease.

In the realm of chemotherapy, higher doses of drugs are now possible with fewer side effects. New infusion techniques, targeted therapies, drugs and drug combinations are becoming more effective at slowing or stopping tumor growth. Currently, commonly used agents in metastatic colorectal cancer include: 5-FU/LV, Capecitabine, Irinotecan, Oxaliplatin, Bevacizumab, Cetuximab, Panitumumab, Ziv-Aflibercept, Ramucirumab and Regorafenib. Combinations such as mFOLFOX6, FOLFIRI, CapeOx, infusional 5-FU/LV or Capecitabine and FOLFOXIRI are intensive therapies used in these patients.

While some patients have resectable liver metastases on presentation, the preponderance of patients are initially deemed unresectable. Chemotherapy is now being used to convert a number of patients to resectable status due to a favorable response. This highlights the importance of close communication amongst the multidisciplinary team, including the surgeons and medical oncologists, with frequent evaluations to optimize outcomes and survival.

On other fronts, portal vein embolization and advanced ablative therapies such as microwave and radiofrequency ablation, provide additional options – especially for unresectable metastases. In addition, cutting edge diagnostic imaging technologies are improving early screening, treatment accuracy and follow-up regimens – further improving results.

The best outcomes typically involve a multidisciplinary approach, personalized therapy and an upfront evaluation by a surgeon experienced in the resection of hepatobiliary or lung metastases. Such an approach is integral to improved survival rates.

NCCN Guidelines

Below are the National Comprehensive Cancer Network (NCCN) guidelines for "Workup and Management of Synchronous Metastatic Disease:"

- Colonoscopy, CBC, chemistry profile, CEA, biopsy and CT scan of the chest/abdomen/pelvis
- Tumor KRAS/NRAS gene status testing and BRAF genotyping for patients with KRAS/NRAS wild-type
- PET/CT if potentially curable M1 disease in select cases
- Close communication among members of the multidisciplinary team including evaluation by a hepatobiliary surgeon

Summary

When patients receive a diagnosis of colorectal liver metastases, the news is daunting for both the patient and the physician due to the historical stigma of liver surgery and previously low survival rates associated with metastatic cancer. Now, however, when patients present with colorectal cancer and liver or lung metastases, prolonged survival and potential cure are indeed possible. We now have access to a broader arsenal of treatment modalities and advanced technologies that is bringing new hope to many patients.

For more information, contact Dr. Paulus at 989.790.1001 or elizabeth.paulus@cmich.edu.

The Changing Landscape of Hospital Medicine

Dr. Iris Marteja, Medical Director of Hospital Medicine, Covenant HealthCare

Hospital medicine, which originated in the early 1990s, is the fastest growing specialty in the history of medicine due to the increasing value that it brings to physicians, hospitals and patients. Drivers include the continuing need to reduce costs, improve quality, fill the void in declining residency coverage due to limitations in work hours, and help primary care providers (PCPs) devote more time to their clinics.

By providing 24/7 coverage, hospitalists are increasingly filling those voids and taking on tasks that improve the speed of admissions, reduce length of stay, discharge patients earlier and reduce the cost per case. Furthermore, they help connect the dots in complex cases involving several specialties, providing clarity to patients and the entire medical team.

Important Trends

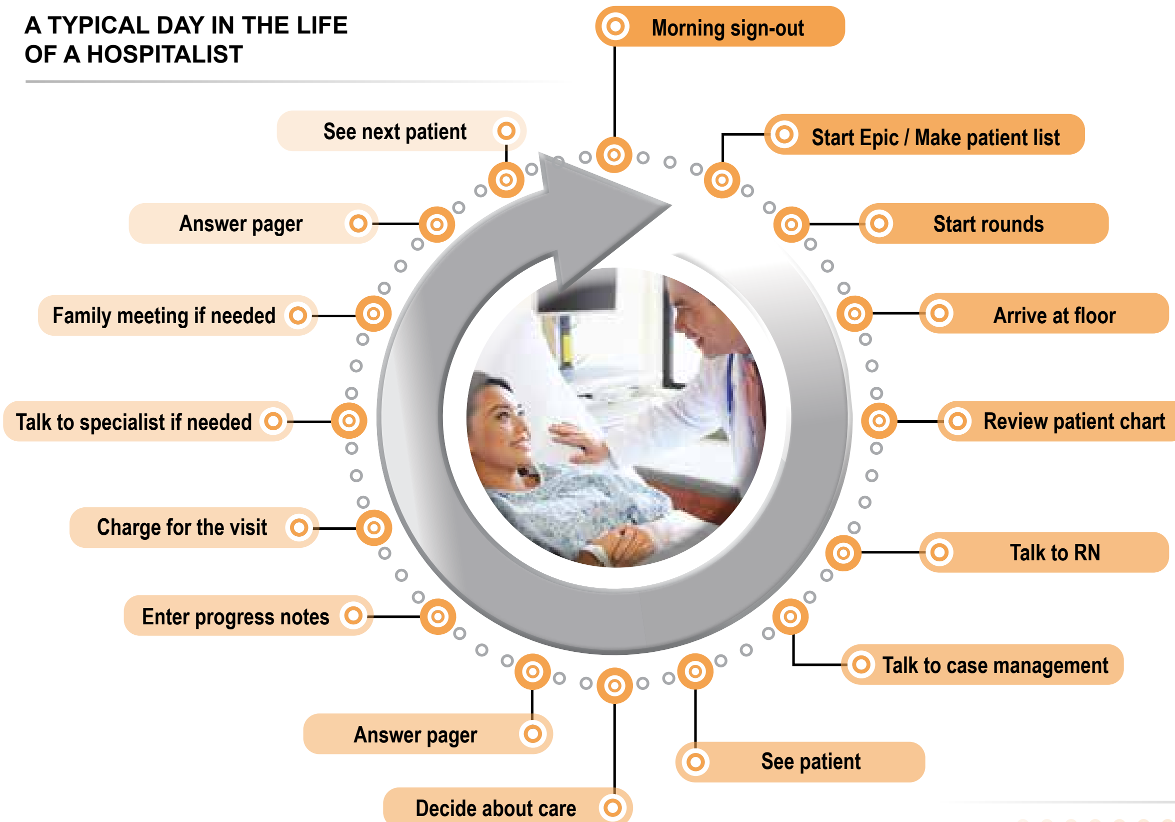
In the beginning, hospitalists primarily admitted for PCPs. Increasingly, most medical subspecialties and surgical specialties are also giving this role to hospitalists, especially in underserved areas. Hospitalists are aware of the need to cover more than what they originally were contracted for, but are becoming concerned about practicing outside the scope of their training. This concern is being addressed by the Society of Hospital Medicine (SHM) and various hospital groups to ensure high standards of care.

Another trend is the evolution to a specialty. While hospital medicine is not a recognized fellowship, a growing number of residency programs are including hospitalist training tracks. This is driven in part by the need to educate future hospitalists about the business and operational aspects of medicine, as these topics are not well covered in traditional residencies.

Some interesting statistics on hospital medicine, per a 2014 SHM survey include:

- More than three quarters of hospitalists are employed by either a hospital, health system or integrated delivery system, or a multi-state hospital management company.
- About 98% of adult hospital medicine groups have physicians who trained in Internal Medicine (IM).
- There is a rapid growth of Family Medicine (FM) physicians who are working as hospitalists. Over the past 10 years, the number of family practitioners in hospital medicine groups has grown from 3% to 59% – where at least one physician is trained in Family Medicine.
- There is an increase in the use of "nocturnists" – hospitalists who cover the night shift.
- More flexible schedules are being offered beyond the standard 7-on-7-off schedule.

Continued on page 16, including Covenant HealthCare capabilities.



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The Covenant Chart is published four times a year. Send submissions to Jaime TerBush at the Office of Physician Relations and Regional Outreach.
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The Changing Landscape of Hospital Medicine, continued from page 15

Access and Impact

One of the biggest assets of having hospitalists is their 24/7 availability and coverage, and integration into the organization. This enables healthcare teams to reach a hospitalist in a timely manner. Their physical presence on the patient care units makes it easier for consultants and nursing staff to have meaningful face-to-face discussions about patient status and needs. Hospitalists also collaborate with case managers to facilitate patient throughput.

Today's patients are getting sicker with more complex profiles. Hospitalists cover virtually everything: from admissions and ensuring the right diagnosis and treatment plan, to medication management, medical emergencies, rapid response, code blues, intubations, family updates and safely transitioning the patient for discharge. They not only manage the clinical side of medicine, but also get involved with logistics and social issues.

Our Story

Covenant Hospital Medicine began in May 2003 as a four-physician group and was the first 24/7 hospitalist program in the Great Lakes Bay Region. Today, it has grown to 28 physicians with Internal Medicine and Family Medicine backgrounds, one physician assistant and four nurse practitioners with a daily census that recently peaked at 206 patients versus 27 patients in 2003. This team:

- Had 67,000 patient encounters in fiscal year 2015
- Covers more than 150 local and regional practitioners
- Is responsible for approximately 40% of adult admissions through the Emergency Care Center
- Is either an attending or consultant for approximately 60% of adult patients in the hospital

In November 2014, the Medical Executive Committee (MEC) approved the creation of the Hospital Medicine Section under the Department of Clinical Services. The medical director of Hospital Medicine acts as section chief with a seat on the MEC.

The financial model of healthcare delivery continues to evolve, with a growing shift to value-based medicine, quality measures and outcomes. This is where the rubber meets road for hospitalists. You'll find that today's Hospital Medicine group is integrated across the hospital and engaged in many committees dedicated to quality improvement, cost reduction and patient satisfaction. For example, they are at the forefront of "Transitions of Care," serve as physician champions for VTE prophylaxis, sepsis management, patient satisfaction and population health management, and are physician leaders in the Covenant Medical Group. The group also participates as educators for Central Michigan University FM and IM residents and will be engaged with the in-patient rotation of Central Michigan Health (CMH) students during their third- and fourth-year clerkships.

As a mainstay of inpatient medicine, hospitalists have a defined role and set of metrics. Given the ever-changing landscape of health care, the ongoing expansion of a hospitalist's role and involvement must continue to align towards patient-centered, value-based delivery of care.

For more information, contact Dr. Marteja at 989.583.4220 or imarteja@chs-mi.com.