



Empowering
Federally Qualified Health Centers
with Technology to Fight the
Growing Burden of Chronic Liver Disease



For the nation’s Federally Qualified Health Centers (FQHCs), community-based health care providers that receive funds from the Health Resources and Services Administration (HRSA) Health Center Program to provide primary care services in underserved areas, there is a growing concern about the unbridled, alarming prevalence of fatty liver disease.

Individuals served by FQHCs reflect the trends observed nationwide: helping to cure people infected with the hepatitis C virus and addressing the burden of fatty liver disease. Fatty liver disease is a silent epidemic affecting millions of Americans as the rates of obesity and diabetes continue to accelerate.

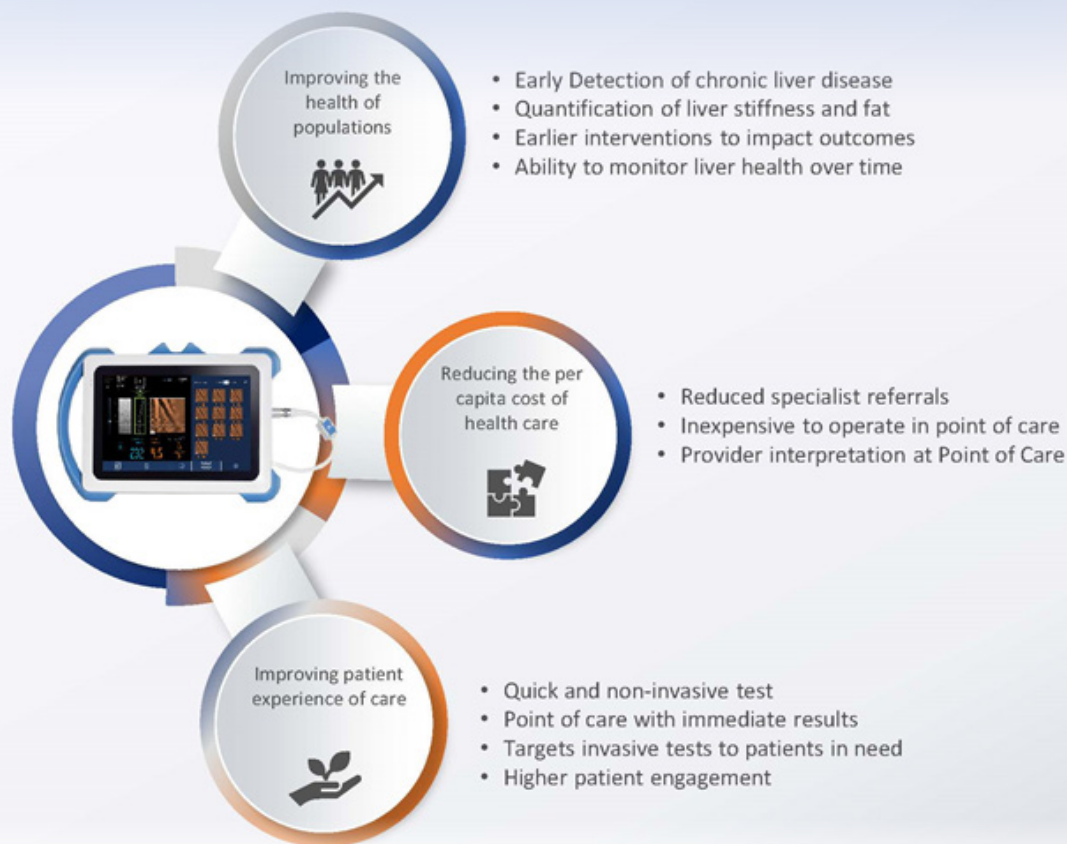
The American Liver Foundation estimates that about 100 million Americans — over 30 percent of the U.S. population — have non-alcoholic fatty liver disease (NAFLD),¹

the most common type of liver disease in the Western world. Nonalcoholic steatohepatitis (NASH), the more severe form of the disease, increases the risk of cirrhosis and is now the most rapidly growing cause of hepatocellular carcinoma among U.S. patients listed for liver transplantation.²

With quality of care a significant focus for FQHCs, and their dedication to effectively halt the onset and progression of liver disease among the populations they serve, many Centers are acquiring FibroScan® technology, a painless five-minute screening, as part of an overall workup to help diagnose NAFLD early on. This non-invasive test quickly provides a quantitative assessment of liver stiffness and fat at the point of care. With over 2,000 peer-reviewed research publications, this technology is the most widely studied tool for point-of-care liver assessment.



FibroScan®:
A tool
supporting the
Triple Aim



Echosens™, an innovative high-technology company offering the FibroScan family of products, presents the accompanying Case Studies which provide compelling examples of FQHCs that are utilizing this technology to better address the looming epidemic of fatty liver disease, advance the quality of care for their largely indigent, vulnerable patient populations and reap the value of enhanced provider and patient satisfaction.

These “real world” examples demonstrate how FibroScan is empowering FQHCs to meet the expectations of the “Triple Aim”: improving the patient experience of care (including quality and satisfaction); improving the health of populations; and reducing the per capita cost of health care.

Background

NAFLD and NASH have become a major concern for a broad spectrum of healthcare providers, not just hepatologists. Today, cardiologists, primary care and internal medicine physicians — especially endocrinologists and those caring for patients with Type 2 diabetes mellitus (T2DM) — are at center stage, as T2DM appears to worsen the course of NAFLD and the liver disease that makes diabetes management more challenging.

NASH is currently the second leading cause for liver transplant waitlist registration/liver transplantation overall, and in females, the leading cause. Given the rate of increase, NASH will likely rise to become the leading indication for liver transplant in males as well.³ Because NAFLD is reversible if diagnosed in the early stages and accompanied by lifestyle changes, understanding the future of screening, early detection and diagnostic methods are important for preventing serious conditions, such as end-stage liver disease (ESLD) or liver cancer, as well as identifying the subset of NAFLD patients with NASH in the FQHCs where they receive care.

The need for identifying the economic burden of NAFLD underscores the need for readily available treatments and early detection to save money and lives. The financial burden on patients is extraordinary: 6.65 million adults (18+ years old) live with NASH in the U.S. lifetime costs of all NASH patients in the U.S. in 2017 were \$222.6 billion and the cost of the advanced NASH population was \$95.4 billion.⁴ NASH, especially advanced NASH, is associated with a high lifetime economic burden.

In the absence of treatment, the total direct costs of illness for these patients will continue to grow, imposing financial constraints on not only individuals, but also health plans and the entire U.S. healthcare system. **With the placement of FibroScan technology in one or more FQHC practice settings, providers can better demonstrate their support for optimal value-based reimbursement.**

Improving Patient Engagement

Although the increasing prevalence of NAFLD is frequently attributed to the epidemic of obesity and is often oversimplified as the “hepatic manifestation of the metabolic syndrome,” it is a much more complex disease process that may also be observed in nonobese individuals and in patients without clinical manifestations of the metabolic syndrome.

Patients need to understand that when the liver stops working properly, it accumulates toxins, food fails to digest, and medications stay in the body. Researchers have found NAFLD in 40 to 80 percent of people who have Type 2 diabetes and in 30 to 90 percent of people who are obese.⁵ Being overweight or obese is responsible for about 85 percent of fatty liver disease.⁶

What is of special concern to the FQHC community is a report published by *JAMA Internal Medicine*.⁷ It found that the demographics of patients seen at FQHCs from 2005 and 2014 have shifted to where the population of young, low-income, uninsured or Medicaid-insured, racial and ethnic minority Americans increased more rapidly than other demographic groups. Proportions of minority and racial groups, largely Hispanic and black populations, seen by FQHCs also saw an increased rate of change. The minority group with the largest growth rate was the population of Hispanic Americans, increasing from 11.2 percent in 2007 to 13.4 percent in 2014.⁸

This is quite relevant since studies show that Hispanics and patients with diabetes are at greatest risk for both NAFLD and NASH, and the prevalence of both is higher in the Hispanic population.⁹

NAFLD Prevalence

Hispanics

58.3%

Caucasians

44.6%

Afro-Americans

35.1%

NASH Prevalence

Hispanics

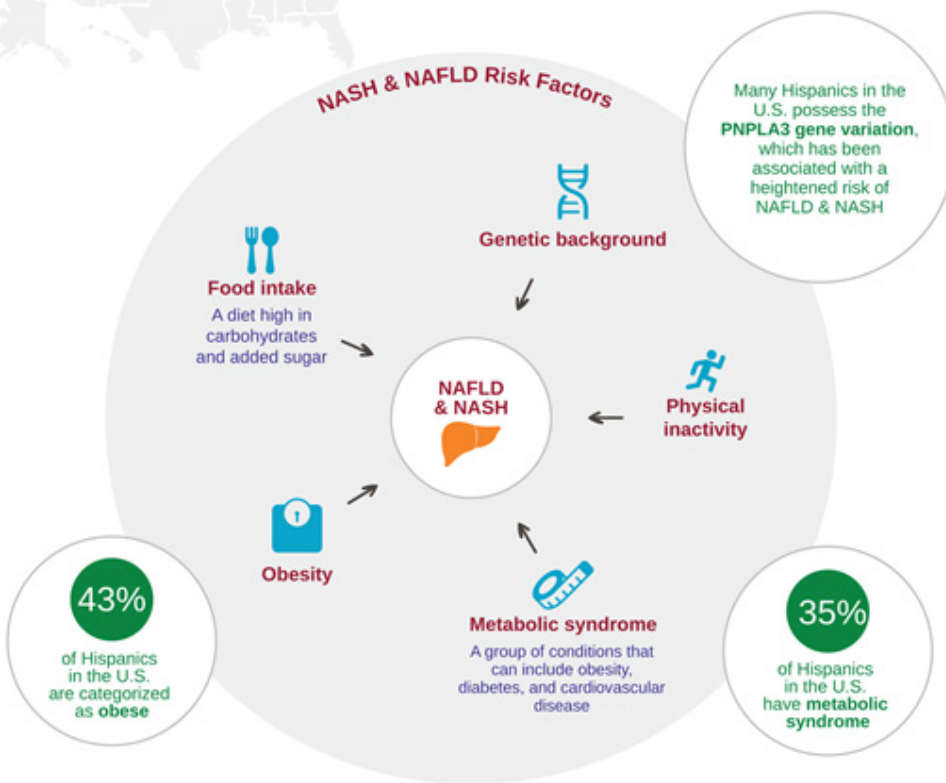
19.4%

Caucasians

9.8%

U.S. Hispanics Have a High Risk of NAFLD & NASH due to environmental & genetic factors

U.S. Hispanics Have a High Risk of NAFLD & NASH due to Environmental & Genetic Factors as shown by the Global Liver Institute.



Adult Obesity Facts. cdc.gov. Available at: <https://www.cdc.gov/obesity/data/adult.html>. Updated 2018. Accessed July 16, 2018.
 Heiss, G., et al. Prevalence of Metabolic Syndrome Among Hispanics/Latinos of Diverse Background: The Hispanic Community Health Study/Study of Latinos. nih.gov. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4113166/>. Updated 2014. Accessed July 16, 2018.
 Pan, JJ and Fallon, MB. Gender and racial differences in nonalcoholic fatty liver disease. World Journal of Hepatology. Available at: <https://www.wjgnet.com/1948-5182/full/v6/i5/274.htm>. Updated 2014. Accessed July 16, 2018.

Those with T2DM and high rates of liver fat are more likely to have progressive liver disease than those with T2DM alone. The 2019 Standards of Medical Care in Diabetes issued by the American Diabetes Association recommend that patients with T2DM or pre-diabetes and elevated liver enzymes or fatty liver on ultrasound should be screened for the presence of liver disease.¹¹

At this point, patients should also be tested for fibrosis. But the need for a FibroScan-based assessment of liver fat and stiffness in patients with pre-diabetes is also becoming evident, as the physicians at the FQHCs featured in this White Paper indicate that they are recommending a FibroScan test in the evaluation and management of care for an expanded pool of patients.

In fact, FibroScan is becoming one of the most important diagnostic tools, comparable to the promotion of hemoglobin A1c (HbA1c) to screen for diabetes and new tools related to personalized medicine, such as pharmacogenetic (PGx) testing.¹² As our health system, and particularly FQHCs, face a challenging environment for liver disease, **FibroScan is taking its place as an essential component of high-quality patient care — a level of care that every individual, regardless of economic or social status, deserves.**



This White Paper examines the role of FibroScan at several FQHCs – providers who are fighting liver disease, one patient at a time:



**LA MAESTRA
COMMUNITY HEALTH CENTERS**
City Heights · El Cajon · National City · Lemon Grove

La Maestra Community Health Centers of San Diego
<https://www.lamaestra.org>



Daughters of Charity – New Orleans, LA (St. Thomas – New Orleans, LA)
<http://dchcno.org/main/home?loc=noeast>

JORDAN VALLEY
COMMUNITY HEALTH CENTER

Jordan Valley Community Health Center - St Louis MO
<https://www.jordanvalley.org/>



Echosens, the developer of FibroScan®, is an innovative high-technology company offering a full range of products and services supporting physicians in their assessment and management of patients with chronic liver diseases. FibroScan is supported by over 2,500 peer reviewed publications and examinations are covered by Medicare, Medicaid and many insurance plans.
<http://www2.echosens.com/AboutFibroScan>
<https://www.echosens.us>

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LA MAESTRA COMMUNITY HEALTH CENTERS

City Heights · El Cajon · National City · Lemon Grove

La Maestra Community Health Centers

In 2010, La Maestra Community Health Centers celebrated 20 years of providing culturally and linguistically-competent prevention, treatment, chronic disease management and essential support services to 148,888 men, women and children in San Diego's most culturally diverse and lowest income communities, through its six primary care medical clinic sites, five dental clinics, mental/behavioral health clinics and optometry clinic, including school-based medical and dental clinics at Hoover High School and a medical clinic at Central Elementary School. Its main health center is located in City Heights, a community that is home to more than 90,000 residents, many of whom are recently settled refugees and immigrants from over 60 countries, with unique health and well-being needs. Additional health center locations include the underserved communities of El Cajon, National City and Lemon Grove, where the majority of patients are also refugees and immigrants who need affordable, quality health and social services.

Mission

Since its founding in 1991, La Maestra Family Clinic, Inc., doing business as (d.b.a) La Maestra Community Health Centers (LMCHC), has been dedicated to its mission to provide quality health care and education; to improve the overall wellbeing of the family; bringing the under-served, ethnically diverse communities into the mainstream of our society through a caring, effective, culturally and linguistically competent manner, respecting the dignity of all patients.

Dr. Adla Tessier, La Maestra Family Clinics, is an internal medicine specialist dedicated to quality improvement and a strong advocate for her patients. She is passionate about the need for early detection of fatty liver, particularly with the high number of Hispanics served by the Clinic and the growing prevalence of fatty liver in this population.

“Typically, these individuals have a BMI over 30 and require more significant intervention. We are ruling out everything from hepatitis C to any other pathology or autoimmune disorder, but it is primarily fatty liver.”

Because she works closely with a Hispanic population, she saw the immediate benefits of having FibroScan technology on site.

“I felt that these patients would greatly benefit from knowing we were providing them a little bit more knowledge on their condition so that we could engage in more active, personalized interventions. We see an incredible number of Hispanics and that was primarily our interest, especially as we shifted our focus from hepatitis B and hepatitis C conditions to fatty liver and NASH.”

She says that, as a result, the team has introduced a whole new work plan for these patients.

“I believe a FibroScan assessment is indicated for all of our patients as a baseline test – particularly for those who are at high risk.”

She explains that about two-thirds of the Clinic’s patient population is obese, including a substantial pool of individuals with Type 2 diabetes.



**Adla Tessier, M.D.,
La Maestra Family
Clinics**

“I would say that more than 90 percent are Type 2 and most of these patients are overweight, which is a significant problem. We’re also seeing some children, mostly ages 17 and 18, who have been followed by gastroenterology at Children’s Hospital and followed for Stage 4 fibrosis. Unfortunately, we have an overabundance of these types of high-risk patients.”

These care issues posed a challenge for La Maestra, but they also provided the rationale for having FibroScan technology in place.

“FibroScan provides the data and information that allow us to have closer and more meaningful discussions with these patients. It demonstrates our high-tech approach to caring and allows for a high touch intervention. That’s the key to enhanced patient engagement and helping the patients to get on the right course of treatment or make lifestyle changes.”

She points to the value and convenience of having FibroScan readily available in the clinic.

“I can immediately share the test scoring information with patients and allow them to understand the significance of the results. Having the ability to educate them during their visit fosters discussions about weight loss and the need for follow-up care. This effectively shifts the patient’s understanding of the condition and underscores the need for intervention and lifestyle changes.”

She also says that this level of information-sharing enhances both patient and provider satisfaction.

“I think physicians are amazed at the scope of data and information that FibroScan quickly provides. This not only raises their comfort level and confirmation regarding their fibrosis stage but also illustrates the benefit of having this technology for further intense management of their co-morbidities. In addition, our staff is well-trained in performing the test, and patients are appreciative that it is both quick and non-invasive.”



From the outset, every member of the liver clinic team wanted to learn how to use FibroScan.

“Everybody was very interested and very involved, and we encountered minimal issues regarding how to do the procedure. They are a skilled team that has been well-trained and we rarely have to perform a repeat test. In fact, our hepatologist is very impressed with our performance and results.”

With this positive experience, Tessier says that they are considering expanding the indication for FibroScan testing to include pre-diabetic patients.

“Pre-diabetes patients present a similar picture to those with confirmed Type 2 disease, so it is under consideration. These patients are at a much higher risk for disease progression and in the long term FibroScan may become part of any standard work up of a patient that has metabolic risk factors.”

She emphasizes the improvement in patient engagement once the individual sees and understands the liver abnormality.

“I have been pleasantly surprised because patients seem to be more involved in their care when they are given appropriate tools and designed interventions to reverse and/or halt the disease progression. It’s so gratifying to see that through a plan roadmap and team approach, which includes our educators and a clinical pharmacist as an integral part of our team, we are managing these patients with successful outcomes.”

She also sees the value of reporting FibroScan scores to health plans in support of addressing fatty liver issues.

“We see patients in virtually every demographic -- elderly female, Hispanic females and Asians -- who are in Stage 4 fibrosis without any symptoms or awareness of the disease. We’re finding out an increasing amount of information about these patients and learning that timely interventions may obviate the need for a costly liver transplant. By taking action sooner than later, we’re actually saving money for the payers in the long run.”

Champions of Quality

A team approach to ensuring quality of care is the hallmark of the La Maestra model, where there is a top-down commitment to patient-centered care that advances ongoing quality improvement.

The introduction of the FibroScan technology exemplifies this dedication to bringing the highest quality healthcare to a largely underserved and ethnically diverse population. La Maestra raises the standard of care to meet, and often exceed, the service levels available to affluent patients with greater access to advanced medical technologies for diagnosis and treatment of liver disease and related conditions.

For Michael Phetsanghane, Quality Improvement registered nurse, this commitment to quality is embedded in his role for ensuring a very smooth workflow for all patients that get a FibroScan measurement. He points to the training provided by Echosens that supports high quality results.

Every week, his team performs the FibroScan measurements and they review all results to determine any discrepancies. Discussions involve a careful evaluation of how the test was administered, what changes could be made to improve patient positioning, and an assessment of processes to ensure compliance with the instructions and guidelines.

“Today, we’re looking at each patient result to ensure quality,” he explains. “We discuss these issues prior to scanning each patient, and then we run reports following the measurement to see where our numbers are, how many patients were scanned – or why they weren’t scanned. As a result, our clinic is running like clockwork, and we’ve expanded the number of patients from 15 to over 30 evaluated in a single session.”

His team knows what has to get done, and if they think something is not going smoothly, they know how to fix it.

“They’re very autonomous and I’m very proud of them,” he says with a smile.

Impacts Patient Engagement

The FibroScan technology enables La Maestra to interact more meaningfully with patients, further aligning with the organization’s history and mission.

“We have a mission of a circle of care,” he continues. “We help our patients with medical needs, as well as nonmedical care. Having the FibroScan here provides a true safety net.”

For each patient, Phetsanghane does a “deep dive” on the chart to identify any gaps in care, such as preventative exams, dental or vision checks.

“I’m able to make those referrals as well, if I get the approval of our physician. This helps me to make sure that we’re taking care of everything, not just the liver.”

He points to the importance of FibroScan in addressing liver disease and related disease states, such as hepatitis, diabetes and obesity.

“In our community, NASH — liver inflammation and damage caused by a buildup of fat in the liver — is one of the leading causes of why our patients are getting the FibroScan measurement. It is critical in helping us to identify these individuals, evaluate their risk based upon these results, and then link them to appropriate care plans and lifestyle changes — such as a change in diet or more exercise. We also refer them back to their physician for additional diabetes care, as indicated, or if they have any type of hepatitis, we refer them to our hepatologist.”



Serves the Needs of All Patients

FibroScan is built into their entire approach to disease management and care pathways. A FibroScan is ordered as soon as possible for any patient with metabolic syndrome, Type 2 diabetes or any type of liver disease.

“Thankfully the FibroScan is quick and easy, and we recommend it for all of our patients,” he explains. “In fact, looking ahead to serving an even larger population, we will be expanding our team and there is a strong possibility for acquiring another FibroScan.”

The versatility, ease of use and capabilities for generating robust information from a five-minute scan advances their ability to generate quality care plans.

“FibroScan gives us an accurate assessment of the patient’s liver and the level of accumulated fat. It’s so much valuable information collected in such a short procedure time.”

FibroScan aligns with their approach to primary care and assuring continuity of care.

“Our family practice physicians see a lot of people who are overweight or have Type 2 diabetes. We always recommend that they get a FibroScan,” says Phetsanghane. “We follow each individual very carefully, and based upon our hepatologist’s recommendation, the measurement can be performed as soon as a year later.”



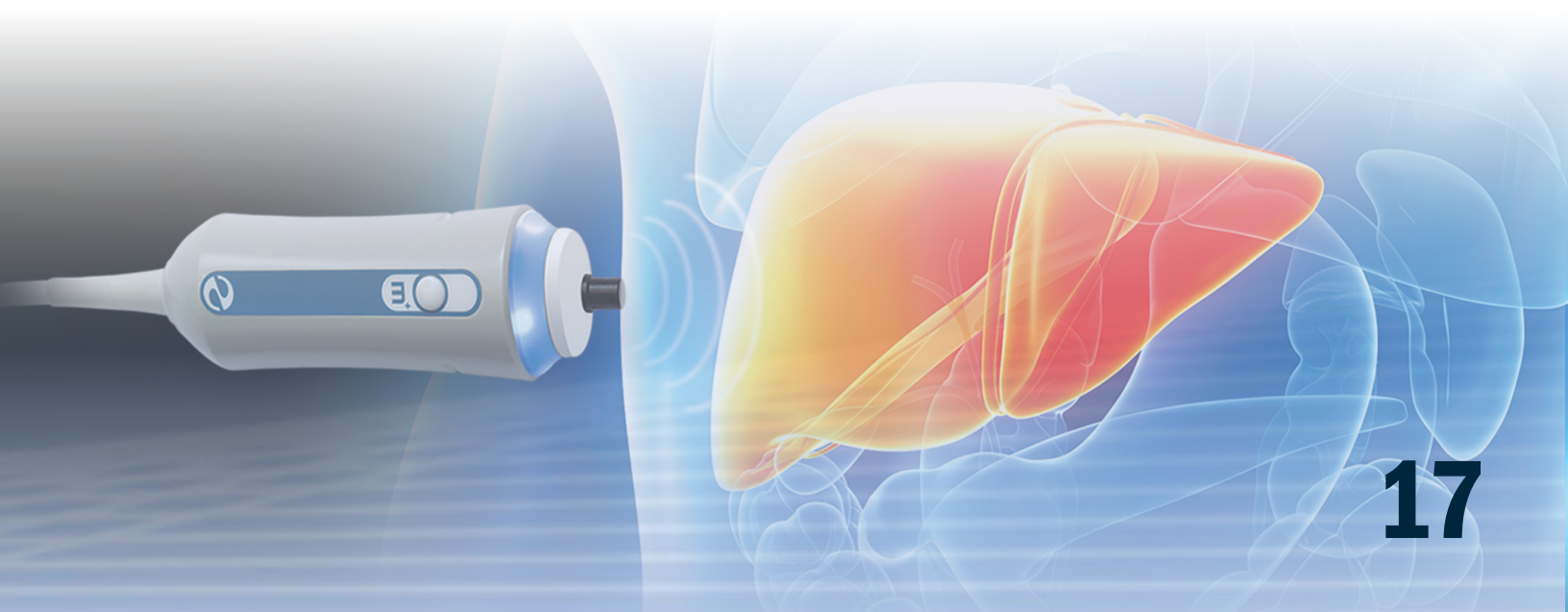
He asserts that FibroScan plays a significant role in helping to improve the health status of all their patients, adding, “Only a few of our patients really focus on their liver health as much as they think about their heart, lungs or GI issues. Unfortunately, we think that the liver is overlooked quite often. That’s why having a tool like this can give us an in-depth reading pretty quickly about where the patient is with liver health, and we can communicate this with the patient. It’s often a very eye-opening revelation and emphasizes that the liver is a vital organ that should not be ignored. We can tell them that when you treat the liver, you have a better chance at living a good life and living longer.”

The physicians at La Maestra read the FibroScan results, explain the meaning to each patient and link them to care.

“We explain not only what the machine does, but also the relevance of the results and what needs to be done going forward to reverse the disease or seek further treatment by a specialist.”

He says the acquisition of FibroScan is one of the best things LaMaestra ever did.

“I didn’t know what a FibroScan was until I came to La Maestra and saw the need for it. It’s surprising to know that we were one of the first ones in the region to acquire the technology. In light of our patient population, I feel like getting a measurement of fatty liver is as important as getting an A1C test. It’s very valuable and noninvasive, with quick, instantaneous results that are critical to quality patient care.”



Impact of Quality Improvement, Provider and Patient Satisfaction

Sonia Tucker, chief quality officer at LaMaestra, echoes these perspectives and elaborates further on the importance of FibroScan for continuous quality improvement.

“At La Maestra we strive for quality care, and by incorporating FibroScan, we have been able to increase the quality care that we give to our patients. FibroScan establishes a baseline on how our patients are doing, especially those with prediabetes, diabetes and obesity related to their liver conditions.”

She explains that the hepatologist determines how soon patients with liver conditions, such as hepatitis, NASH or advanced liver fibrosis need follow up.

“Our medical director and family practice physicians are also recommending repeating FibroScan in six months to a year’s time. It’s important to evaluate the impact of recommended lifestyle changes and assess any changes in the liver condition that were indicated by FibroScan. This measurement is, of course, valuable to our hepatologists, but it is equally important to internal medicine and family practice physicians.”

Tucker reports that FibroScan was implemented mid-2018, and that she is hoping that they will soon see important progress among their patients.

“What I have already noticed and heard from our providers is that when the provider talks to the patients about the FibroScan and discusses the results, the patients seem to grasp a little bit more of the idea of why lifestyle change is important. So, the combination of the implementation of the FibroScan plus the lifestyle changes communicates to the patient the need for change.”

She emphasizes the importance of these results when explaining liver health to patients.

“I think it’s definitely more effective than just telling the patient that it’s important to change their lifestyle because your liver might be suffering from being overweight or poor diet and exercise. When patients are able to see the image coupled with the provider’s explanation, it creates a bigger impact than by simply talking to the patient about the results of a blood test.”

Both Phetsanghane and Tucker say that FibroScan impacts patient satisfaction with care.

“Every other month we distribute patient satisfaction cards to see if there’s anything we can improve upon and if the FibroScan was even useful for these patients,” say the quality champions.

“So far, the feedback has been relatively positive, and it’s shocking for some patients to see how high their FibroScan score really is. But if we didn’t perform the measurements, patients would never know. So as shocking as the news might be, we feel like these patients need to hear it and having this technology is very beneficial.”

They also point to provider satisfaction with FibroScan. As Tucker says, “Our providers are very happy with FibroScan because it enables them to acquire baseline data on the patients and see if there is anything that we’ll be able to change. The image complements the blood test and greatly boosts the level of information on each patient.”



A Good Investment with Strong ROI

It's obvious that acquiring FibroScan is regarded as a good decision. Tucker explains, "When I first began utilizing FibroScan and didn't fully understand the importance of the data, I began meeting with our medical director who was very influential and supportive of the acquisition. That's when we got into the impact of the technology and the value of purchasing from Echosens."

At the outset, she didn't think they would have enough patients to justify the expense, but after meeting with Echosens and learning the possibility of a lease arrangement that could lead to full purchase, she became an advocate.

"After careful cost analysis, I was able to say **YES – I want this. I quickly recognized the impact on quality and how we could impact patient care.** Our medical director and chief medical officer all agreed and there was consensus that we could reverse liver damage. Additionally, we noticed that many managed care plans were requesting a fibrosis score and FibroScan provides this information."

The investment in time and money is generating strong ROI that strengthens the mission.

"Even though we deal with low income patients, they deserve the best possible care available," emphasizes Tucker. **"Care should be equal everywhere, and we wanted to bring it to our facility – and that's what we did."**





Daughters of Charity Health Centers

As an integral part of the health care community for 185 years, the Daughters of Charity are committed to providing high-quality, comprehensive health care to all members of our community, regardless of their ability to pay. Daughters of Charity Health Centers offers high-quality, affordable health care for children, adolescents, adults and seniors at ten community health centers throughout greater New Orleans. Services include primary and preventive health care, pediatrics, dental, optometry, chronic disease management, prenatal care, behavioral health, and onsite laboratories and pharmacies.



Medical Assistant Latayria Chevis (left), Stacy Greene, MD (center) and Medical Assistant Paul Maldonado (right)

Daughters of Charity Health Centers

No city in America claims a more distinct or better cuisine than New Orleans, a good part of the reason that many of the 55,000 patients served by Daughters of Charity Health Centers have high rates of obesity, hyperlipidemia, diabetes and fatty liver disease.

Pointing to 10 different sites located throughout the city, Dr. Stacy Greene, Infectious Disease director, says, “Food and culture are inextricably intertwined in this city and, because much of this food is unhealthy, it negatively impacts one’s health. Subsequently, I estimate that about 30% of our hepatitis C patients have fatty liver disease.”

Daughters of Charity Health Centers provides comprehensive care, including primary and preventive care and family practice, internal medicine, women’s health (OB/GYN care), pediatrics, dentistry, optometry, podiatry, pharmacy and more. The leadership team recognized the importance of acquiring FibroScan technology as a critical component of their approach to addressing the hepatitis C epidemic.

“We conduct about 5,891 screenings annually for hepatitis C viral infection (HCV)-- that’s about 490 tests a month. Our positivity rate is 8-10%. Given this prevalence, measuring liver fat is essential and **I believe that FibroScan has proven to be the most efficient way to screen patients and generate meaningful information,**” says Greene.



Stacy Greene, MD

Efficient, Patient-Centered

A significant number of patients are pressed for time and the resources needed for multiple office visits.

“We care about our patients and try to be as efficient as possible when it comes to scheduling,” Greene explains. “Our goal is to do many of the work-up steps for treating HCV in one visit. Having a portable FibroScan enables us to not only get our blood work done, but also stage the disease—all in one visit.”



Enhancing Patient Engagement and Compliance with Lifestyle Changes

Managing a growing number of patients with fatty liver disease requires expanded resources and a personalized approach to care.

“We know that fatty liver disease is the second most common cause of liver transplant in our country,” notes Greene. **“Having FibroScan to not only stage fibrosis, but also to find out the individual’s steatosis result or change in liver fat – known as the CAP score – helps us to be more aggressive about controlling a person’s weight, diet and sugar intake.** It helps us to be more aware of the opportunity to really adjust those risk factors for fatty liver disease.”

Dr. Greene states that many times he is personally performing the FibroScan so that he is able to explain to patients about their stage of liver fibrosis, CAP score and the meaning of the result. He also explains that even though HCV infection can be cured with medication, lifestyle adjustments must be made in patients with fatty liver disease to improve their liver well-being.



Role of FibroScan in Follow-Up Care

FibroScan is also an essential component of the ongoing HCV care plan. Dr. Greene says that for certain patients with advanced liver disease, FibroScan is often performed every six months after a sustained virologic response (SVR) to hepatitis C therapy.

He states, “We’re able to gauge whether the fibrosis stage has decreased and see if there are any changes in the CAP score/liver fat.”



Impact of State Regulations

Louisiana recently transitioned to a subscription model for direct acting antivirals, meaning they're removing restrictions to allow treatment access to people with HCV infection, irrespective of baseline liver disease. While HCV infection is curable, the high costs of medication have made it unaffordable for thousands of Louisiana residents who are infected and rely on the state for health care coverage. The state had been able to cover only a fraction of HCV infected patients enrolled in its Medicaid program and prisons. This new model is changing the treatment landscape so that treatment is no longer out of reach for many residents, including those who are incarcerated. Louisiana pays one set price and all Medicaid patients – including those who are incarcerated – are able to be treated regardless of their fibrosis stage.

Greene states that because of the subscription model for hepatitis C treatment in Louisiana, there are potentially 39,000 people who have the potential to be treated.

“This means we’re going to have an influx of patients to be treated for HCV infection, and we’re going to be using the FibroScan a lot more.”

He adds that everyone who is HCV-antibody positive with a HCV viral load gets a scan. He also states that he has been getting referrals from within health centers from other providers for the evaluation of patients with elevated liver enzymes and/or known fatty liver disease.





Jordan Valley Community Health Centers

Jordan Valley Community Health Center is a Federally Qualified Health Center founded in 2003 to provide dental services to the Springfield community and quickly expanded to other essential primary care services. Today, Jordan Valley Community Health Center has locations in six Southwest MO communities with nine clinics offering medical, dental, behavioral health and optometry services. Recognized for its unique integrated model of healthcare, Jordan Valley aims to improve the community's health through access and relationships.



Creating a Hepatitis C Specialty Service: Addresses Social Determinants of Health, Enhances Patient Access to Care and Treatment, Boosts Center's Financial Performance

At the pulse of the Ozarks, Springfield, Missouri, is home to the Jordan Valley Community Health Center, with nine clinics serving 66,000 adult and pediatric patients living in the city, as well as in rural communities throughout the region.

Matthew Stinson, M.D., vice president of Medical and Behavioral Health Services, explains, "The city of Springfield and surrounding areas reflect a primarily Caucasian population, although about 3% of our patients are African American and 5-7% are Hispanic. We address many of the issues that face most community health centers, including the challenges of high-risk obstetrics patients, problematic sexual practices and dangerous substance abuse activities. For our overall population, social determinants of health (SDoH) are playing an increasingly important role in the delivery of care. This includes food insecurity, as well as violence and domestic violence, although one of the biggest barriers to care is lack of transportation."

Stinson says the routes of public transport are not as well developed in this region as in the neighboring large urban areas, such as St. Louis or Kansas City, Missouri. This is especially challenging in rural areas where there is simply no public transportation system.



**Matthew Stinson,
M.D., Vice President
of Medical and
Behavioral Health
Services**

“Even though we are on the bus route, it can sometimes take one or two hours to get to our community health center, a factor which impedes access to care and follow up visits – particularly for the patients who have hepatitis C. These individuals find it difficult to visit a facility or multiple facilities for testing, getting elastography or a comprehensive liver evaluation. For these and other reasons, purchasing the FibroScan machine has allowed us to optimize efficiency during each and every encounter, remove extra visits and ease the transportation burden for our patients.”

Jordan Valley serves a very large substance abuse population and initially focused FibroScan screenings on just the people who already knew they had hepatitis C.

“When patients come in to meet with the provider team for their hepatitis C evaluation, they have already completed their blood tests,” says Dr. Stinson. “During this visit, patients can have their FibroScan test, with the doctor deciding at the point of care about appropriate medication and treatment. A pharmacist could also be available during this visit to further discuss medication, provide education and get the patient started on the plan of care.”

The immediate availability of the FibroScan score provides an objective way to begin the discussions, with an actual number to report to each patient instead of simply providing a level of fibrosis.

“I like to compare this approach to the old smoking cessation programs where doctors provided the patient with a lung age of 85 in contrast to their real age of 50. The number is often an eye-opener.”

At the Core of Specialty Services

At Jordan Valley, hepatitis C care is a specialty service developed from the clinic's primary care practice.

“Hepatitis C care was one of those areas where you could identify the problem but were challenged to get patients into treatment. We found that when we referred someone out of the health center, the chances that they would follow up diminished dramatically. This is documented by our no-show rate outside of Jordan Valley – which is more than double than staying inside the center. **This is where FibroScan technology is so critical to delivering an on-site, comprehensive service. It has become central to our approach to hepatitis C care.**”

By bringing the services in-house, Stinson says Jordan Valley's providers are better able to help patients access better care.



Enhanced Financials

“After 18 months, we can report that from a financial perspective, the addition of FibroScan has been very positive,” says Stinson. “This is not necessarily in the number of visits but more about the whole picture of care.”

The technology enhances the financial picture of all Jordan Valley operations – revenues associated with the scan itself, the medical visit, as well as the medication and the pharmacy piece. Collectively, these services justify the investment in FibroScan as Jordan Valley continues to see the ROI.

Follow-up scans are usually repeated annually, with particular attention to those who require re-screening because of high-risk sexual behavior. Additionally, the medical team is concerned about patients with metabolic syndrome and the anticipated prevalence of nonalcoholic steatohepatitis (NASH), liver inflammation and damage caused by a buildup of fat in the liver.

“When you look at diabetes as a determiner for performing a scan, the need is obvious: we probably treat 1,500+ patients with diabetes. It’s an everyday problem for each of our providers who see adult patients.”

When using the FibroScan as qualification for treatment, the medical team assesses the fat score as part of the plan for moving forward.

“The next step for us really is going into primary care and saying, ‘Let’s start screening everyone for hepatitis C,’ because we know that when we do this later in the year, the doors are going to come off in terms of access. We’ll be talking about really tackling NASH.”

The Power of Mobile Technology for Rural Settings

“Mobility lends a whole lot of power, especially in a rural setting,” he says. “For a Center like ours to have cutting edge technology that we can utilize in rural areas is a very impressive capability.”

Stinson explains that when his team goes out to a rural site that has a population of 2,000 or 3,000, they are able to bring in the FibroScan portable unit and initiate hepatitis C treatment from that facility.

“It brings an air of credibility, not just to the patient but to everyone the patient talks to in that community. We’re excited to offer a level of care that’s not typical in a health center to those residing in a rural setting in the state of Missouri.”

Jordan Valley is very proud to offer a technology that often is only available to more affluent populations.

“It makes a difference, for sure. We have seen the same reaction in other areas where we are able to offer substance abuse services, telehealth and medication assistance treatment in-house to those living in rural settings. These services are simply not available in a whole lot of places. It makes a big difference to be able to offer these services in a small town where the clinic is only two minutes from where you live instead of driving to the city. FibroScan does that for us.”

The Importance of Training

Stinson explains that when Jordan Valley takes on a new technology or test, they methodically build the program.

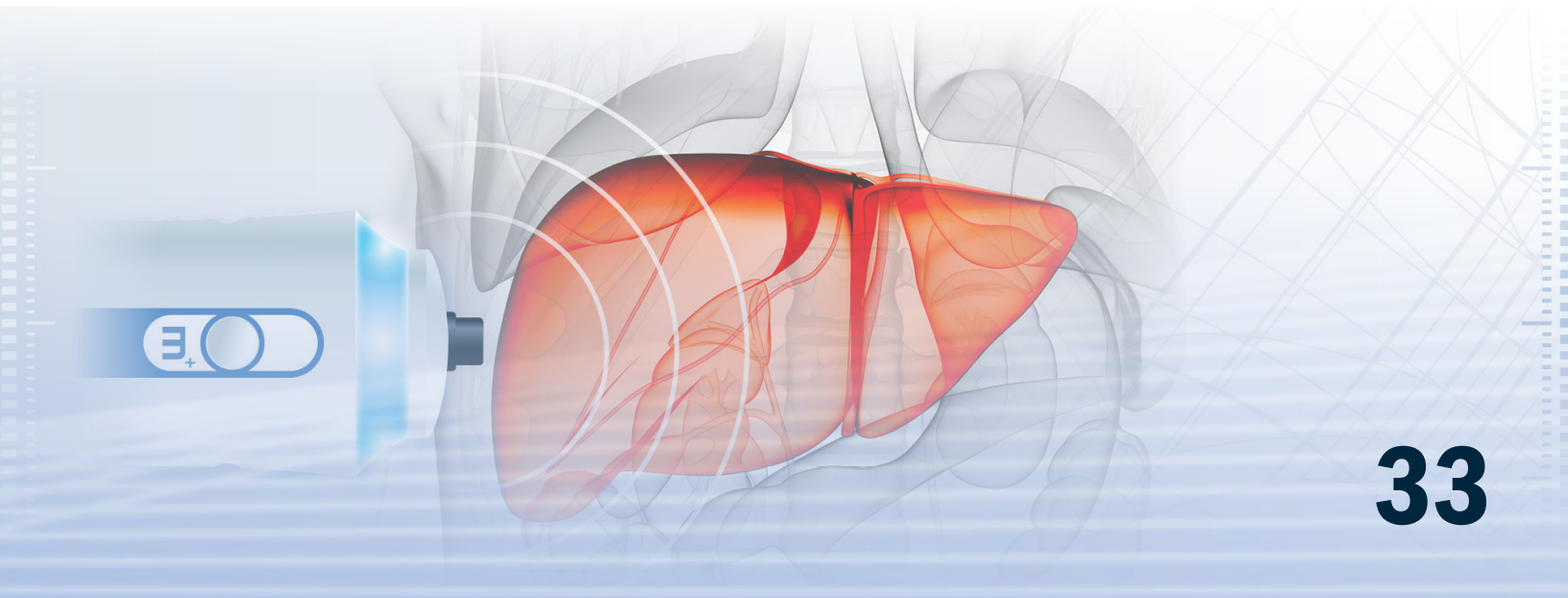
“We build the skateboard before we get to the cars, just to get us from point A to point B. When we brought in the FibroScan unit, the idea was to put it with one of our providers who sees hepatitis C patients. We let her use it and figure out the best way to optimize the technology. Once we had six to nine months of utilization, we put together a team to say, ‘Now we’ve done this so, let’s make it available to more providers and make sure that we’re progressing.’”

The next step was to engage a community health worker, a pharmacist and more providers to pull together a larger team that could formalize the patient referral process.

“When a patient comes in and visits with the community health worker, they go through the SDoH factors, conduct the appropriate screenings and -- on the same day -- get the FibroScan. Based on what the provider recommends, the patient will meet with the pharmacist, and get the education and the prescription. If they can’t finalize all on that day and require an assistance program, we’ll get that set up.”

He says they can usually complete all these activities within a 45-60 minute visit.

The team has now operationalized the machine by setting up a schedule for use, with an estimated 50 scans performed per month.



“We foresee that this number will increase substantially,” he says. **“FibroScan is easy enough to use and we don’t have to assign one person to be solely devoted to the schedule.** Our internal medicine physicians who have a concern about NASH or another issue can get people in right away. We also have it incorporated into our hepatitis C services and work with patients who have other problems that are treated at the clinic.”

Stinson reports that feedback from his team on the FibroScan training program has been excellent.

“The manager of our family medicine department has been extremely satisfied and she is responsible for coordinating all of the technology training for multiple nurses and medical assistants. This includes staff both here at our main facility, as well as in several of our rural sites. Additionally, we have three of our providers who have been trained to read the results.”



Value-based Contracting

Jordan Valley has value-based contracts through managed Medicaid, as well as with some of the larger insurers in the area.

“Pay for quality, pay for performance, as well as some access measures or other items are part of our contract in delivering what’s important, such as lowering ER utilization rates and hospitalizations. We probably have somewhere around six to seven of those quality-based contracts.”

While the largest payer in the region is Medicaid, about 20 percent of patients are covered by insurance.

“A major issue is that right now, the Medicaid managed care companies are not focused on liver disease as a problem. They are focused on other areas because managed Medicaid in southwest Missouri is only about two years old – a very young market segment.”



Improved Access to Medication and Treatment

What's been most surprising to Dr. Stinson is that with the enhancement of their hepatitis C services, they have been able to get access to more effective medications for patients.

“I think we had a fear that when we started screening people who didn't have insurance coverage that we would struggle to get their medication covered. But to be honest, most of the companies have pretty good patient assistance programs and that has not been a barrier.

With a FibroScan result and a recommendation for treatment, we've been able to treat even more patients than expected – even those who are uninsured. In the community health center world, that's really important.”



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Echosens, the developer of FibroScan®, is an innovative high-technology company offering a full range of products and services supporting physicians in their assessment and management of patients with chronic liver diseases. FibroScan is supported by over 2,500 peer reviewed publications and examinations are covered by Medicare, Medicaid and many insurance plans.
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