Hepatitis C virus (HCV) infection is the most common blood-borne infection in the United States. Most of those infected in the US are chronically infected and may not be aware of their infection because they are not symptomatic. The Centers for Disease Control estimates that in 2003, 2.7 million persons in the U.S. had chronic Hepatitis C infection, and that 1.8% of the American population has ever been infected with the virus. Chronic liver disease is a leading cause of death in the U.S., and approximately 40 percent of chronic liver disease is related to HCV. Incidence of acute disease is higher in those of Hispanic ethnicity, and African Americans have a higher prevalence of chronic disease than whites. Rates are even higher in correctional facilities. The HIV and Hepatitis in Prison Project (HEPP) has compiled data from many states citing HCV rates among inmates to be between 13 and 40 percent.

Although new infections are declining, HCV is in many ways an emerging epidemic. Persons infected with HCV in the past may now be developing associated liver disease. In addition, co-infection with HIV infection is common, and HCV is contributing significantly to the morbid effects of the epidemic of our age. HIV appears to accelerate liver disease in those co-infected with HCV.

HCV has been transmitted primarily in the U.S. through blood transfusion and injecting drug use. Since 1994, risk for infection from transfusion has been very low. Injecting drug use continues to be the most significant factor in HCV transmission in the U.S. Women seem to be less affected by HCV infection than men in the general population. The connection between sexual practices and HCV transmission is unclear and causality remains elusive. Sexual contact with a partner with a history of hepatitis and multiple partners has been associated with higher HCV risk. Long-term partners of partners with chronic HCV, however, show little or no increased risk of acquiring the disease, though women may be at greater risk from sexual transmission from a male partner than men from a female partner. This would indicate that HCV, like HIV, is more efficiently transmitted from male to female than female.

continued on page 2
to male. However, while HIV transmission has been shown to be more effective in male-to-male sex, the same has not been proven with HCV.1

While 25 percent of all AIDS cases in the US from 1994 to 1995 are attributed to sharing injection equipment,2 60 percent of all HCV cases are estimated to be due to injecting drug use.3 Injecting drug use is a very potent means of HCV transmission and often people who only used one time or for a short period became infected. Sixty percent of individuals using injected drugs will become infected within the first year, and 80 percent of Americans who have used injected drugs will acquire HCV.2

Mother to infant transmission of HCV seems to be rare, with various small studies reporting rates between zero and 10 percent for women not co-infected with HIV. There is some evidence that HIV co-infection increases risk for vertical transmission of HCV.

The standard treatment for Hepatitis C is a combination of ribavarin and interferon treatment. Unlike treatment for HIV infection, HCV treatment aims for a cure, complete eradication of the virus from the body. Pegylated interferon, which is long-acting and can be injected once weekly, was proven with HCV.

Of the at least six genotypes known in the world, three are common in the US. People with genotype 1, the majority of infected Americans, do not respond well to current treatment. “Three quarters of chronically infected people in the US have genotype 1, and these are mostly injecting drug users,” said Allison Nist MD, Clinical Director of the Collier County, Florida, Health Department HIV, TB and Hepatitis Programs. “A quarter is infected with type 2 or 3. The medications have much better effectiveness for these strains. With six months of treatment, 80 percent show a sustained viral response. For genotype 1, there is a 40 to 50% response rate after a year of treatment.”

Women who are pregnant cannot receive the standard treatment for HCV infection. “Ribavarin is very severely teratogenic,” said Nist. “Women need to be using two reliable forms of birth control. That is very important.” Pregnancy and unreliable birth control are standard contraindications of ribavarin therapy.

“Hepatitis C treatment is very, very time intensive,” said Nist. “Both medications, ribavarin and interferon, can drop hematocrit and white blood cell levels. It takes a tremendous amount of monitoring and a tremendous amount of patient education.”

Case Study: Collier County, Florida
Dr. Allison Nist works to provide comprehensive Hepatitis prevention and treatment services Florida’s Collier County, which includes the diverse urban community of Naples and the small swamp-surrounded hamlet of Immokalee, which is a part-year home to many migrant farmworkers. “I still have not heard of other state health departments that are running Hepatitis C treatment programs, including for non-co-infected persons,” said Nist. The Collier County program is part of the Florida Hepatitis Liver Failure Prevention (HLFP). “The program includes three parts: (1) Hepatitis A and B vaccine to those at risk (includes anyone infected with Hepatitis C, since getting Hep A or B would increase the risk of liver failure). (2) Screening (A, B, and C) for those at risk, and (3) Education to the public. Six counties, including Collier, applied for and got the original funding. Since then, the state has expanded the program to other counties, making Hepatitis A and B vaccines available to all 67 county health departments.”

“We tried to work with local physicians to set up a network for referral to private providers. What we found was that the private doctors had limited capacity, partly because they are overbooked during the tourist season. So we set up a Hepatitis C treatment clinic for both HIV positive and negative individuals. In our clinic, we treat a small number. The cost of the medications is approximately $1000 a month, so we use patient assistance program medications. We currently have 10 we are treating and another 10 on the waiting list. We offer testing at the community mental health center, which is also the substance abuse center, several homeless shelters, community outreach to a

REFERENCES
There are over 130 different Patient Assistance Programs in the United States. One of these is Rx Outreach, which is patient assistance program that provides affordable and easy access to more than 50 FDA-approved generic medicines for people of all ages. It provides medications to treat ongoing health conditions, such as diabetes, asthma, blood pressure, and depression.

There is no limit to the number of different medications one may order at a time, and one can request a 3 or 6-month supply of each medication. Applications must be accompanied by a written doctor’s prescription for the amount of medication needed (i.e. a 90-day or 180-day supply). Only one form is required per patient; however, a doctor’s prescription for each medication must accompany the form. Patients are required to submit a new form every year.

An administrative fee of $18 for a 3-month supply and $30 for a 6-month supply is charged for each prescription. This fee covers filling, packing, and shipping. There is no additional cost to use the service and patients only pay for what they need. There is no enrollment fee. Prescriptions are shipped to the address that a patient chooses, including one’s home, doctor’s office, or the home of a trusted family member or friend, within 10 to 14 days.

Rx Outreach can be used in conjunction with another discount medicine program or patient assistance program. To participate in Rx Outreach one must fill out an application that is available at the Rx Outreach web site http://www.rxoutreach.com. The application can be printed or filled out online and then printed and signed. The patient must meet income guidelines of less than $23,275 for a single person. The application also requests you provide a social security number or green card number, but the field is not required. You may fill out 111-11-1111 or N/A. According to Rx outreach personnel you do not need to have a social security number to receive medications through this program. Some of the medications that can be requested are: Glucophage, Glucotrol, Lasix, Vasotec and Prilosec. A complete list of available medications is available on their website.

You may contact Rx Outreach at 1-800-769-3880 with any questions. If you participate in any of the MCN Health Network Programs (TBNet, Track II, CAN-track) the staff at MCN will help your patients enroll in Rxoutreach. You can contact MCN at 512-327-2017.

Generic Medications Available through Patient Assistance Program

An administrative fee of $18 for a 3-month supply and $30 for a 6-month supply is charged for each prescription. This fee covers filling, packing, and shipping. There is no additional cost to use the service and patients only pay for what they need. There is no enrollment fee. Prescriptions are shipped to the address that a patient chooses, including one’s home, doctor’s office, or the home of a trusted family member or friend, within 10 to 14 days.

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Hepatitis C Infection and Public Health Care Systems

There are many medical and social contraindications to treatment. So, if someone is screened, they are evaluated to see if they can tolerate the 6-12 months of treatment, which can be very debilitating at times, and can have significant side effects and drug interactions. Many of the side effects are worst in the first two to three weeks, then diminish. The interferon can cause flu-like symptoms, which can be quite severe, including arthralgias, that kind of ‘a truck ran over you’ aches. We treat that symptomatically. It is similar to the treatment of TB or HIV. You anticipate side effects, do lots of counseling, give them access to phone contact, preferably 24 hours, so there is some one they can talk with about the side effects, and you prescribe palliative medications. We tell them to use [over the counter medications for aches and insomnia], and ‘If they don’t work, call in and we’ll give you a prescription.’

“The treatment can lower the red count/white count and cause fatigue. Sometimes people are treating that with stimulating antidepressants. We have also had success on a temporary basis using methylphenidate. We try to help people stay working. One of the keys to keeping people on treatment is to palliate to keep them working.” She explained that when it comes down to paying rent or getting medications, people have to prioritize, “And we’ve really had good success with that.”

“We feel strongly that homelessness per se is not a contraindication for treatment for HIV or Hepatitis C. But the initial evaluation costs $1,000-$2,000 for labs, biopsy. We have had the situation where we spent the money to evaluate, then they transition to the outside world from the shelter, and can’t make the transition and go back to using drugs. The transition to the outside world can be a major impediment. We try very hard to make sure people have a stable home, family, social network. If they have a new job or are just getting out of a shelter or treatment program we encourage them to stabilize those situations before starting treatment.

“We recently had a woman who tested in our community program who did drugs 20 years ago. We tested her… we did a confirmatory test and tested liver functions. She had a viral load indicating chronic active infection. She was moving to Pennsylvania. We told her she didn’t appear to have signs of cirrhosis, that it was not an emergency to start treatment. For her, the priority was to stabilize her living situation and get a job that will have insurance that will cover treatment… It would be a miracle if she found a community health center that was treating Hepatitis C.

“The Collier County program has been going for three years. We were waiting to start most of our treatment for the pegylated interferon, which came out in April 2002, so we’ve been very busy since then. Staff time is a really significant issue. Side effects can equal or be greater than those for antiretrovirals. Adherence can also be an issue, but we haven’t had any fall out. For more information about HCV treatment contact: Allison Nist, MD”
Making a Difference in Migrant Health While Inspiring New Providers in South Georgia

Jillian Hopewell, MPA, MA

Tom Himelick, Director of Community Projects in the Physician Assistant (PA) Program at Emory University has a mission, “my agenda is to help as many people as I can to understand where our food comes from. I hope to add to a growing awareness that food doesn’t magically appear at Krogers (grocery).”

The impetus for this mission began with a seemingly simple request in 1995 from a PA student who requested a rotation in farmworker health. Without personal connections in the farmworker community, Mr. Himelick turned to the regional Area Health Education Center (AHEC) for help.

In May, 1996 Emory and the AHEC put together a one-week pilot program “by the seat of our pants, according to Mr. Himelick. The initial effort has grown into the South Georgia Farmworker Health Project and in the process inspired a new generation of health care providers.

FIRST LESSONS
That early summer, the Emory PA students were told that farmworkers were seen at a local health department and a private physician’s office. Armed with this information, the team of eight students dispersed to these two locations to wait for farmworker patients to arrive for care.

After a couple of days, the students reported that the farmworkers were not showing up at these sites. Fortunately during the process they had met Julissa, an outreach worker with the local health department who knew how to find people.

Julissa led the team to a small local grocery store with large shade trees in the back. Underneath these trees were about 30 local farmworkers eating lunch. The farmworkers looked up in alarm at the approach of this team pouring out of cars and vans. With Julissa’s help they were able to convince the farmworkers that they were there to provide health care.

That was the moment that Tom Himelick realized he would have to change the whole structure of the program if it was to continue. From that point on the students have brought care directly to farmworker camps—taking care to the people.

The South Georgia Farmworker Health Project has been able to foster support from a number of growers who give permission for the students to provide services on their property. During that first week the team saw an estimated 150 individuals. The program has now grown to a two-week intensive summer program with over 40 volunteers who saw over 1,600 encounters in 2004.

TREATING CHRONIC DISEASE WITH EPISODIC CARE?
Tom Himelick is very clear about the limitations of the South Georgia Farmworker Health Project. He says that especially at first there was a great deal of frustration among the students and volunteers because the needs they saw were so great and their ability to affect health was so limited. It was particularly difficult to provide follow-up or care for chronic conditions. As Mr. Himelick asks, “how do you treat a chronic disease with episodic care?”

The answer has come about through local initiative aided by the South Georgia Farmworker Health Project. One of the most significant long-term impacts of the program is that it provided the data required to prove significant need in the counties in which it has operated. With this information, the local community has been successful in developing additional health care resources to serve the underserved.

Lake Park, GA now has a farmworker clinic that is open 2-3 days a week from 2-9 p.m. Opening four years after the Emory program first came to that community, this clinic operates from a doublewide trailer on land donated by a local grower.

In another site, the health department in Decatur County developed funding to hire more outreach workers and refurbish a couple ambulances to use to do more work in farmworker camps.

While there are still a number of gaps in health care to the farmworker population in these very rural areas of Georgia, there are now more health care options available to farmworker community.

THE INTERSECTION OF MEDICINE AND JUSTICE
Tom Himelick recounts a story of some high school students who participated in the South Georgia Farmworker Health Project this past year. After working as volunteers with the program, a smaller group of students went on to a national church conference. During this conference there was a large “watermelon fest.” Before they sliced the watermelon, one of the youth who had
Clinicians serving mobile populations face unique challenges for care delivery and follow-up. Some of the challenges are high rates of "no-shows" and lost to follow-up and limited availability of a complete medical history. Many clinics offer outreach services and mobile clinics to be able to serve their population of focus. Nevertheless, clinics are still unable to provide patients with appropriate follow-up and lose track of them as soon as they move to a new location — especially if there is no Community Health Center in the new area.

For the last eight years, MCN has worked to address the unique challenge of mobility by creating the MCN Health Network, a system by which clinicians can follow-up their patient and patients can have appropriate continuity of care. The following is one case study of a patient enrolled in TBNet, a component of the Health Network program.

"Manuel" is a Mexican 23-year-old migrant who grew up along the Texas/Mexico border. In March 2003 he was enrolled in TBNet by an immigration clinic in Texas. He had been diagnosed with Latent Tuberculosis Infection (LTBI), and started on treatment by a county jail clinic. However, soon thereafter the immigration center changed that diagnosis to active TB. As the immigration-processing center was planning to have Manuel “removed” and sent back to Mexico, they wanted TBNet’s help to ensure that he completed his treatment (4-drug therapy).

TBNet, working with Grupo sin Fronteras, a binational TB program, found a clinic in Mexico for Manuel to continue his treatment. When Grupo sin Fronteras tried to contact him in Mexico they were told that he had returned to the U.S. and his family would not disclose his location. Luckily, after a home visit to the family, they were convinced that continuing his TB treatment was very important and the staff would not report Manuel’s location to the immigration authorities. Manuel became a patient at a local county health department and his treatment continued.

As is commonly the case, in July, Manuel abruptly left his treatment in Texas without notice (or providing any future contact information). When he moved to Michigan to find work, he visited the local migrant health center which, learning of his TB status, referred him to the county health department to continue treatment. This health department has been working with TBNet for many years so seeing a patient likely to move unexpectedly, they tried to enroll him. Since the MCN Health Network database double checks patient name and birth date for new enrollments, the TBNet staff was able to see that Manuel was already a participant. Information about his previous treatment was quickly sent to Michigan.

Within a couple weeks, however, the Michigan clinic’s initial suspicion that Manuel would move unexpectedly proved to be true. He missed a DOT appointment and when a caseworker went to his house she found that he had been told to leave because of overcrowding in the house. The other residents of the house thought he might have headed back to Texas.

TBNet staff contacted the Texas Department of State Health Services to see whether a TB400 form had been filed for Manuel (which would have happened had he returned to TB treatment in the state) but there was no record of his return. The staff also called the county Health Department where Manuel had been seen earlier in the spring but again, no record of recent treatment. Manuel’s status was considered lost-to-follow-up, although since he had been proactive about seeing care in the past, everyone was hopeful that he would after this move as well.

In August came the call that everyone had been waiting for — Manuel had visited a migrant health clinic in Missouri and told them (and the local health department) about his TB treatment and his enrollment in TBNet (he showed them the famous “little blue book” – his TBNet portable record). TBNet staff was able to send his records to the local health department and his treatment continued. Coincidentally, two MCN staff was visiting the migrant clinic in that area of Missouri and were able to have an in-person visit with Manuel to commend him for his active role in completing his TB treatment.

Manuel completed treatment in October 2004. TBNet sent copies of his completion records to all the clinics where he had been treated in the past so that they could maintain accurate statistics about their cases.

For more information about MCN’s Health Network contact Jeanne Laswell, jlaswell@migrantclinician.org.
Focus on Physician Assistants

Physician Assistants (PAs) are part of a growing segment of nonphysician health care providers that include Nurse Practitioners (NPs) and Certified Nurse Midwives (CNMs). These provider groups are increasingly important throughout the United States, particularly in providing health care to the underserved.

Like NPs, PAs are a relatively new provider group that grew out of an overall shortage and misdistribution of physicians in the 1960s. During this time, there was a cohort of medical corpsmen returning from Vietnam looking for civilian work that utilized their skills. The confluence created an opportunity and, according to the American Academy of Physician Assistants (AAPA), "the PA profession was seen as a way to improve the supply and distribution of primary care services and extend the practice of a physician." 1

In 1970 the House of Delegates of the American Medical Association (AMA) passed a resolution to develop educational guidelines and certification procedures of PAs. The first PA educational program began at Duke University. There are now over 110 accredited PA programs throughout the United States.

As of 2000 there were an estimated 40,000 PAs practicing in the U.S., an increase of about 160 percent from 1992.1

Role of PAs

The AAPA officially defines PAs as "... health professionals licensed to practice medicine with physician supervision. Physician Assistants are qualified upon graduation from an accredited physician assistant educational program and/or certification by the National Commission on Certification of Physician Assistants. Within the physician/PA relationship, Physician Assistants exercise autonomy in medical decision-making and provide a broad range of diagnostic and therapeutic services. The clinical role of Physician Assistants includes primary and specialty care in medical and surgical practice settings in rural and urban areas. Physician Assistant practice is centered on patient care and may include educational, research, and administrative activities." 2

Services commonly provided by a PA include:
- Medical histories and physical exams
- Ordering and interpreting lab tests
- Diagnosing and treating illnesses
- Assisting in surgery
- Prescribing or dispensing medication
- Counseling patients
- Making referrals to other health care professionals

The PA profession was founded with an emphasis in primary care and multidisciplinary teamwork that fits well with the Migrant and Community Health Center model. And in many parts of the country, PAs play an important role in M/CHCs.

PAs have historically filled niche markets, particularly in areas with physician shortages. Overall the PA profession is one of the more diverse health care provider communities. While 9 percent of practicing PAs are non-white, about 20 percent of the population currently in training is non-white. When the profession began 30 years ago most PAs

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Physician Assistant Raises Awareness of Migrant Farmworkers

D. Cristopher Benner is a graduate of Emory University’s Physician Assistant program. Last summer he made a commitment to ride his bike across the country to raise awareness about the dramatic health situation of migrant farmworkers across the United States. He began his ride immediately after completing volunteer work with Emory University’s South Georgia Farmworker Health Project.

“The apple you just snacked on, the peach you enjoyed with breakfast, the tomatoes on your salad, these and hundreds of other fruits and vegetables represent the labor and toil of thousands of migrant farmworkers.”

These folks, men and women, work under extremely difficult circumstances and their health suffers; they have serious health issues that need help,” Mr. Benner says.

Mr. Benner funded his ride himself. All funds that were donated to the ride went directly to Emory University’s South Georgia Farmworker Health Project. Mr. Benner worked with Emory’s migrant farmworker project as a physician assistant, and says he was overwhelmed about the workers health problems: tuberculosis, lung and skin disorders from exposures to pesticides, hearing and vision disorders from overexposure to sun and industrial noises, unimmunized children of farmworkers and lack of prenatal care for the women.

“Many of their ailments are easily treated and preventable,” he adds, “It just takes a caring person and money to buy the right medicine and educational materials.”

In the end Mr. Benner made it about half way across the country before he was forced to stop the ride because of increasingly dangerous encounters with motorists. His ride was important as a demonstration of commitment and in raising awareness of the role and challenges of migrant farmworkers throughout the country.

Contact: D. Cristopher Benner, PA-C, MMSc., Phone: (571) 217-2931
worked with the South Georgia Farmworker Health Project led an impromptu prayer that ended with, “…let us remember the hands that picked this fruit.”

That story gets to the heart of what Tom Himelick hopes this program accomplishes for the students and other volunteers that participate. He hopes that the program becomes a “life-changing” event. An encounter between two cultures that allows those studying health care to “understand the intersection between medicine and justice. Whether they take that idea and work in a setting that serves the underserved or whether they just think more carefully about the things that they buy.”

At this point, Emory does not keep statistics on the practice environments of its graduates, but anecdotally, Mr. Himelick knows of former students who have gone on to practice medicine for the underserved. This includes at least two former students employed in Migrant Health Centers and another who has set up a “suit-case clinic” serving migrant fishery workers on the East Coast.

The program has also influenced the Emory PA Program as a whole. A commitment to serving the underserved has “become a part of our culture”. And Mr. Himelick also sees that this program has been influential in attracting more “mission-driven” individuals to the University.

THE FUTURE

Himelick admits that the South Georgia Farmworker Health Project is held together with “band-aids.” The successes of the program have come about largely through collaboration and donated resources from a variety of sources. A regional medical facility provides a mobile medical unit, supplies, and staff support; members of the Latino Employees Group at the Centers for Disease Control and Prevention offer their services every summer as interpreters; and, most recently Cristopher Benner, an Emory PA graduate, attempted to bicycle across country to raise money for the project (see story on page 7).

However, the program is supported by the administration of Emory University’s PA program. And the work that they have begun will continue for the foreseeable future because of the commitment of a diverse group of individuals and organizations that recognize the significance of this collaborative effort.

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**Making a Difference continued from page 4**

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**calendar**

**2005 MAF0 National Farmworker Conference**
March 13-7, 2005
Garden Grove, CA Hyatt Regency
Lalo Zavala 320-251-1711
http://www.maf0farmworker.com/

**2005 National Migrant Education Conference**
April 2-6, 2005
San Francisco, CA
Hyatt Regency Hotel
Diane Sippl 608-270-2979
http://www.nasdme.org/

**National Farmworker Health Conference**
May 12-14, 2005
San Juan, Puerto Rico
National Association of Community Health Centers
301-347-0400
www.nachc.com

**AAPA’s 33rd Annual Physician Assistant Conference**
May 28-June 2, 2005
Orlando, FL
American Academy of Physician Assistants
703-836-2272
http://www.aapa.org/annual-conf/index.html