

Richard W. Snyder II, MD  
President's Page  
"Dr. Snyder, we have a problem..."  
Anatomy of a Crisis

Wednesday, June 20  
First reported case of West Nile Virus in Dallas County for 2012

Monday, July 9  
10 total cases

Friday, July 13  
14 cases, first fatality reported

Thursday, July 19  
27 cases, second fatality reported

Monday, July 23  
36 cases

Friday, July 27  
82 cases, third fatality reported

Monday, July 30  
94 cases, fourth and fifth fatalities reported

Friday, Aug. 3  
123 cases, sixth fatality reported

### **Sunday morning, Aug. 5**

It was with these words from Connie Webster, the DCMS senior VP of operations, on my cell phone early on a peaceful Sunday morning that the course of my life was dramatically changed over the next 4 weeks. This was the phone call by which I was alerted that we had a serious problem in Dallas County with West Nile Virus and that the medical society may have to become involved.

WNV hardly was on my radar screen at that time, with my knowledge of the disorder mainly derived from what I had learned from the media and informal buzz in the doctor's lounge. I knew we had experienced an unusual number of cases at Medical City, but I hadn't yet realized the gravity of the situation on a regional basis. WNV rarely has cardiac involvement, so it did not play a role in my cardiology practice. But all of that was about to change.

Connie was calling to advise me that John Carlo, MD, chairman of the DCMS Community Emergency Response Committee, had called an emergency telephone conference for that night to discuss the escalating WNV epidemic. This meeting was triggered by a letter that was unanimously signed over the weekend by an informal committee of 13 infectious disease physicians who were calling for the immediate implementation of aerial insecticide spraying. This group, representing all major hospital systems in Dallas County, would meet on an informal basis whenever an emergent infectious threat manifested, such as H1N1. Following the initial fatality on July 13 and the alarming number of reported cases so early in the mosquito season, the physicians decided it was time to reactivate their informal group and meet weekly, at the Dallas County Health and Human Services Department to discuss

epidemiology, mosquito control and best practices. At its July 27 meeting, the group discussed aerial spraying of insecticides and by its next meeting on Aug. 3, the number of human cases and fatalities of West Nile disease had jumped alarmingly, surpassing the previous record in 2006. (Dallas County had 104 total cases and four deaths for a full season in 2006 and we were only a little more than halfway through the 2012 season.) This is even more startling when one remembers that we had zero human cases in 2010, and just two in 2011. The trajectory of the cases was foreshadowing an historic epidemic that could easily double, and possibly set a record for an urban area in North America.

Clearly, full measures needed to be considered, including aerial spraying as called for in the Centers for Disease Control and Prevention guidelines for a Level 5 WNV outbreak (the highest-multiple human cases). Because aerial spraying had not been employed in Dallas County since the St. Louis encephalitis epidemic in 1966, the ID committee decided to vote on the measure and agreed 13–0 to support immediate aerial spraying. The physicians then generated a letter directed to DCHHS. Knowing this would be a tough, controversial decision for the DCHHS to make for Dallas County residents, it was felt that support from the full DCMS membership would be helpful. Several members of the informal ID group also sat on the CERC and alerted the chairman, Dr. Carlo, of the recommendation that was circulating for signatures over the weekend and asked for assistance. The epidemic was magnifying swiftly, so time was crucial.

### **Sunday evening, Aug. 5**

The call for the emergency telephone conference of the CERC was organized for that same Sunday at 7 p.m. We all received texts early Sunday morning alerting us to the need for this meeting and that we would be e-mailed the relevant epidemiology info, scientific papers and signed recommendation from the ID group. The meeting lasted roughly 75 minutes and we thoroughly vetted all options, benefits, risks, and consequences. The CERC by design is made up of senior and experienced physician leaders of all the major hospitals in Dallas County in order to decide how to best respond to a countywide medical emergency such as a hurricane, dirty-bomb attack or H1N1 outbreak. I participated on the call in my role as DCMS president as a nonvoting committee member.

This meeting also resulted in a 13–0 recommendation for immediate aerial spraying. The committee felt that the widespread aerial spraying option, as opposed to targeted truck-based spraying of the same insecticide, clearly was more efficacious and safe for the epidemic we were experiencing.

### **Monday, Aug. 6**

#### **129 cases, seventh fatality reported**

The CERC recommendation was e-mailed to the DCMS board of directors, with all the relevant guidelines and scientific papers for consideration, as our bylaws require. The board also voted unanimously for this recommendation. A letter was drafted that afternoon to Christopher Perkins, DO, the DCHHS health authority, and signed by myself and Dr. Carlo, as chairman of the CERC on behalf of DCMS, supporting a decision for immediate aerial spraying should Dr. Perkins make that call. To summarize, within 72 hours, 38 DCMS physicians at varying levels of expertise and leadership had reviewed the recommendation, all the relevant epidemiology, guidelines and supporting scientific papers, and had come to the same conclusion. To get 38 physicians to agree unanimously on anything is pretty spectacular; it is more typical that if you have 10 physicians, you'll get 12 opinions.

The letter was e-mailed to Dr. Perkins and Zachary Thompson, DCHHS director, that afternoon, with copies e-mailed later that afternoon and evening to the Dallas County Commissioners Court, Dallas City Council and Dallas mayor. (A copy of the ID group's letter and the letter from DCMS are on the WNV section of the DCMS Web site.)

### **Tuesday, Aug. 7**

### **142 cases, eighth fatality reported**

At the Commissioners Court regular Tuesday morning meeting, the WNV situation and our letter recommending immediate implementation of aerial spraying were reviewed. In our letter, we had offered to be present at the meeting to answer questions, but the court declined our offer. The court then dismissed the physicians' recommendation to immediately begin aerial spraying. Several commissioners noted that although the county had the option of aerial spraying, they wanted to continue the current targeted truck-based spraying strategy to completion. During the meeting, Commissioner John Wiley Price referred to DCMS physicians as "alarmist," and Thompson said DCMS was "Monday morning quarterbacking."

Almost immediately the media inundated DCMS with requests for interviews regarding our letter. WFAA had a camera team at my office by noon for an interview. I participated in a live interview that night during the 9:00 newscast on the Fox affiliate. Additionally, Dr. Carlo and Mark Casanova, MD, a CERC member, did on-camera interviews on NBC, CBS and Univision to explain why we made the recommendation. We were contacted by virtually every media outlet in the region, as well as numerous national print and television media outlets. During the crisis we used social media such as Facebook, the DCMS Web site, and Twitter to get our message out. Dallas Mayor Mike Rawlings even re-tweeted us on several occasions. I cannot tell you how many cell phone numbers of reporters I have collected in my smartphone contact list, so intense was the media attention of the role of DCMS in this crisis.

### **Wednesday, Aug. 8**

#### **162 cases, ninth fatality reported**

County Judge Clay Jenkins called me and requested that I attend a meeting of experts he was assembling to discuss the WNV situation in Dallas on Friday, Aug. 10. DCHHS experts, the Texas Department of State Health Services commissioner, a county commissioner, the CDC's top entomologist, and US Department of Homeland Security and FEMA representatives would be among the attendees. Judge Jenkins said I could bring a draftee to help represent DCMS, so I brought the smartest ID guy I know, Dr. Jim Luby. Jim was head of the ID Department at UTSW for 22 years and the guy who authored the original ID letter to the DCHHS department (and later sent to the Commissioners Court) that called for aerial spraying. Dr. Luby additionally was a chief resident at Parkland in 1966, the last time Dallas sprayed for mosquitoes from the air. He has written extensively about that experience and I knew he would be the right choice. (Jerry Jones – now that is how you make a draft pick!)

### **Thursday, Aug. 9**

#### **175 cases**

Events started to happen quickly, almost like a blur. The recent string of fatalities and daily increase in total cases were haunting. Judge Jenkins declared a public health emergency for Dallas County.

### **Friday afternoon, Aug. 10**

#### **181 cases**

The judge's panel of 18 experts met for 2 1/2 hours to discuss the WNV epidemic. Dallas County residents can be proud of the way Judge Jenkins conducted this meeting. Except for yours truly, he could not have assembled a more knowledgeable, experienced group of experts to dissect the data and science, and to weigh in on this decision. I brought with me a stack of scientific papers, studies and guidelines about 5 inches thick that I had studied like a monk in preparation for this meeting. I proudly placed them on the conference table and tapped the papers as I spoke. The state's health commissioner, David Lakey, MD, had a taller stack. (I'm still trying to figure out to whom I can request some CME for all the research I did on this subject.)

The judge was thoroughly prepared and asked tough questions, almost like an inquisition. We then asked the tough questions of each other. The process was comprehensive, methodical, extensive, thorough, and insightful. And it was based on science and data. Dr. Luby was spectacular. At the end of the meeting, the judge thanked us all for our input and opinions, and said he would make a decision soon about aerial spraying. In Texas, the county judge is the most senior Homeland Security official and has the power in a declared public health emergency to authorize an action on behalf of the county. As Dr. Luby and I departed, we traversed a gauntlet of reporters and responded to a myriad of questions.

A little more than an hour later, Judge Jenkins made **The Decision**. He called an impromptu press conference to make the announcement, just as I had returned to DCMS headquarters. We all watched the events transpire live on TV with the same level of anxiety and expectations reminiscent of the recent Supreme Court decision on health system reform. Then the moment we all were waiting for: the judge authorized the implementation of aerial spraying. At that point, we (DCMS) felt that our role in the saga had ended.

How naive.

### **Friday evening, Aug. 10**

About 6 p.m., the judge called me on my cell and thanked me for the Society's contribution to the process and the help in making a decision. He had another question: Did I think the residents of the county would be prepared for aerial spraying by Tuesday? I paused, thought about that serious, sober question for what seemed like an eternity, and responded with my typical insightful answer: "I don't know." I suggested that I try to identify the area in the country with the most experience with aerial spraying, and see if I could learn from them and borrow some best practices. That is, after all, what we physicians do – borrow from the experiences of others (good experience comes from bad experience).

At about 8 p.m., before I had a chance to start my on-line research, a staffer from Congressman Pete Sessions' office called to ask that I attend a 9 p.m. press conference in University Park. The mayor of UP was expected to announce, in the wake of Judge Jenkins' decision, that the Park Cities were going to ask the County to be aerially sprayed ASAP because they were experiencing such a high concentration of human cases of WNV. At the press conference, the congressman was going to stand in solidarity with the mayor, Judge Jenkins and other city officials supporting this request. Politics and party affiliation evaporates, as it should, when a crisis like this threatens the community. The officials wanted DCMS standing with them supporting this decision and available to answer questions about our unanimous recommendation. The press conference went surprisingly well, with only one reporter asking only one question about the announcement. This community clearly did not have to be sold on the wisdom of aerial spraying.

### **The weekend, Aug. 11–12**

I researched the regions of the country with the most successful mosquito abatement programs and spoke with experts around the country. I learned from these leaders and from Google that Sacramento has the most experience confronting mosquitoes and WNV. The city has been aerially spraying for WNV every year since 2005 (except in 2009) before human illness arises, in response to infection rates in mosquitoes. In Sacramento, the Sacramento Yolo Mosquito Vector Control District (SYMVCD) is a separate government entity that has directed all aspects of mosquito abatement in Sacramento and Yolo counties since 1946. The district's Web site and published scientific papers report that it has sprayed aerially for WNV the equivalent of several million people in a dense urban area (Sacramento) with no significant human, environmental, wildlife, or legal consequences over a 7-year period since 2005. And if there ever is, shall we say, "an environmentally sensitive" state, it is California. I wanted to know their best practices and secrets, so I e-mailed and left a voice message on a contact phone number listed on the SYMVCD's elaborate Web site (<http://www.fightthebite.net>)

While I waited for a response, Judge Jenkins began to forward me most of the e-mails he was receiving from concerned citizens about the prospects of aerial spraying. He almost overloaded my e-mail inbox, there were so many. He sent at least 60 of them that weekend alone. I forwarded them all to Michael Darrouzet, the CEO at DCMS. We felt it would be helpful if we categorized the e-mails, and create responses in the form of an FAQ section on the DCMS Web site. DCMS created a fairly comprehensive subsite on the home page called West Nile Virus Resources ([http://www.dallas-cms.org/emerg\\_response.cfm](http://www.dallas-cms.org/emerg_response.cfm)). We also posted relevant guidelines, scientific papers, DCMS letters and statements, and internet resource links such as to the CDC and EPA, to help alleviate any fears. The Web site also contains a moving and informative video with DCMS Past President Don Read, MD, giving his account as a WNV survivor. We updated the Web site when the judge forwarded unique questions or when we discovered new scientific papers over the next several weeks. Wait a minute ... did I say, "we"? This herculean task was performed by Dr. Carlo and many on the DCMS staff, including Connie Webster, Lauren Cowling, Deanna Wooten, and Tracy Casto. They helped defuse some of the anxiety in the community by presenting the science and data in one easily searchable location.

### **Monday, Aug. 13**

#### **190 cases**

I received a call from the SYMVCD public relations director Luz Rodriguez. After just a few minutes, I realized we had hit the motherload! Sacramento offered a wealth of experience and information combatting mosquitoes. Having all the guidelines, scientific papers and expert opinion is great, but real-world experience is priceless! I arranged to have a telephone conference that afternoon with Judge Jenkins' staff and the folks in Sacramento, including the SYMVCD manager, David Brown. He and the judge became my newest best friends. In fact, over the ensuing three weeks, I communicated with both of these gentlemen about WNV several times a day. I think my wife was beginning to suspect I was going through a midlife crisis or had joined a secret society, so frequently were we strategizing on the phone. Later that day, the judge announced that aerial spraying would commence on Thursday, Aug. 16.

### **Tuesday, Aug. 14**

#### **207 cases, 10th fatality reported**

This was our day in Commissioners Court. WNV was squarely on the agenda because of the divided and vocal opinions about the wisdom of aerial vs truck-based spraying. Thirteen people had registered to speak, mostly against aerial spraying.

Dr. Read, Dr. Luby and I testified for DCMS, and Dr. Carlo was available to answer questions. Passionate presentations were made on both sides of the argument, but no positions seemed swayed. Later that day, DCMS issued a second press release reaffirming our concern about the situation and our recommendation for immediate implementation of aerial spraying. The transcripts of our testimonies and the press release are on the DCMS Web site.

### **Thursday, Aug. 16**

#### **230 cases**

Finally, the day aerial spraying was to commence. Eleven cities in Dallas County had opted in for this first round of aerial spraying. My day started with a series of scheduled and impromptu call-in TV and radio interviews beginning at 5:30 a.m. The reporters, despite having submitted a list of questions prior to the interviews, simply couldn't help themselves and led provocatively with the unannounced "vindication" question. I did my best to keep them focused on what mattered: getting the county safely out of this crisis. For the remainder of the day I had kept my schedule light, not sure what to expect. As I was soon to find out, my instincts were right and that decision served me well.

At about 11 a.m., I received a text to call the judge “stat.” When I immediately called back, he asked if I were seeing patients, and I replied I was about finished with my last morning appointment. He said that in about 15 minutes, he was meeting with most of the mayors in Dallas County, and they were nervous about the prospects of aerial spraying. He said he needed me by his side because rumors of an injunction and temporary restraining order were circulating that could halt the aerial spraying scheduled for that night. The judge said he needed the support of the medical society to reassure the mayors that aerial spraying was safe. If all the mayors agreed to declare their cities as under public health emergencies, they legally could circumvent any court challenge. I quickly finished with my last patient and, still in scrubs, made a bee-line to the county administration building downtown.

Upon my arrival to a standing-room-only conference room, the judge broke off his comments and asked that I explain the DCMS recommendation, how we came to that conclusion, and what I had learned from the Sacramento experience. I spoke for about 15 minutes and answered questions the best I could. Most, if not all, of the mayors must have signed the emergency declaration because the injunction was not invoked. Throughout the day we heard rumors and radio reports that the air campaign was cycling between being on, and then off, for various reasons. At 4 p.m. I participated in a one-hour radio call-in show/debate on KERA that included the mayor of Dallas and Judge Jenkins. At that point we were guardedly optimistic, but the threat of a temporary restraining order remained.

At about 10 p.m., the judge called my cell and left a voice message: “Rick, I saw it with my own eyes – the planes just took off. Thanks for the Society’s help!” Again, I thought it was “mission accomplished.”

### **Monday, Aug. 20**

But wait! There’s more?

In Texas, cities operate under “home rule.” So, not only does the county have to offer assistance in terms of resources to the community, each city has to agree to accept them. So, each city had to decide whether to be aeri ally sprayed. Many were having emergency city council meetings to decide the issue, and some had not decided by the time the first round of spraying was to begin. My reward for doing such a good job of presenting to the mayors as a whole on Aug. 13 was to be invited to speak to some city councils and officials individually.

At the request of the mayor, I spoke to the Wilmer City Council. After my presentation, the council voted unanimously in favor of aerial spraying.

As I drove home, I phoned the judge to give him the good news. He was at the Dallas Executive Airport watching the planes take off to start that night’s spraying missions. The first round of spraying missions had to be truncated and staggered over five nights instead of the originally intended two because of thunderstorms on consecutive nights. The judge was at the airport every night the planes sprayed Dallas County, almost like a nervous parent chaperoning his teenage kids, at the ready in case any untoward events took place. He invited me to join him. Over the next 2 hours, we had a grand time watching the planes take off, land and refuel. We even chatted with David Brown from Sacramento as we enjoyed the evening under the stars. At the judge’s behest, I joined his kids, mother and staffers in spraying with DEET at regular intervals.

### **Waiting, Aug. 21 – Aug. 30**

A second round of spraying occurred, this time over the intended two-night plan in a patchwork fashion to cover those municipalities that opted in later.

Over the next 10 days, we waited anxiously for signs that the spraying was having positive or negative effects. The judge asked me to contact local EDs informally to see if any upticks in symptoms that could be attributed to aerial pesticides were manifesting. The answer at my hospital, Medical City, was no. Although the “research” was informal and not scientific, it was at least something and was

reassuring. What the EDs had noticed, though, was a significant increase in people presenting to the ED wanting to be tested for West Nile Virus.

While we waited, the judge and I communicated almost daily and discussed strategies of how the region should learn from this experience and plan for the future. We discussed the idea of a mosquito abatement district for the region, similar to SYMVCD, and how such an organization might better survey and respond to this type of crisis.

### **Wednesday, Aug. 22**

CDC officials briefed the White House and Homeland Security about the WNV epidemic, with emphasis on Dallas. Our medical society was mentioned as having played a supportive role in the decision-making process.

### **Friday, Aug. 24**

JAMA ran an article authored by our own Dr. Robert Haley characterizing WNV and detailing the impact of the 2012 epidemic across the country.

I also got a call from the judge, who passed along a preliminary assessment from the CDC that the aerial campaign had better-than-expected results. He said the CDC had indicated how impressed it was with the speed with which the judge and mayors decided to spray aurally. The CDC said most locally elected bodies need 3–4 weeks before a decision is reached; the judge attributed the swiftness of the decision to a large degree to DCMS.

### **Saturday, Aug. 25**

Michael and I advised neighboring medical societies of DCMS' decision to recommend to our local elected officials the immediate implementation of aerial spraying. On Aug. 28 Denton County Medical Society issued a press release recommending aerial spraying for its community.

### **Monday, Aug. 27**

By this time I am so tired of talking about mosquitoes and *Culex pipiens quinquefasciatus* (say that one 10 times fast!) that I almost want to scream.

### **Thursday, Aug. 30**

The first big outcomes milestone arrived. The county, City of Dallas and CDC held a press conference at which the CDC released findings from the postspray trap survey detailing the effects of the aerial campaign on the mosquito population. I represented DCMS during the Q&A session. The result was an astonishing 93 percent reduction of mosquitoes capable of carrying the West Nile Virus. In fact, data showed an increase in mosquitoes in areas not aurally sprayed. We were stunned. We had not expected such good news. This was accomplished with seemingly no significant adverse effects on the human population, wildlife or the environment. The judge thanked those who participated in the campaign: *"I want to publicly thank those without whom the aerial campaign would not have been successful ... the Dallas County Medical Society ... whose compelling and fact-based analysis was instrumental in the decision."*

The judge afterward treated his staff, the CDC team and yours truly to a celebratory refreshment at a local restaurant.

### **Early September**

But those results were only surrogates for the real goal: halting the human impact of the disease. About a week later, our hopes were confirmed with a dramatic reduction in the reporting of human cases in Dallas County in those areas that were aurally sprayed (after the 15-day incubation period had

been considered). This was the news we had been waiting for. And, with it, all the time and effort of dozens of individuals from DCMS who put in countless hours every day contributing to this effort immediately seemed worthwhile.

### **Kudos and Remembrances**

DCMS has a long history of leadership during public health crises, including the polio and St. Louis encephalitis epidemics in the 1950s and '60s. The society's response to the WNV crisis this year echoed those efforts. Your county medical society is proud to have played a role. We hope you will visit the DCMS Web site and learn more about WNV.

Thanks to the DCMS staff for being equal to the challenge. I particularly want to recognize Michael and Connie for their efforts. Michael claims he keeps every e-mail in an electronic file system. If so, his WNV file counts e-mails in the hundreds, if not thousands. Also, Tracy Casto and Lauren Cowling played a BIG role in coordinating communications with the judge's office and the media, and with our messaging and education efforts on the Web site. They all spent several hours a day over the last several weeks, including nights and weekends, promoting this campaign. They not only tolerated my demands for the role that the society should play, but they embraced it with passion.

Thanks to the dozens of DCMS physicians who upheld the mission and goals of the society during this crisis:

*"To advocate for physicians and their patients, to promote a healthy community ... to establish the medical society as the definitive source of healthcare information in North Texas."*

**This crisis has taught us that the ideal of the physician advocate is alive and well in Dallas County. Remember, regarding the health care our patients receive, we physicians have as much impact in legislative chambers and board rooms (and, in this case, a Commissioners Court) as in exam rooms and operating rooms. As clinicians we treat one patient at a time, but as physician advocates, we have the opportunity to treat everyone, even a whole county, at once!**