



ST. ELIZABETH MEDICAL CENTER & ARNETT CLINIC Medical Director's Viewpoint

Dr. Stephen Ash is a renowned Nephrologist with a private practice and dialysis clinic. He is also the Medical Director for three dialysis units at St. Elizabeth's hospital in Lafayette, Indiana, with locals in rural parts of Indiana. Dr. Ash uses Velos Renal to seamlessly integrate his nephrology practice, dialysis clinic, and in-hospital settings.

Velos: What are the major value additions you get from using Velos Renal?

Dr. Ash: The driving force that brought me to Velos is the organization of the clinical data, especially around the problem title list. I've been a firm believer that in order to organize medical information successfully, we have to have an index according to the patient's problem. Even though this system structure was described by Dr. Larry Weed as far back as 1968, and implemented in my practice in the 1980's, it has never, until Velos, been implemented as a structure for medical data in a commercially available clinical information system. There has not been any other means proposed for organizing patient data other than by the patient problem.

Now, a problem in Velos has a very broad definition: it could be a patient complaint, it could be a physical observation, a chemical abnormality, and it could even be a therapy itself. Using the problem list, and then associating data and comments with it, gives you the chance to essentially use the problem list as the index for the rest of the whole medical record. That's a hugely important feature of Velos and very unique among the systems that are out there.

The other important feature of Velos is the fact that it was designed such that it could be configured specifically for use in a dialysis setting, including machine and lab interfaces, and the capability to do billing. As an aside, I believe so much in this (concept) that I developed my own product called Smart Chart, a problem-oriented database in Unix, before migrating to Velos.

When I look at the other products on the market, what I find is a re-creation of the flat file concept of visit notes that appears currently in the paper chart. All they're doing is replacing the paper chart, and that doesn't add a lot of value. The other systems basically bring up a blank screen, like a blank piece of paper, allow the physician to type in whatever he or she wants, tack chief complaint on the top and a short problem list on the bottom, and think that's satisfactory. Whereas in reality, everything in medicine is pushing us towards the use of problem lists.

The E and M codes themselves are clearly based on problems. The justification of lab tests in dialysis, for example, is based now on proper definition of the diagnosis and giving the patient the proper hematocrit values. So, everything is pushing us towards associating therapies, numerics, and problem titles.

The Velos system helps clinicians take a step forward in thinking when caring for a patient. They have to think a little more about, "Wait a minute, what is the patient's problem that I'm addressing?" If they don't take that step, then they really don't get the value out of using a computer system any more than they would using a paper chart.





And, by the way, because of the fact that we've used such a system and seen the value, and proven that nurses, dieticians, doctors, and patients can all use problem titles and the whole thing works – not only do I feel that way, but the rest of the people in the various areas where I practice feel that way – from my office practice, to the hospital floors, to the dialysis units.

Velos: Can you describe life before and after Velos?

Dr. Ash: If you look at what Velos gives that the other systems don't, the very first, simplest thing to describe is that you get an accurate problem list, one that's really detailed, really works, and is up-to-date. Any other system that you use will not give that to you. They say, "Oh, we have problem lists," or, "Yes, we have problem orientation." But if you say this is not just something to bill on, but I want to know the status of each of the patient's problems and some history around that, you can only get that when you go to that line to put data in.

If I were to grade other systems or the paper chart, I would go to what every doctor says they think should be kept up – which is the problem list – and look at the accuracy of that list. With Velos, it will be accurate, and all available in one view. In fact, it will probably be more accurate and detailed than most people want to review, but that's a function of how complex patients are today.

One of the many things that you get with Velos, that you won't get with any other vendor, is the capability to create a history and physical (H&P), a discharge summary, or a suitable insurance company summary on the whole history of the patient at the push of a button.

If you don't have Velos' problem organization, the system won't give it to you. If you look at the other systems on the market, and they say "Oh, yes. We do H&Ps (history and physicals)." You say "Well, what do you mean?" Well, you can look at a list of problems, and you can probably find visits in the past that address those problems, and you can then review all that and essentially re-dictate an H&P.

What I say is, "Wait a minute, that's what the computer is supposed to do." I don't want to put in information again that's probably less accurate and more general, and certainly less complete than what was entered in real-time. Not to mention the amount of effort that saves. Every vendor will tell you that they automate history and physical, and every doctor will tell you they should absolutely have a complete problem list and history and physical, but they never are automated and rarely complete. The combination of quality and efficiency in Velos is exceptional.

And, I did it three times today. I can actually go to a computer in the hospital, call up the Velos database at the clinic or my office, update a couple of the patients' medical problem titles, put in what happened in this admission, push a button and get a complete history on that patient for discharge or admission. The other systems just don't have it.

The other thing is that the accessibility of clinical information in Velos is wonderful. You can get access to data in other systems, but with most of them, you have to get access visit by visit – and, that's a real pain. For example, you can search for CHF (Chronic Heart Failure) on some of our patients, in the hospital system for example, and find 50 visits over time where people tacked on CHF in the description. Well, where are the supporting observations, how important were the noted factors, where are the EKG results interpreted by the cardiologist? You have to guess, work





from memory, or call around.

Another big thing is access to the system from different locations with different needs. Continuity of care among hospital, clinic, and office is wonderfully accomplished by a computerized medical record. But, it's not an easy task. Even in my own relatively small network, you have three, now four, dialysis centers, a private clinic, that's right next to those centers but is on a different computer network, and then the hospital, which isn't attached to any one of the dialysis centers. You've got hardware problems and, more importantly, political problems to work through to actually get continuity.

Most doctors, and most nephrologists, assume they'll never actually accomplish this – that they'd actually be able to go into their dialysis unit and see the record on a patient in their private practice, or go to the hospital and see one from either place. We've accomplished that.

But, if you didn't have a software program that was built to handle information within a medical practice, and also work within a dialysis unit, or other specialties, like the dialysis run record, the PD record, the dietician report, et cetera, it just wouldn't work. And, I know Velos has the same software running in hospitals, too. So, Velos is the only one I've seen that has accomplished that kind of breadth, which in turn unlocks a wealth of opportunities for quality, cost, and efficiency improvements. Designing a system that does that is very complex. They've done it and made it easy to use.

Velos: Great. So, if you were to look at other improvements, in terms of saving time, communications, better compliance, are there other advantages to Velos?

Dr. Ash: Oh, absolutely. If you work in a world of paper charts, for example, and the patient comes in at, say, one of two local hospitals like in our community, and you want to find out what happened yesterday at my clinic, you're sunk. There is no way you'll get that paper chart. In fact, even if they come into my own clinic in the urgent care area, after hours, and I want to find out what I did yesterday at my office, I'm sunk. It's all by memory, it's all fill in.

Doctors have been covering this deficiency in information and discontinuity of information by using memory as best they can. This has always been the case. But it really doesn't work well. Doctors say, "Well, it's all up here," and they point to their head. Well, that's great, but what if he's off and I'm on call?

So, accessibility of information in the paper chart world is a mess. And no one has solved it, whether through faxes and even central databases. Hospitals are trying through central databanks and that's beginning to work, if you're within that institution; but try doing it across institutions – it's just hopeless.

Then, of course, you get to the question: "How good is the chart?" My clinic had a paper cardboard sheet next to the chart for 25 years, which had on it med list, important allergies, and problem list on the patient, and they were virtually never halfway complete. This is all cleaned up now – and current.

Designing a system that allowed the kinds of correlations among problem, numerics, and labs that Velos does is hard enough, and involved a lot of foresight and dedication on Velos' part. But what is also in Velos, which I think isn't very apparent when people first look at the system, are parallel and almost overlapping approaches to organizing information. I've talked a lot about the problem list, but you also have whole diagnosis list section, which is very parallel to what has always gone on in hospitals.





For example, in hospitals, doctors have always written or dictated what's wrong with the patient, and the medical records department transcribes it. Then you have a chief complaint section for people who want to focus on that. And, for people who don't like problem orientation, you can still put visits in block by block, one by one, and associate the whole visit with a problem title. So, there are many different ways to use the system which makes it simple for people with different work habits and different perspectives, such as the nurse, physician, dietician, administrator, and so forth. So there's a tremendous amount of flexibility built into Velos which, once configured, makes it easy and powerful to use for each perspective.

Velos is powerful because of its combinations. Basically, you combine list-based and free text entry, problem-orientation or a complete lack of it, and a high degree of configurability, and allow the system to be easily adapted to the way medicine works and doctors think – far better than any system I've seen.

Now, so far, I've talked about the system from what I see as a quality perspective. Now, let's talk about cost-effectiveness and efficiency . . .

The overall operation of the system, from the standpoint of data entry, takes slightly more than what it takes using a paper chart. We in the medical community spend decades evolving dictation systems, file handling systems, and other processes to support the paper chart. If your cost effectiveness is looking at how much quality of information you get out, Velos beats the heck out of a paper chart. I don't like to suggest to people that you'll save time in implementing a system like Velos. Number one, you'll spend time implementing the system, and you also need someone on staff committed to implementing the project and getting staff up-to-speed. So, the time of data entry is, overall, perhaps equal to a paper chart. But, speed of the subsequent preparation of documents and data recall with Velos is light years ahead of our old paper-based systems. If you look at our office on a day-to-day basis, I bet our office is 50% more efficient with Velos than it used to be. Part of it is just the accessibility: A nurse gets a phone call from a patient; she brings up the patient's med list, finds what the patient's on, can call a pharmacy immediately, call the doctor to make suggestion. Perhaps, she looks at the visit before and sees where they were and what the labs were last time.

People in my clinic come by and marvel at how our nurses work. The fact is that our nurses don't have to say to the patient, "Wait a minute, I'll call for the paper chart, I'll call the doctor and get back to you later this afternoon," which is how most every other clinic in America works today.

And my staff loves it. Velos, as in velocity, was very aptly named.

