Integrating Evidence-Based Diabetic Wound Care into the EMR

Algorithms should be incorporated into treatment protocols.

BY JEFFREY M. ROBBINS, DPM

Changes to our healthcare system are occurring at a fast and furious pace. We all seem to be part of a rather large beta test as new systems, requirements, and policies are rolled out at an alarming rate. For example, even though ICD-10 has been threatened for several years, we are remarkably unprepared for its October 1, 2015 start date. This is not because we have not prepared, rather it is because of the unknown and the seeming inability of the payers to give providers any degree of certainty that it will work smoothly. Healthcare consultants have gone as far as to suggest that providers prepare for anywhere between 3-6 months without payments. This is for a system that arguably does not have one patient outcome benefit. All of the expense and energy going into this launch will not facilitate one diagnosis nor improve disease management.

There is something to be learned from this experience as well as others, most notably, Meaningful Use and the electronic health record. We, the providers, are no longer driving healthcare. It has been taken over by health insurance companies and the federal government. We are seemingly on the "bench" as it were, and told, "We will call if and when we think we need you." While this article is not necessarily a "call to arms," it is a template for making our voices heard and influencing policy that affects how we treat patients.

We, the providers, are no longer driving healthcare.

A while ago, a certain insurance company decided that it would no longer carry the medication Crestor on its formulary. Letters were sent out to subscribers indicating this and suggesting they call their physicians and have them switch to another statin drug. Their suggested list included statins that are now available in generic form. The evidence they used shows that a large majority of patients on Crestor will do just fine on a generic statin, and those that do not can petition to be allowed to continue on Crestor. To be clear, the letter was not denying the patient the right to use Crestor, just that they would no longer cover it under their policy. This is population-based health at work, and it seeks to do what is right at the population

Continued on page 122

TABLE 1:

High Evidence Wound Care Principles

1) Proper wound assessment and staging
2) Addressing of systemic disease issues (e.g., diabetes, nutritional status)
3) Antibiotics, if an infection is present
4) Addressing any arterial vascular compromise, if present
5) Wound cleansing
6) Maintaining a moist wound environment
7) Proper off-loading with total contact casting or instant total contact casting.
8) Considering an advanced wound care product or technology if there is not a 50% reduction in the wound size within four weeks. •

EMR (from page 121)

level rather than at the individual level. Clearly, this serves the population by cutting costs they consider unnecessary so that more resources are available for other conditions and drugs as well as company administrative costs. The key here is the use of evidence to justify changes in benefits to patients.

We are all aware of the enormous number of expensive advanced wound care products available and the aggressive sales force that promotes their use. Each comes prepared with mainly anecdotal evidence in the form of photographs of wounds that have not healed using traditional basic wound care but were healed with the use of their product. Some have studies and even clinical trials that purport to show the effectiveness of their products. The question we have to ask ourselves is: Does the evidence rise to the level of quality to justify the use of the product or technology? The answer is generally "maybe."

If we examine the high levels of evidence for wound care, we come up with the list in Table 1.

These are all well documented in the literature and are considered the standard of care in most instances. Providers are trained to do whatever is necessary to improve the conditions of patients. When one strategy does not work, we move on to the next strategy, and if that does not work, we move on again. In the past, before the concept of evidenced-based medicine was integrated into practice, most strategies were based on traditional management patterns, many of which were anecdotal at best. The era of evidenced-based medicine has forced providers to take a step back and begin asking questions about what we do and how we do it.

As advanced wound care products began to be highly promoted, the number of these rather expensive products being used increased, and so did the expense of wound care. This caught the attention of administrators who are responsible for spending available resources wisely. They need to consider the total gamut of resources and balance that with the spectrum of medical conditions that need to be managed by the system, (diabetes, heart disease, COPD, ESRD, cancers, dementia, etc.).

From that perspective, it makes sense to ensure that we are not expending dollars on products and technologies that have not been proven effective, or if they have been proven effective, on patients who fall outside the inclusion criteria used in the trials. At the same time, we need to allow for the use of new and emerging products and technology to move the science forward. We just need to do it in a reasonably organized and fair manner.

The era of evidenced-based medicine has forced providers to take a step back and begin asking questions about what we do and how we do it.

The question we have to ask ourselves is: Does the evidence rise to the level of quality to justify the use of the product or technology?

In our system of care, we devised and field-tested an evidence-based wound care algorithm based on the principles listed in Table 1. Using the electronic health record, we created a wound care template that tracks all of the high-evidence basic wound care principles. It forces the completion of the assessment on each visit. If the wound fails to heal by 50% after four weeks, and all of the conditions in Table 1 are met, then the provider can move on to a more advanced wound care product. Of course, once they have demonstrated a failure to heal, patients with repeat ulcers would be allowed access to advanced wound care sooner if the judgment of the provider deems it necessary.

The unique nature of the EHR is that it can pull information from other areas of the record into the current note. For example, in our note template, the measurements from the past encounters are automatically populated into the current note so providers can judge the percentage of healing for each week. It will also auto-populate the last C&S, HA1c, pre-albumin, x-ray, and imaging results, and any NIVT results reducing the time needed to seek this information during the patient encounter. This is truly meaningful use in its greatest sense, as the less time spent looking through the chart, the more time dedicated to interacting with patients.

It is appropriate for providers in medical groups and other systems of care to develop algorithms based on the evidence; and once established, they should be expected to follow them. This does not mean that they must not deviate from the algorithm; it means that if they do deviate from the agreed-upon management strategy, a justification in the note for that deviation is necessary. Deviations from the expected practice pattern can then be reviewed on a yearly basis and

Continued on page 124

EMR (from page 122)

changes to the algorithm can be suggested if they become commonplace. In this way, the algorithm becomes a living document with opportunities to improve as new evidence and advancements are made. **PM**

References

[1] Gottrup, F. Apelqvist, J, Present and new techniques and devices in the treatment of DFU: a critical review of evidence, Diabetes Metab Res Rev 2012; 28(Suppl 1): 64–71.

[2] Hinchliffe, RJ, Valk, GD, Apelqvist, J. Armstrong, DG, et al., A systematic review of the effectiveness of Interventions to enhance the healing of chronic ulcers of the foot in diabetes, Diabetes Metab Res Rev 2008; 24(Suppl 1): S119–S144.

[3] Game, FL, Hinchliffe, RJ, Apelqvist, J, et al., A systematic review of interventions to enhance the healing of chronic ulcers of the foot in diabetes, Diabetes Metab Res Rev 2008; 24(Suppl 1): S119–S144

[4] Greer, Nancy, Ph.D., Neal Foman, M.D., and Timothy Wilt, M.D. Advanced Wound Care Therapies for Non-Healing Diabetic, Venous, and Arterial Ulcers: A Systematic Review. N.p.: Department of Veteran Affairs. Health Services Research and Development Service, 2012.

[5] Sheehan P, Jones P, Giurini JM, Caselli A, Veves A. "Percent Change in wound area of diabetic foot ulcers over a 4-week period is a robst predictor of complete healing in a 12-week prospective trial., Plast Reconstr Surg. 2006 Jun;117(7 Suppl):239S-244S.

[6] Armstrong, D. G., H. C. Nguyen, L. A. Lavery, C. H.M. Van Schie, A. J.M. Boulton, and L. B. Harkless. "Off-Loading the Diabetic Foot Wound: A Randomized Clinical Trial."Diabetes Care 24.6 (2001): 1019-022.

Dr. Robbins is Director of the Podiatry Service VACO and Chief of the Podiatry Section at the Louis Stokes Cleveland VAMC.