

Promoting Success in Self-Injection: Listening to Patients

Administering medication via self-injection can be beneficial from several perspectives. In the United States, where over 9,000 people reach age 65 every day and a high percentage of older adults suffer from multiple chronic diseases, hospitals are struggling to meet the demand for care (U.S. Government Accountability Office, 2013; Ward & Schiller, 2013). Increased use of self-injection could alleviate pressure on medical services by reducing hospitalizations, clinic appointments, or home visits for routine administration of injections. Patients are empowered by assuming responsibility for the treatment of their conditions. They also enjoy practical benefits, such as the flexibility of being able to self-inject at home, at work, or even when traveling (Bygum, Andersen, & Mikkelsen, 2009).

The number of patients who suffer from chronic diseases treatable by self-injection is significant and growing. Diabetes is the primary indication as 6 million patients with diabetes inject insulin daily in the United States alone (Centers for Disease Control and Prevention [CDC], 2014a). Further indications include multiple sclerosis, Crohn's disease, rheumatoid arthritis, and a range of immunological diseases (Demary et al., 2014; Hirai et al., 2014; Hupperts et al., 2015; Levi, Choi, Picavet, & Hack, 2006).

Technological advances have made it easier for patients to master injection techniques for either subcutaneous or intramuscular administration depending on the drug. Since the introduction of the first insulin pen 30 years ago, many sophisticated auto-injection devices have reached the market and offer the possibility of tailoring injection settings to individual needs. Devices

also have been adapted to meet the needs of patients who have problems with vision or manual dexterity (Verdun di Cantogno, Russell, & Snow, 2011).

The nurse plays a key role in enabling patients to come to terms with debilitating long-term conditions and the necessity to self-inject. Patients have to develop confidence in handling their medication and injection equipment, and they need reassurance that help is available for practical problems that may arise when they return home from the hospital. Studies have shown comprehensive training in self-injection, together with positive, supportive interactions and regular follow up from the health care team, result in better long-term adherence to treatment and reduced rates of hospital readmission (Saunders, Caon, Smrtka, & Shoemaker, 2010; Schapiro, Scanzillo, & Hundley, 2011).

A Pilot Nurse/Patient Focus Group on Self-Injection

A patient/nurse focus group was organized through the international *Connecting Nurses* (2014) program (a recognition program that provides a forum for nurses to share ideas, advice, and innovations) to investigate patients' perceptions of self-injection and explore how nurses can improve the training and assistance they give to patients, particularly in the period immediately after diagnosis. The focus group included five patients and four nurses from France, Germany, Canada, and the United States. The nurses had wide experience, with expertise across many areas of nursing, patient education, and nurse training in their respective countries; they are the authors of this column. The patients were recruited through patient support groups and online communities, and were not known previously to the nurses. During the recruitment process, patients were informed of the objectives of the focus group and signed consent forms that included assurance no information would be disclosed to a third party regarding their identities.

Patients' ages ranged from 20 to 47 years. They had been diagnosed with the following conditions: Crohn's disease (two patients), psoriatic arthritis, diabetes, and rheumatoid arthritis plus diabetes. Three of the patients were experienced self-injectors (>1.5 years), while the youngest patient (age 20) was diagnosed recently with type 1 diabetes and had been injecting insulin for only 6 months. One of two patients with Crohn's disease had decided not to self-inject and regularly attended a hospital clinic for treatment.

Phyllis Arn Zimmer, MN, FNP, FAANP, FAAN, is President, Nurse Practitioner Healthcare Foundation, Seattle, WA.

Lynne T. Braun, PhD, CNP, FAHA, FPCNA, FAAN, is Professor and Nurse Practitioner, Rush University College of Nursing, Department of Adult Health and Gerontological Nursing, Rush Heart and Vascular Institute, Chicago, IL.

Robert Fraser, MN, RN, is Registered Nurse, University Health Network, General Internal Medicine, Informatics, Knowledge Translation and Research Mobilization, Toronto, Canada.

Lars Hecht, M.Sc., is Executive Director, RED-Institute, Medical Research and Education, Oldenburg, Germany.

Felicity Kelliher, RN, B.Ed., RM (Ireland), Registered Nurse Teacher (France), is Project Manager, Association Française pour le Développement de l'Éducation Thérapeutique (AFDET), Paris, France.

A professional facilitator was engaged to guide discussions and ensure questions previously defined by the authors were addressed. The authors reviewed qualitative information collected from the discussions to determine key themes and lessons concerning the role of the nurse in educating patients and helping them overcome psychological barriers to self-injection.

The focus group identified and prioritized psychological barriers to self-injection the patients had encountered personally by patients or observed by the nurses (see Figure 1). These included concerns about the use of needles (pain and/or incorrect technique), side effects, social stigma related to injecting in public, and frustration or lack of acceptance of the illness. Patients in the

focus group indicated they had received insufficient support from their health care teams, particularly when they first returned home from the hospital and were feeling confused and frightened about the prospect of self-injection.

These concerns are consistent with findings of previous investigators and they have not changed for at least 10 years despite improvements in self-injection technology (Cox & Stone, 2006; Mohr, Boudewyn, Likosky, Levine, & Goodkin, 2001; Tuong, Olivieri, & Craig, 2014).

Members of the focus group made the following specific and practical recommendations to address patients' psychological barriers and improve nursing practice in relation to self-injection:

- Provide the patient with a personalized treatment plan and advice on self-injection when he or she leaves the hospital.
- Arrange a follow-up appointment within 1 week to assess the patient's progress with injection technique and address any problems.
- Involve family members whenever possible because they are a valuable source of support for the patient who self-injects.
- Coordinate the handoff of the patient from one setting to the next (usually from the hospital to home or primary care). If possible, this should include designating one nurse as the contact person for the patient.
- Establish special self-injection hotlines the patient can call if he or she has questions, encounters difficulties, or needs moral support.
- Identify online resources, such as websites, videos, and patient forums, that provide practical information about a patient's condition and treatment, and allow him or her to share experiences with other patients in a similar position.

The focus group agreed increased support from nurses, particularly in the learning stages, would enable patients to overcome barriers quickly and result in bet-

FIGURE 1.
Psychological Barriers to Self-Injection Identified by the Nurse/Patient Focus Group

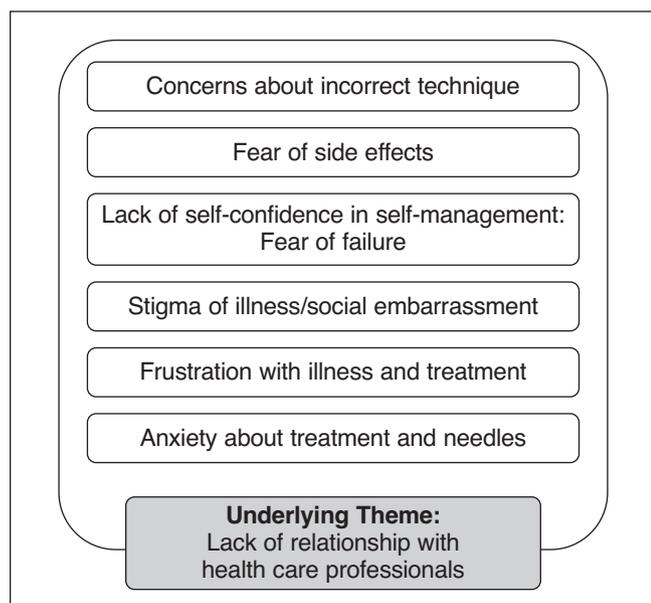
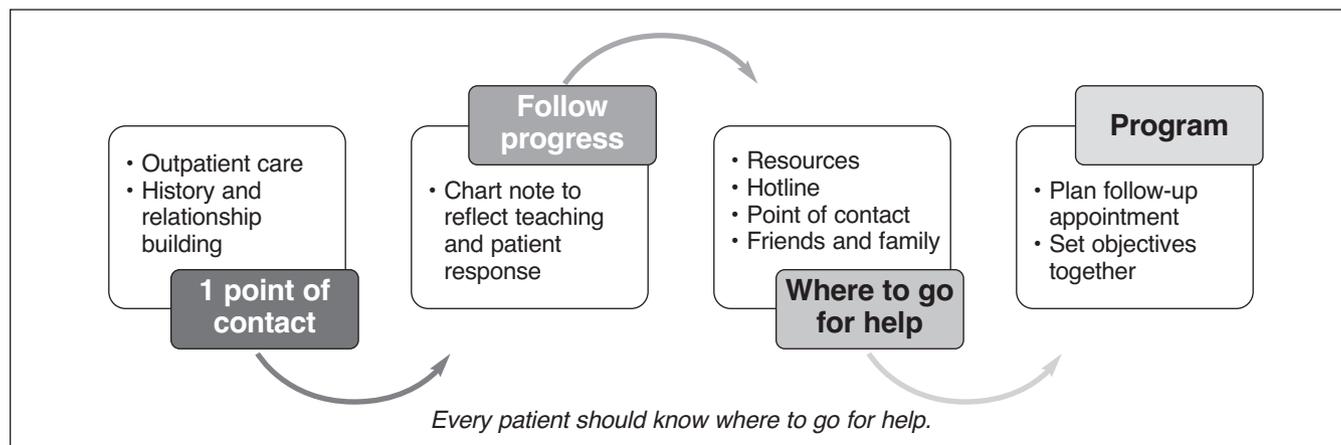


FIGURE 2.
Recommendations to Improve Nursing Practice in Relation to Self-Injection

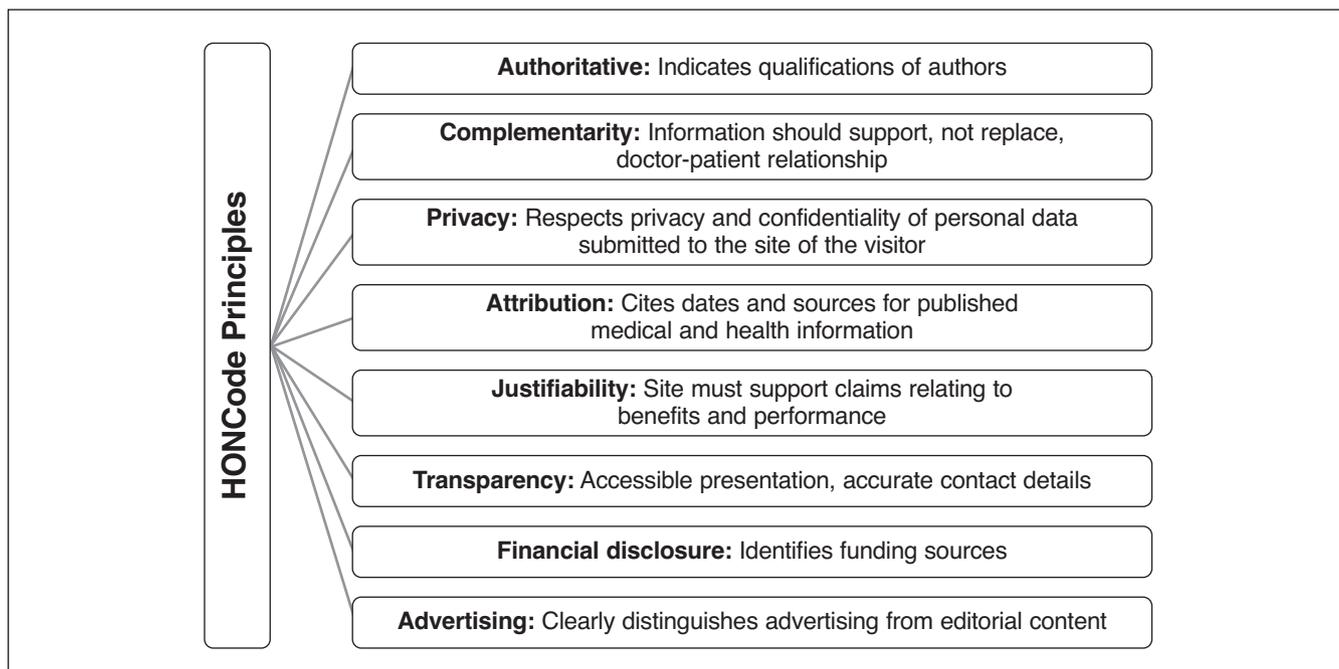


Source: Connecting Nurses, 2014.

TABLE 1.
Informative Websites for Patients who Self-Inject

Title	Author	Website
A Patient Guide to Properly Administering Medications Requiring Self-Injection	Walgreens, 2011	http://healthcare.walgreens.com/images/pdfs/pharmacy/SP14267-Injection_PatEd_sprd.pdf
The Human Pin Cushion: Tips for Making Self-Injections Easier	Bradley, 2014	http://chroniccurve.tumblr.com/post/19929868858/the-human-pin-cushion-tips-for-making-self-injections
Strategies for Insulin Injection Therapy in Diabetes Self-Management	American Association of Diabetes Educators, 2011	http://www.diabeteseducator.org/export/sites/aade/_resources/pdf/research/AADE_MedEd.pdf
Patients Like Me	Patients Like Me, 2014	http://www.patientslikeme.com/conditions/52-ra-rheumatoid-arthritis

FIGURE 3.
The HON Code of Conduct for Medical and Health Websites



Source: Health on the Net Foundation, 2014

ter long-term treatment adherence. (See Figure 2 for an example of how nursing contact could be structured.)

Identifying Reliable Online Resources

Gilmour, Huntington, Broadbent, Strong, and Hawkins (2012) suggested nurses should help their patients to find and evaluate the vast array of readily available health information essential for disease management education. This recommendation has not been incorporated yet into everyday nursing practice. The authors observed patients, when left unaided, often misunderstand or misinterpret the information they find on the Internet.

Identifying relevant information online can be challenging; a simple search of *self-injection* returned 13.7 million web pages of varying quality and accuracy. Some useful websites provide videos demonstrating injection technique, or access to online patient communities (see Table 1). The authors urge nurses to evaluate carefully the appropriateness of all online materials they recommend to patients.

To help health care professionals assess the quality and reliability of online sources, as well as their relevance to the patient, family, and caregiver, the Health on the Net Foundation has developed a Code of Ethics (*HONcode*) (Health on the Net Foundation, 2013).

The *HONcode* proposes a structure for evaluating

sources of information and identifying any potential bias based on the following criteria: authority, complementarity, confidentiality, attribution, justifiability, transparency, financial disclosure, and advertising policy (see Figure 3).

Resources such as the web page on injection safety from the CDC (2014b) or best practice recommendations for safe injection from the World Health Organization (2010) meet these criteria.

Conclusion

Thorough patient training in self-injection techniques and regular follow up from health care providers result in good long-term adherence to treatment and less readmission to the hospital (Cox & Stone, 2006; Remington, Rodriguez, Logan, Williamson, & Treadaway, 2013). Continuity of care can pose problems, particularly for new patients who leave acute care settings to return home. Strategies should be introduced to ensure patients have a distinct point of contact when they are home to seek advice by telephone or online for any difficulties linked to self-injection. Promoting successful treatment of chronic conditions via self-injection can limit the financial impact of these diseases, while simultaneously improving treatment flexibility and overall quality of life for the patients and families concerned (Boeru et al., 2013). **MSN**

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