What do patients with diabetes and diabetologists – especially those in private practice – expect from the new technologies for diabetes care in the future?

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**Abstract**

Thanks to the high volume of patients’ consultations delivered, and especially in private practice, diabetologists are able to accurately describe the expectations of diabetic patients with the new and mostly future technologies. In addition, diabetologists are also able to imagine how these technologies will change their medical practices in future.

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1. **Introduction**

Diabetologists in private practice are able to follow their patients with diabetes throughout the course of their lives. During a consultation, the diabetes specialist has to answer various questions, depending on the age of the patient. However, the recurrent question that ends each visit is invariably the same: What’s new in diabetes care?

2. **What does a patient with diabetes expect from new technologies for diabetes care in the future?**

The answer depends on how the patient sees the technology that is already currently available. When nothing new has been attempted, the expectation is often general, such as “I wish there were something that could keep my blood sugar under control without my having to do anything”. In contrast, patients who already use the newer technologies tend to focus on more specific targets according to their own experience. Usually, a patient uses new technologies for a medical reason: to improve glucose control. The benefits for quality of life often appear later with long-term use on a daily basis.

As for insulin infusions, patients expect a more discreet and easy-to-use system. In fact, they usually wish for a pump that is virtually invisible, with no tubes, but with the possibility of acting separately on the reservoir, battery or infusion set. The second most frequent patient’s wish is to have the method simplified, with prefilled reservoirs, automatic cannula insertion and filling, and a pump menu available on everyday items such as mobile (cell) phones (smartphones that allow intuitive and easy pump menu control). Indeed, patients expect a system that is friendly, discreet and helpful in their daily life instead of being just a medical device.

But the greatest expectations are naturally related to continuous blood glucose monitoring (CGM) devices. However, patients’ wishes often remain vague, as only a few have had the...
opportunity to use the currently available devices. The latter patients are the ones who are best able to clearly express what they are waiting for. Most are expecting a minimally sized, long-lasting device. Patients with diabetes look forward to “closing the loop” with a device that will automatically infuse insulin according to their CGM values. This constitutes the most logical and complex expectation. Yet, most patients do not want a continuously active device, as they wish to keep control of their diabetes. What they do want is a reliable device that they can depend on when they want to. This would allow them to sometimes simply forget that they have diabetes (and let a trustworthy device take control) and, at other times, get help when blood glucose variations are so unpredictable that they just feel like giving up.

Of course, patients’ expectations also vary depending on their age and how comfortable they are with the newer technologies: the fear of not being able to control a device can interfere with the patients’ attitudes and expectations.

3. What does a diabetologists – especially one in private practice – expect from the new technologies for diabetes care in the future?

The healthcare provider generally has the same opinions and same expectations as does the patient regarding the new technologies for diabetes care, so any of the above-mentioned points may be applicable. However, the diabetologist often has reservations towards any new technology, mainly in terms of reliability and safety, the two mandatory features of any device considered part of everyday medical practice. The diabetes specialist has to consider, beyond the device itself, all of the potential consequences of its wider distribution and use, and how the device is likely to interfere with the patient-physician relationship. Indeed, diabetologists can only hope that new technologies will improve their understanding and analyses of the metabolic state and, thus, help to find adequate solutions. The healthcare provider knows that each step is going to be a personal challenge – and one for the patient as well – provided that the technical aspects are not too complicated. Otherwise, only specialized centres will be able to offer the devices (and education), thereby making the diabetologist in private practice merely a spectator. On the other hand, the diabetologist hopes that the new technologies will be so readily available and so reliable that the current healthcare team can use them routinely in the usual specialized practice setting.

Ultimately, the hope is that all of the new technologies will be both developed and made widely available. Otherwise, the cost of the devices could lead to underestimation of the value of the clinical activities that are the very essence of the profession. Indeed, the use of telemedicine could be part of the relationship, and could be useful for both the patient and healthcare provider if it is recognized and paid for. However, if the development of new technologies presupposes a reduction in the “classical” clinical activities, then two main issues will arise: this could lead to a restriction in human, face-to-face, relationships and a loss of recognition of the profession; and the diabetologist could just become a “healthcare technician” who would only play a role in case of an emergency or device failure, and would only be there to sign prescription forms.

Nevertheless, diabetologists are excited about the arrival of new technologies, as they could be a way of obtaining greater recognition for diabetes care specialists. In addition to their recognized capacities in diabetes education, diabetologists could use the new technologies to improve their abilities and, even more so, their specificity. Hopefully, the new technologies will provide effective solutions and improve the patient-physician relationship.

Thus, by answering enthusiastic patients’ questions, but also by encouraging reluctant patients to finally accept modern management approaches to their diabetes, diabetes specialists may hope to see a positive evolution in their everyday practices. This would not be a “futuristic” approach, but an ultimately modern and human-centered one.

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Conflicts of interest statement

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