



Australian Diabetes Educators Association

Use of Subcutaneous (S/C) Insulin Delivery Devices

Background

This position statement applies to the ‘use of subcutaneous insulin delivery devices’ developed by the manufacturers to deliver subcutaneous insulin for people requiring insulin therapy. It does not include the continuous subcutaneous insulin infusion (CSII) device.

The ability to inject insulin accurately is an important consideration for the health professional giving instruction on the principles of insulin therapy and the person administering and receiving the insulin.

In 1999, Therapeutic Goods Administration (TGA) accepted that injectors were supplied as a convenient alternative to syringes for the injection of insulin. They however identified that *‘adverse events associated with insulin injectors’ use are rare, and can in the vast majority of cases be prevented through adherence to the injectors’ instructions for use and by taking care to check for insulin flow prior to every insulin injection’*.¹

The Australian Diabetes Educators Association (ADEA) National Core Competencies for Diabetes Educators² and ADEA National Standards of Practice for Diabetes Educators³ require diabetes educators to maintain current and detailed knowledge of the administration of insulin and insulin delivery devices. This requirement ensures that the information a diabetes educator provides to a client is appropriate, accurate and meets a minimum standard of safe practice.

Clinical trials, DCCT 1994⁴ and UKPDS 1998⁵ have demonstrated that normalised blood glucose levels reduce the risk of diabetes-related complications. Insulin therapy is a safe and proven treatment for clients that are insulin dependent or insulin resistant and require insulin.⁶ Insulin delivery devices take away the fear of insulin therapy and reduce the stigma associated with syringes. These devices are convenient, accurate, portable, discreet and suitable for clients with visual and/or dexterity problems.⁷

All client education should be in consultation with the client’s medical practitioner and under the direction of a diabetes educator. Diabetes education is important when teaching clients about insulin and the devices used for the delivery of insulin, particularly when a device is not transferable for another. If another device is required, further instruction will be needed.

Issues

- Diabetes educators and clients are not always consulted or involved in the decision making process regarding the choice of an appropriate insulin delivery device.

- Clients, who are commenced on an insulin delivery device, are not always referred to a diabetes educator for initial instruction, therefore client competence, knowledge and skills may not be assessed or reviewed.
- Pharmaceutical companies may provide insulin delivery devices directly to the public, without the safeguard or benefit of individual client education, support and follow-up by a diabetes educator.
- Guidelines for health care agencies are limited. Protocols for quality improvement programs to assess the skills of personnel involved in the care of people using an insulin delivery device in a hospital or residential setting is not readily available in all services.
- Disposal of used needles from the insulin delivery devices, by the health professionals, needs to be done in a manner that maintains the safety of the health professional. This can be difficult with some insulin delivery devices.

ADEA Statement of Position

The ADEA supports a collaborative approach between medical practitioners, diabetes educators, pharmacists, insulin delivery device manufacturers and distributors to ensure the safe and appropriate use of insulin delivery devices. This collaborative approach should include the development and implementation of standards. Knowledge and skills of the health team giving instruction on these devices and evaluation from the health professionals regarding difficulties, faults, limitations and/or benefits of the devices should undergo a period of review.

There are established TGA guidelines outlining the quality, safety and efficacy of the insulin injectors available in Australia. These devices are precision medical devices and careful attention to the instructions in using the device lies with the role of the diabetes educator. Specifications from the manufacturer should be followed at all times.

ADEA Recommendations

Individual Client

- The introduction of any insulin delivery device is determined in consultation with the client and a diabetes educator. The decision regarding the appropriate choice of the device is based on the client's dexterity, intellectual capacity, visual acuity and their ability to safely manage the insulin delivery device. People with diabetes have the right to know what equipment options are available to them, to assist in making an informed choice about their care.
- Individual education and follow-up support and evaluation of the client's technique when using the insulin delivery device is arranged with a diabetes educator for all clients and their carers (including relevant family members)³.

- In the absence of a diabetes educator, the health professional overseeing the administration of insulin via a delivery device must be familiar with the device in use. If the health professional has not received prior instruction and the client is not confident with the device, then an insulin syringe should be used to administer the insulin.
- Instruction by the diabetes educator must be based on instruction guidelines from the manufacturer and the *ADEA National Core Competencies for Diabetes Educators* and *ADEA Standards of Practice for Diabetes Educators*.
- People with diabetes using diabetes delivery devices are taught the importance of checking for insulin flow before every injection.

Health Care Agencies

- All agencies have in place specific protocols; in service education and quality improvement programs with regard to the safe use of all available insulin delivery devices.
- Health care agencies actively include diabetes educators in the decision making process with respect to the review and determination of the appropriate use of insulin delivery devices in health care settings.
- Safe practices be designed and implemented to prevent needle-stick injuries occurring to health professionals using insulin delivery devices.
- Health care agencies ensure that staff are taught the importance of checking for insulin flow before every injection when using these devices.

Pharmaceutical Companies

- Each pharmaceutical company develop for its sales representatives, an education and quality improvement program, based upon the operating instructions of each insulin delivery device, outlining the limitations and advantages of the devices.
- Appropriate client education resources are designed, in consultation with diabetes educators, to support the educational needs of the client.

1. Therapeutics Goods Administration Australian Therapeutic Device Bulletin. Number 39-2/99 July 1999
2. Australian Diabetes Educators Association (2001), National Core Competencies for Diabetes Educators, Canberra, ACT.
3. Australian Diabetes Educators Association (2003), National Standards of Practice for Diabetes Educators, Canberra, ACT.
4. DCCT. The Diabetes Control and Complication Trial Research Group. The effect of intensive treatment of diabetes on the development and progression of long term complications. N England J. 1993: 329; 977-86.
5. UK Prospective Diabetes Study (UKPDS) Group. Lancet 1998a; 352 (9131):837
6. deWitt, D.&Hirsch,I. (2003) Insulin Therapy for Type 1 and Type 2 DM. Scientific Review Journal of American Medical Association. May 7.Vol.289.
7. Diabetes Educator (2004) Insulin management know-how. Patient tips from industry. Vol.30. No.2 March/April.