

### **Meet Harold**





74 year old ♂

Type 2 diabetes for 32 years injecting insulin for over 20 years

His wife Edith supports him in his diabetes care

- Recently hospitalized with a stroke.
- Transferred to a rehabilitation facility following a three week stay in acute care.
- Working very hard to achieve the independence he had prior to his stroke.

### **Current Challenges**

- History of Hepatitis B and diagnosed with Parkinson's disease at age 68.
- Post stroke has residual right side weakness, may need assistance with his insulin injections when he returns home.

### **Current Challenges**



 Arrangements were made to teach his 68 year old wife Edith. During the teaching session Harold showed Edith how he usually gives his injection and then handed his pen to her to do a trial injection.
 She did well giving Harold his injection but when she attempted to recap the pen needle she sustained a needlestick injury!

When injecting in a home setting, the use of safety engineered devices (SEDs), should be considered in high risk patients i.e. those positive for HIV, HBV or HCV. This will reduce the risk of needlestick injury.

### What does the research say?



Injection pens have demonstrated an improvement in the quality of treatment for patients. However, they are associated with NSI six times more often than syringes, therefore supporting the need for SEDs.



# International Healthcare Worker Safety Center<sup>2</sup>

15.5% of needlestick injuries occur after the use of the device and prior to disposal.



#### Lamontagne3

Needlestick injuries have been reduced by up to 75% with the use of SEDs.



### **Recommendations for Harold and Edith:**



Edith was advised on the appropriate handling and disposal of the sharps used for blood glucose testing.



Edith was instructed in the proper use and disposal of a 5mm safety engineered pen needle for the insulin injections.

### FIT4Safety Recommendations:<sup>4</sup>

Recapping of needles and lancets should be eliminated.

All healthcare facilities should use SEDs.





### Did you know?

#### Injection technique matters

 The injection using a safety engineered device (SED) requires a different technique. Therefore, caregivers need to be taught how to use the SED and how to check to ensure that the insulin has been properly injected.

 SEDs are available at selected pharmacies and healthcare institutions. The recommended SED for pen use has protected ends preventing needlestick injury to the user and is shorter in length (5mm).





• When using a pen device, the pen needle should be inserted at a 90° angle. Then, depress the plunger and hold the needle in the skin for a count of 10 seconds before removing. This will ensure that you have properly delivered the full dose.



### Did you know?



#### SEDs are the safest option

Other options to avoid handling of the sharps are:

- 1. Needle clipping devices are used to clip the end off of a pen needle or syringe. After clipping, the needle is automatically and safely retained within the device.\*
- 2. Pen needle removers which remove the entire pen needle for transfer to a sharps container.\*

3. Unfortunately, there is still a higher risk of a needlestick injury when using these devices compared with SEDs. Both are available through the pharmacy and web order sites.



### Did you know?





- Since many needlestick injuries occur when disposing of sharps, caregivers needs to be instructed to put the used sharp in a puncture proof container with a tight fitting lid, preferably a "sharps container".
- Sharps containers should not be filled past the indicated fill line or more than 3/4 full.
- A sharps container should be located at eye level and in close proximity to where the sharps are being used.
- These containers are available at pharmacies.
- Check with your local government for regulations regarding the disposal of these sharps containers.

- 1. Pellissier et al 2006; 63: 60-64 Journal of Hospital Infection http://www.sciencedirect.com/science/article/pii/S0195670106000326
- 1. recursione et al 2000; 95: 00-04 journal or nospital infection nrips;//www.sciencearect.com/science/pii/S0195670100000326
  2. International Healthcare Worker Safety Centent, University of Virginia. 1.U.S. EPINEt Sharps Injury and Bid Exposure Surveillance Research Group. Sharps Injury Data Report for 2011; 32 hospitals contributing data, 708 total injuries. Report available at; http://www.healthsystem.virginia.edu/pub/epinet/EPINet2011-NeedlestickRpt.pdf
  3. Lamontagne F, et al. Role of safety-engineered devices in preventing needlestick injuries in 32 French hospitals. Infection Control2007; 28:18-23.] Hosp Infect 2006; 64: 50-55.
  4. FITASafety (2012) Injection Safety in UK and Ireland; Safety of Sharps in Diabetes Recommendations 1st Edn. FIT4Safety, UK http://www.fit4diabetes.com/united-kingdom/fit-safety-recommendations/\*Refer to manufacturer's instructions manu al for proper use of these devices.



www.fit4diabetes.com



### Did you know?

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Despite the introduction of Safety Engineered Devices (SEDs), needlestick injuries are still occurring.

### Do you promote a "safety culture" in the use of diabetes sharps?



### **Safety**

- I promote a "safety culture" by modeling best practice recommendations
- ✓ I have read the policies/procedures in place for the use of sharps
- ✓ I use SEDs wherever possible
- ✓ I never recap needles
- ✓ I can easily find the procedures in the event of a needlestick injury



### **Education**

- ✓ I promote best practice in the handling of all diabetes sharps
- ✓ I avoid 'skin lifts' wherever possible by using shorter needle lengths
- I always ensure the device's safety feature has been activated after use
- ✓ I read and refer others to educational websites\*
- ✓ I promote the use of safety tools if SEDs are not available for use in the home i.e. needle clip, pen needle removers



## **Disposal**

- ✓ I always have the sharp disposal unit accessible before I use the sharp
- ✓ I dispose of sharps in a puncture resistant container with a tight fitting lid
- ✓ I ensure that the sharps container is not filled past the indicated fill line or more than 3/4 full
- ✓ I do not shake or force more sharps into the container
- ✓ I am aware and share the information regarding local regulations and disposal sites for sharps



### Safe practice prevents needlestick injuries.

 $\verb|*www.ccohs.ca|; www.cdc.gov/niosh|; safety@uottawa.ca|; www.ona.org|$ 

