DMTs and the Caregiver Role

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Caregivers for MS patients

• MS is a chronic disease with variable symptoms
• Important part of successful DMT use is compliance to the treatment plan
• Use of DMT includes laboratory monitoring, use of medications to lessen side effects and knowledge of injection techniques
Caregivers are Important!

• The emotional and physical support provided by a caregiver is crucial
• Research shows that patients who stick to a treatment plan have the best response.
• While patients usually focus on the disease state alone, caregivers see the whole person and are instrumental in addressing all the patient needs
What are some basics?

• Always know the active ingredient in the medication
• Give the right medicine in the right dose
• Talk to your pharmacist or nurse manager if you have questions on the medication
• Store medications in safe location
• Dispose of injection equipment safely
Types of DMTs

• Injection
  – Subcutaneous
  – intramuscular

• Oral

• Infusion
Rebif, Copaxone, Glatopa, Betaseron

- Rebif (interferon beta-1a)
- Copaxone & Glatopa (glatiramer acetate)
- Betaseron (interferon beta-1b)
- These are subcutaneous injections
  - Subcutaneous means under the skin. In this type of injection, a short needle is used to inject a drug into the tissue layer between the skin and the muscle. Medication given this way is usually absorbed more slowly than if injected into a vein, sometimes over a period of 24 hours.
Subcutaneous Injection

Common sites used for SQ route:
- Outer aspect of the upper arm
- Abdomen (from below the costal margin to the iliac crests)
- Anterior aspects of the thigh
- Upper back
- Upper ventral or dorsogluteal area
Skincare before and after injection

- Avoid the use of lotions/fake tan/sun beds
- Only use witch hazel, arnica cream or aloe vera on injection sites other products may cause irritation
- Report any injection site problems to your doctor/nurse/pharmacist
- Avoid rubbing the area post injection
- Use a clean tissue/cotton ball to dab the area
Betaseron and Rebif

- Betaseron (interferon beta-1b)
- Rebif (interferon beta-1a)
Plegridy (peginterferon beta-1a)

**Visual Cues**
Stripes turn to checkmarks when dose is complete

**Audio Cues**
Audible clicks will silence when dose is complete

**Comfortable Grip**
Fit for all hand sizes

**Plunger**
Becomes yellow when PLEGRIDY dose is complete

**Needle Cover**
Hides the needle before, during, and after injection

**Autoinject Tip**
Inject PLEGRIDY without pushing a button
Copaxone & Glatopa (glatiramer acetate)
Zinbryta (daclizumab)
Avonex (dimethyl fumarate)

• Intramuscular Injection
  – An intramuscular injection is a technique used to deliver a medication deep into the muscles. Intramuscular injection is absorbed faster than subcutaneous injection. This is because muscle tissue has a greater blood supply than the tissue just under the skin. Muscle tissue can also hold a larger volume of medication than subcutaneous tissue.
Avonex (dimethyl fumarate)
Oral Agents

- Gilenya (fingolimod)
- Aubagio (teriflunomide)
- Tecfidera (dimethyl fumarate)
Infusion Therapies

• Tysabri (natalizumab)
• Lemtrada (alemtuzumab)
Storage Requirements

• Room temperature (59-86°F)
  – Aubagio (teriflunomide)
  – Betaseron (interferon beta-1b)
  – Copaxone (glatiramer acetate)
  – Gilenya (fingolimod)
  – Tecfidera (dimethyl fumarate)

• Refrigerate (36-46°F) or Room Temperature ≤ 30 days
  – Avonex (dimethyl fumarate).
  – Glatopa (glatiramer acetate)
  – Rebif (interferon beta-1a)
  – Zinbryta (daclizumab)
  – Plegridy (peginterferon beta-1a)
Potential Side Effects

• Flu like symptoms
• Injection site reactions
• Altered laboratory testing
• Depression
• IPIR (immediate post injection reaction)
How to manage side effects

• Prophylactic acetaminophen or ibuprofen
• Timing of injection; at night
• Rotation of injection sites
• Reporting of side effects
• Take with food
Monitoring Requirements

• Commitment to clinic appointments
• Blood monitoring
• Reporting of side-effects
• Relapse management / reporting
Special Instructions

• Gilenya (fingolimod) First Dose
• What if I miss a dose?
• Can I take with other medications?
• What about the flu vaccine?
• What about my vitamins and herbal supplements?
caregiving, caregivers, family, support, life, things, help, care, group, learned, loved, husband, advice, friends, taking place, time, journey, hope, knowledge, physical, important, wonderful, going, insight, day, saying, info, online, people, month, plans, give, opportunity, disease, online, feeling, still, needed, humor, month, disease, opportunity, give