

# Transitional Care from Inpatient to Outpatient

Jane Jeffrie Seley

DNP MPH GNP BC-ADM CDE CDTC  
FAADE FAAN

*Division of Endocrinology, Diabetes  
& Metabolism*

*NewYork-Presbyterian Hospital*

*Weill Cornell Medicine*

*[janeseley@nyp.org](mailto:janeseley@nyp.org)*

# Outline

- Strategies for Preventing Readmissions
- Diabetes Self Management Education:
  - Patients
  - Clinicians

# How Do We Smooth the Transition

- From Inpatient to Outpatient?



# Transitional Care:

## *Why We Care*

- Place where many errors occur
- Home to pre-op or hospital room to pre-op
- Pre-op to surgery
- Surgery to recovery
- Recovery to hospital unit or home
- Hand-Off at EVERY TRANSFER is key
- Need clear and timely communication

# Teach Diabetes Survival Skills



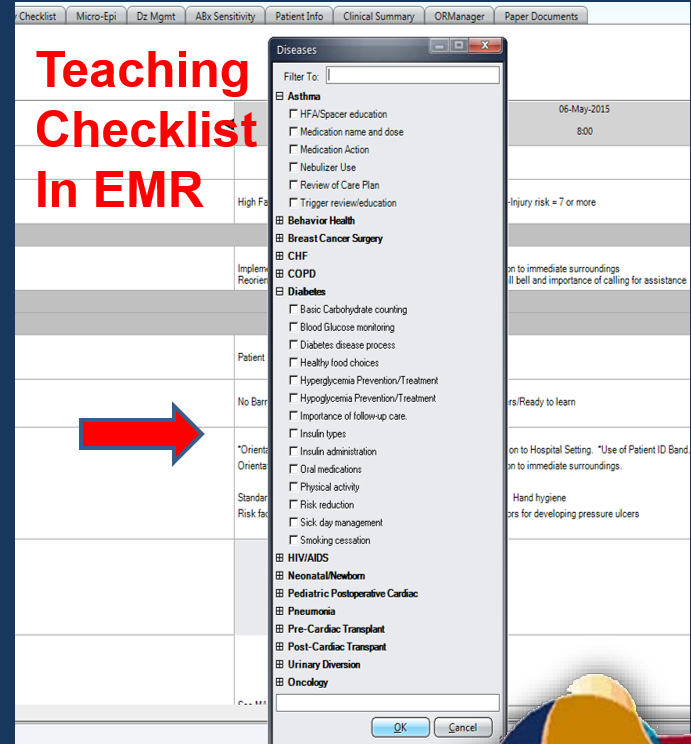
# Diabetes Self-Management Education

## Promote EARLY Diabetes Education

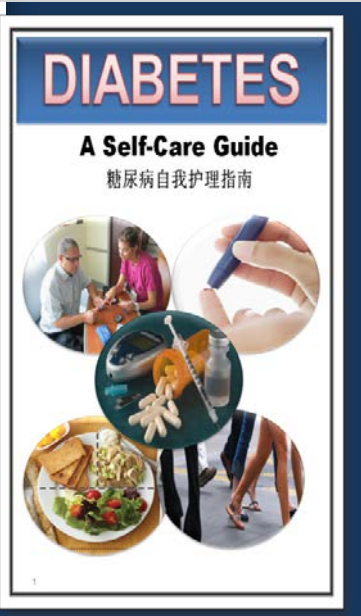
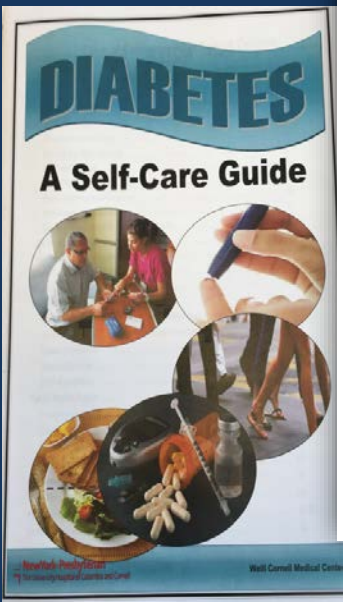
- Educate *high-risk* patients as soon as patient is ready to learn:
- **Who is high risk??**
- Use BG monitoring, insulin administration, menus & meal trays as
- teaching moments
- Ensure RN access to DM
- self-management tools



# Diabetes Teaching Resources



Practice Pens



Free Meters

Handouts in Multiple Languages

# Insulin Pen Teaching

## Safety

- RN Education:  
*Be Aware: Don't Share*
- *Barcoding* insulin type & PATIENT ID on one label
- Barcode fails: 2 RN Check?
- Pen returned to *pt specific drawer right after use*

## Patient Education

- Generic Pen Handouts
- Teaching Kits
- Label Saline Pens:  
*"Do Not Inject"*





# Compare Home & Hospital Glycemic Targets with Patient

## Home:

- Before Meals: 80-130 mg/dl
- After Meals: 80-180 mg/dl at 1-2 hrs pc
- Random: less than 180 mg/dl

## Hospital:

- Before Meals: 100-140 mg/dl in *non-critical care*
- Random: 100-180 mg/dl *all in-patients*

# Carb Controlled Menu

## BREAKFAST

### HOT ENTREES

Cinnamon French Toast (20g) \*  
Spicy Breakfast Burrito (25g) \*

### BAKERY SELECTIONS

Plain or (25g) Whole Wheat Bagel (25g) \*  
White (15g) or Whole Wheat (10g) Sliced Bread \*  
Blueberry (25g) or Corn Muffin (30g)  
Low-Fat Blueberry Muffin (40g) \*  
Low-Fat Banana Nut Muffin (40g) \*

### HOT CEREAL

Homemade Oatmeal (25g) \*  
Cream of Wheat (20g) \*

### COLD CEREAL

Corn Flakes (20g) \* Rice Chex (15g) \*  
Cheerios (15g) \* Kashi (20g) \*  
Raisin Bran (25g) \*

### SIDES

Scrambled Eggs (0g)  
Hard Boiled Egg (0g) \*  
Hash Browns (15g)  
Turkey Sausage (0g)

\*AVAILABLE AT ALL MEALS



## LUNCH AND DINNER

### SOUPS

Chicken Noodle (5g) Split Pea (10g)  
Hearty Vegetable (15g) Lentil (10g)  
Cream of Mushroom (10g) Chicken Broth (0g)

### SANDWICHES

Egg Salad on Whole Wheat (25g)  
Ham and Swiss Cheese on Whole Wheat (25g)  
American Cheese on Whole Wheat (25g)  
Peanut Butter and Jelly on Whole Wheat (50g)  
Roast Beef on Whole Wheat (25g)  
Tuna Salad on Whole Wheat (25g)  
Turkey on Whole Wheat (25g)

\*SANDWICHES AVAILABLE ON WHITE BREAD  
FOR AN ADDITIONAL 10 GRAMS

### SIDES

Lettuce & Tomato (0g) Potato Salad (15g)  
Cole Slaw (10g) Pretzels (20g)  
Baked Potato Chips (20g)

### WRAPS

**Classic Chicken Caesar (60g)**  
Grilled Chicken Breast with Romaine Lettuce,  
Parmesan Cheese, House-Made Caesar  
Dressing and Served in a Spinach Wrap

**Grilled Vegetable Hummus (65g)**  
Grilled Red Bell Peppers, Zucchini, Onions  
and Portobello Mushrooms Topped with  
Hummus and Mesclun Greens and Served  
in a Sun-Dried Tomato Wrap

### THE KOMANSKY KIDS CORNER

Chicken Nuggets (10g)  
Fish Sticks (25g)  
Vegetarian Bean Burrito (45g)  
Tater Tots (30g)

## LUNCH AND DINNER

### APPETIZERS

Fresh Mozzarella with Grape Tomatoes (10g)  
Served with an Extra Virgin Olive Oil,  
Balsamic Vinegar and Basil Infusion

Fresh Raw Vegetables and Ranch Dressing (10g)

Cheese and Cracker Plate with Grapes (15g)

### SALADS

**Signature Side Salad (5g)**  
Mixed Greens, Cucumbers, Tomatoes and Carrots

**Hummus and Pita Plate (50g)**  
Middle Eastern Chickpea Puree with  
Roasted Red Peppers and Pita Points

**Tuna Salad Plate (35g)**  
Homemade Tuna Salad, Tomatoes, Cucumbers  
and Chilled Pasta with Vinaigrette

**Green Salad with Grilled Chicken (5g)**  
Mixed Greens, Cucumbers, Tomatoes  
and Carrots, Topped with Sliced  
Grilled Chicken Breast

**Fresh Seasonal Fruit Plate (30g)**  
Sliced Fresh Fruits Served with  
Low-Fat Cottage Cheese

### PASTA

**Pasta Marinara (30g)**  
Penne Pasta Tossed in Our Own Marinara  
Sauce Served with or without Meatballs

**Garden Vegetable Lasagna (40g)**  
Sheets of Pasta Layered with Fresh Vegetables  
and a Creamy Béchamel Sauce

**Hearty Beef Lasagna (35g)**  
Sheets of Pasta Layered with a  
Bolognese Style Meat Sauce

## LUNCH AND DINNER

### FROM THE GRILL

Grilled Turkey Burger without Bun (0g)  
Grilled Turkey Burger with Bun (25g)  
Veggie Burger without Bun (20g)

### CHEF'S SPECIALTIES

**Yankee Pot Roast (5g)**  
Thinly Sliced Pot Roast Topped  
with Homemade Gravy

**Rotisserie Chicken (0g)**  
Roast Chicken Rubbed with Fine Herbs

**Chicken Marsala (10g)**  
Grilled Chicken Breast Topped  
with a Mushroom Sauce

**Homemade Classic Meatloaf (5g)**  
Freshly Ground Beef, Slowly Baked and  
Seasoned with Vegetables, Herbs and Spices

**Teriyaki Glazed Atlantic Salmon (5g)**  
Baked Salmon Filet Topped with a Teriyaki Sauce

**Citrus Glazed Tilapia (20g)**  
Baked Tilapia Filet with Seasoned Panko  
Breadcrumbs and Topped with a Citrus Glaze

**Chef Monty's Tofu Stir Fry (15g)**  
Golden Tofu and Vegetables Sautéed with  
a Low-Sodium Soy Sauce

### VEGETABLES AND GRAINS

Green Beans (10g)  
Broccoli (10g)  
Mixed Seasonal Vegetables (5g)  
Roasted Potatoes (20g)  
Mashed Potatoes (20g)  
Steamed Brown Rice (20g)  
Southern Style Macaroni and Cheese (10g)

# Great Teaching Tool!

# STRESS Importance of Timing



# Diabetes Education Documentation: Use to *Communicate* With Team

The screenshot displays a medical software interface with a flowchart titled "6) M/S Assessment, From 03-May-2015 to 06-May-2015". The flowchart is organized into sections: "Fall-Injury Risk Level" (High Fall Injury Risk), "Fall Prevention Safety Measures", "Admission/Transfer/Discharge", "Patient Education - Nursing", "Learner", "Barriers", "Topics Discussed: Patient Safety", "Topics Discussed: Disease Process", and "Topics Discussed: Medications". A red arrow points from the "Fall Prevention Safety Measures" section to the "Diabetes" section in the "Diseases" dialog box.

The "Diseases" dialog box is open, showing a list of diseases with checkboxes for documentation. The "Diabetes" section is expanded, showing the following options:

- Basic Carbohydrate counting
- Blood Glucose monitoring
- Diabetes disease process
- Diabetes food choices
- Hyperglycemia Prevention/Treatment
- Hypoglycemia Prevention/Treatment
- Importance of follow-up care
- Insulin types
- Insulin administration
- Oral medications
- Physical activity
- Risk reduction
- Sick day management
- Smoking cessation

The "Diseases" dialog box also includes sections for Asthma, Behavior Health, Breast Cancer Surgery, CHF, COPD, HIV/AIDS, Neonatal/Newborn, Pediatric Postoperative Cardiac, Pneumonia, Pre-Cardiac Transplant, Post-Cardiac Transplant, Urinary Diversion, and Oncology. The "Diabetes" section is currently selected.

The main interface includes an Options Panel on the left with "Flowchart Selection" (This chart selected), "Date Range" (From: 03-May-2015, To: 06-May-2015), and "Filter" options. The "Flowchart Selection" list on the left includes "6) M/S Assessment" which is highlighted. The "Diseases" dialog box has "OK" and "Cancel" buttons at the bottom.

# Staff Education: *Be Creative*

- Unit Based Education
- Online learning
- Case Studies
- Grand Rounds
- Pocket Cards
- Team Web Sites
- Games
- AADE Inpatient Management Listserve for ideas



# Diabetes Champions

- Intensive then ongoing additional education for clinicians: e.g. RNs, NPs, PA, RDs, PharmDs
- Focus on education AND management
- Champions serve as unit based resource
- Most impact if house-wide & *interdisciplinary*



# Review Insulin Doses & BGs Daily

Patient List   Orders   Results   Documents   Flowsheets   iNYP   Data Vis   Dose Hx   Handoff   Patient Snapshot   Quality Ch						
Noon		4P	8P	Feb 18	4A	8A
<b>Insulin Reg Inj (HumuLIN R)</b>						
<b>Summary</b>						
	12:00A - 10:30A	10:31A - 3:00P	3:01P - 7:30P	7:31P - 11:59P		
02/15/16	<b>BG Values:</b> -- <b>Insulin (units):</b> --	<b>BG Values:</b> -- <b>Insulin (units):</b> --	<b>BG Values:</b> -- <b>Insulin (units):</b> Insulin Reg Inj (HumuLIN R) 5 (17:15)	<b>BG Values:</b> >600 (20:42) <b>Insulin (units):</b> --		
02/16/16	<b>BG Values:</b> >600 (00:10) >600 (00:50) >600 (02:00) >600 (03:00) >600 (04:14) 527 (05:14) 583 (05:58) 504 (06:55) 308 (08:15) 235 (09:00) 253 (09:58) <b>Insulin (units):</b> --	<b>BG Values:</b> 217 (11:07) 208 (12:04) 227 (13:11) 193 (14:17) <b>Insulin (units):</b> --	<b>BG Values:</b> 227 (15:03) 255 (16:18) 265 (16:58) 276 (18:05) 256 (19:17) <b>Insulin (units):</b> Insulin Glargine Inj (Lantus) 25 (19:00)	<b>BG Values:</b> 243 (20:00) 356 (00:00) <b>Insulin (units):</b> --		
02/17/16	<b>BG Values:</b> 405 (06:45) 381 (09:05) 403 (10:03) <b>Insulin (units):</b> Insulin Aspart Prandial Scale Pre-Meal 4 (01:20) Insulin Aspart Prandial Scale Pre-Meal 10 (06:00) Insulin Aspart Inj 10 (05:00) Insulin Aspart Prandial Scale Pre-Meal 10 (10:00)	<b>BG Values:</b> 364 (12:05) <b>Insulin (units):</b> Insulin Aspart Prandial Scale Pre-Meal 9 (14:00)	<b>BG Values:</b> 267 (16:03) 245 (18:13) <b>Insulin (units):</b> Insulin Aspart Prandial Scale Pre-Meal 14 (18:28)	<b>BG Values:</b> 209 (21:39) <b>Insulin (units):</b> Insulin Glargine Inj (Lantus) 50 (21:00)		
02/18/16	<b>BG Values:</b> 336 (07:56) <b>Insulin (units):</b> Insulin Aspart Prandial Scale Pre-Meal 17 (07:00)	<b>BG Values:</b> -- <b>Insulin (units):</b> --	<b>BG Values:</b> -- <b>Insulin (units):</b> --	<b>BG Values:</b> -- <b>Insulin (units):</b> --		
Summary	Lowest BG: 235 Highest BG: 600 # Low (BG<70): 0 # High (BG>180): 15	Lowest BG: 193 Highest BG: 364 # Low (BG<70): 0 # High (BG>180): 5	Lowest BG: 227 Highest BG: 276 # Low (BG<70): 0 # High (BG>180): 7	Lowest BG: 209 Highest BG: 600 # Low (BG<70): 0 # High (BG>180): 4		

# Insulin Discharge Regimen: 4 Main Options

- Basal Alone: 1 shot/day
- Basal *Plus*: 2 shots/day
- Pre-Mix: 2 shots/day
- Basal-Bolus: 4 shots/day



# NYP/Weill Cornell Medicine Transition Guide

A1c < 7%	A1c 7-9%	A1c > 9%
Return to home regimen PTA if not contra-indicated	Restart home regimen if not contraindicated, start/keep basal at 50-100% of inpatient dose	<p><u>Best option:</u> Basal insulin at 75-100% of current dose &amp; bolus insulin with meals at fixed or calculated dose</p> <p><u>Other options:</u></p> <ul style="list-style-type: none"> <li>• Basal Plus (basal qd + bolus at largest meal)</li> <li>• Pre-mixed insulin before breakfast &amp; dinner</li> <li>• Basal insulin qd + repaglinide with meals</li> <li>• Basal insulin qd &amp; GLP-1 daily or weekly to cover prandial needs</li> </ul>

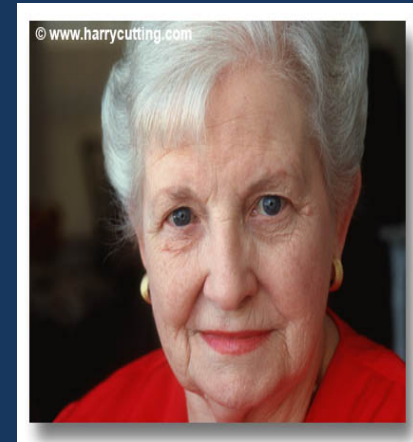
Adapted with permission from algorithm by Umpierrez, G, *Diabetes Care* 2014

*Bolus insulins: aspart, lispro, glulisine*

*Basal insulins: degludec U100 & U200, detemir, glargine U100 & U300*

*Pre-Mixed insulins: aspart 70/30 & lispro 75/25*

# Meet Mary



- 77 y.o. Caucasian female with 16 year hx of T2DM
- Widowed, lives alone in apartment, no family nearby
- Admitted with acute asthmatic episode
- Diabetes Meds prior to admission: linagliptin 5 mg qAM, glimepiride 2 mg qAM
- Admission BG 268 mg/dL, A1c 8.6%, eGFR >80
- Hospital Course: Antibiotics, steroids, basal/bolus insulin therapy
- Glargine 10 units q 9 PM, prandial insulin according to current BG

# Mary's current DM Regimen: glargine 10 units & aspart pre-meals according to BG

Breakfast	Lunch	Dinner	Bed
88	141	220 aspart 2 units	172 glargine 10 units
101	147	158 aspart 1 unit	133 glargine 10 units
94	130	173 aspart 2 units	

What diabetes discharge regimen would you recommend?

# Individualize Discharge Regimen

- CONSIDER:
  - Current A1C
  - Duration of diabetes
  - Body weight & distribution
  - Age of patient
  - Co-morbidities
  - Cost of medication/ Assistance
  - Convenience / complexity of regimen: Is patient/family ready and able to follow proposed regimen????

# Review Diabetes RXs in EMR

Med Status: [Incomplete Medication History](#)  
Preferred Pharmacy: [Chiron](#)

Some patient medication may not be shown. Showing Active, No Longer Taking, Unsubmitted (Prescription, OTC, FreeText) only.  
Display Format: [Active and Medications to be Renewed \(Modified\)](#) Group Sort by: [Item Class and Drug](#) 0 of 20 selected

Medication Summary	Status	Start Date	Renew Date	Pix End Date
<b>Unsubmitted (3 items)</b>				
<input type="checkbox"/> Bayer Contour NEXT lancets 1 each, 4 times a day x 30 days Indication: DM2	Unsubmitted	19-Aug-2015	18-Sep-2015	
<input type="checkbox"/> Bayer Contour NEXT test strips 1 each, 4 times a day x 30 days Indication: DM2	Unsubmitted	19-Aug-2015	18-Sep-2015	
<input type="checkbox"/> BD Nuro pain needles 1 each, 4 times a day x 30 days Indication: DM2	Unsubmitted	19-Aug-2015	18-Sep-2015	
<b>Active (10 items)</b>				
<input type="checkbox"/> abuterol CFC free 90 mcg/inh inhalation aerosol 2 puff(s) inhaled 4 times a day - Indication: asthma	Active			
<input type="checkbox"/> Calcium 500+D oral tablet, chewable 1 tab(s) orally once a day - Indication: supplement	Active			
<input type="checkbox"/> enalapril 2.5 mg oral tablet 1 tab(s) orally once a day - Indication: high blood pressure	Active			
<input type="checkbox"/> Lantus Solostar Flex 100 units/mL, subcutaneous solution 20 unit(s) subcutaneous once (at bedtime) Indication: DM2	Active	19-Aug-2015	20-Aug-2015	
<input type="checkbox"/> Levaquin 500 mg oral tablet 1 tab(s) orally once a day x 3 days Indication: CAP	Active	19-Aug-2015	22-Aug-2015	
<input type="checkbox"/> mycophenolate mofetil 250 mg oral capsule 1 cap(s) orally every 12 hours - Indication: transplant	Active			
<input type="checkbox"/> NIFEDIPINE 90 mg oral tablet, extended release 1 tab(s) orally once a day - Indication: high blood pressure	Active			
<input type="checkbox"/> NovelOC FlexPen 100 units/mL, subcutaneous solution 4 unit(s) subcutaneous 3 times a day (with meals)	Active	19-Aug-2015	18-Sep-2015	
<input type="checkbox"/> prednisONE 5 mg oral tablet 1 tab(s) orally once a day - Indication: transplant	Active			
<input type="checkbox"/> tacrolimus 1 mg oral capsule 4 cap(s) orally every 12 hours - Indication: transplant	Active			
<b>Not Longer Taking (2 items)</b>				
<input type="checkbox"/> amiodipine 10 mg oral tablet 1 orally once a day x 30 days Indication - Specify: HTN	Not Longer Taking	07-Mar-2013	05-Apr-2013	
<input type="checkbox"/> citalopram 0.5 mg oral capsule 2 tab(s) orally 3 times a day x 30 days Indication - Specify: hypocalcemia	Not Longer Taking	24-May-2013	22-Jun-2013	

Next Page Close

# RX "Cheat Sheet"

Medications	Instructions
<b>BOLUS:</b> NovoLog Flexpen® or Humalog U100 or U200 KwikPen®	Take (range, up to) _____ units before meals
<b>BASAL:</b> Lantus or Basaglar U100 or Toujeo U300 Solostar Pen® or Levemir or Tresiba U100 or U200 FlexTouch Pen® <b>PREMIX:</b> NovoLog Mix 70/30 Flexpen® or Humalog Mix 75/25 KwikPen® <b>NPH:</b> Humulin N Kwik Pen®	Take _____ units at _____ AM/PM OR Take _____ units at _____ AM <i>and</i> Take _____ units at _____ PM
<b>BD Nano or DUO (safety) 4 or 5 MM pen needles</b>	Dispense #100 (or #200), use as directed
<b>BD Ultrafine 6 mm 3/10 ml insulin syringe (Holds up to 30 units)</b>	Dispense #100 (or #200) use as directed, DAW*
<b>BD Ultrafine 6 mm 1/2 ml insulin syringe (Holds up to 50 units)</b>	Dispense #100 (or #200), use as directed
<b>BD Ultrafine 6 mm 1 ml insulin syringe (Holds up to 100 units)</b>	Dispense #100 (or #200) use as directed
<b>Accu-Chek Connect, Bayer Contour Next EZ , FreeStyle Freedom LITE OR OneTouch Verio Flex blood glucose meter</b>	Dispense: 1 meter
<b>Accu-Chek Connect, Bayer Contour Next EZ , FreeStyle Freedom LITE OR OneTouch Verio test strips</b>	Test BG _____ x/day
<b>Accu-Chek Connect, Bayer Contour Next EZ , FreeStyle Freedom LITE OR OneTouch Verio lancets</b>	Test BG _____ x/day

# Resolving Incomplete/ Incorrect Prescriptions at NYP/WC Campus

- Distribute *Glycemic Management* pocket card to educate clinicians in correct Rx writing for diabetes meds & supplies
- Make Med-to-Bed standard of care to facilitate medication reconciliation of discharge RXs with insurance coverage prior to discharge
- Work with med-to-bed pharmacy to help identify missing RXs e.g. no needles, BGM supplies; educate pharmacists in current diabetes management and optimal substitutions

# Preventing Readmissions

## *NYP/WC Best Practices*

### Diabetes Education



Med-to-  
Bed

3-Day  
Phone Call

7-Day  
Outpatient  
Visit



# Summary of Key Recommendations

## Standardize Diabetes Transitional Care:

- **Streamline Discharge RXs**
- *Glycemic Management pocket cards*
- Med-to-Bed RX delivery for DM PTs
- **Diabetes Self-Management Education (DSME)**
- Empower bedside nurse to make diabetes education a priority, expand role of diabetes champions to monitor unit BGs
- Improve access to & RN comfort with DSME teaching resources: practice pens, meters, books

# Diabetes Reference Charts

## Diabetes Treatments

<http://www.empr.com/diabetes-treatments/article/123836/>

## Insulin Administration

<http://www.empr.com/clinical-charts/insulin-administration/article/123646/>

## Insulin Pens

<http://www.empr.com/clinical-charts/insulin-pen-devices/article/170526/>

## Blood Glucose Meters

<https://www.diabeteshealth.com/charts/>

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- Dungan, K., et al., An Individualized Inpatient Diabetes Education and Hospital Transition Program for Poorly Controlled Hospitalized Patients with Diabetes.  
*Endocr Pract.* 2014:1-24.
- Healy, S.J., et al., Inpatient diabetes education is associated with less frequent hospital readmission among patients with poor glycemic control.  
*Diabetes Care.* 2013;36(10):2960-7.
- Kimmel, B., Sullivan, M.M., Rushakoff, R.J.. Survey on transition from inpatient to outpatient for patients on insulin: what really goes on at home?  
*Endocr Pract.* 2010;16(5):785-91.

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- Umpierrez, G.E. et al. Hospital discharge algorithm based on admission HbA1c for the management of patients with type 2 diabetes. *Diabetes Care*. 2014;37(11):2934-9.
- Wei, N.J., et al. Intensification of diabetes medication and risk for 30-day readmission. *Diabet Med*. 2013;30(2):e56-62.

