

BASICS OF INSULIN PUMPS

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SPEAKER DISCLOSURES:

Contracted trainer for Animas, Omnipod, Medtronic

Dexcom Advisory Board

Sanofi Advisory Board

Sanofi Contracted Speaker

Dexcom Contracted Speaker

**VERBAL DISCLOSURE: I WILL NOT
PROMOTE ANY PRODUCT**

INTENDED AUDIENCE

- RD's
- RN's
- MCHES
- Pharm
- CDE's
- No pump experience or basic knowledge of one product only

OBJECTIVE:

1. PROVIDE OVERVIEW ON INSULIN PUMPS
2. PROVIDE HANDS ON KNOWLEDGE
3. CHALLENGE PERSONAL COMFORT, LIMITATIONS AND POTENTIAL BIAS
4. FIND YOUR VOICE ON MEDICAL TEAM FOR RECOMMENDATIONS

BUT.. THE REAL PURPOSE:

- Brace yourself – Here I go on my soap box..
- Diabetes technology is moving fast!
- Diabetes therapies are moving fast!
- Increase in diabetes prevalence (really?)
- Earlier diagnosis of type 2 diabetes -> longer duration -> increased beta cell failure -> pump candidates
- Consumer driven needs and wants - CKOTB
- Role on medical team as a diabetes educator –
- EDUCATOR....

DIABETES EDUCATORS: CALL TO ACTION

- Where is your knowledge base?
- Just because there is 'a lot of diabetes to go around' does not mean you have guaranteed employment
 - Payment models for PCP's
 - Reimbursement
 - Your value you bring
 - Self marketing

MARKET YOURSELF TO NOT JUST BE A MEMBER ON THE DIABETES TEAM; BE A VALUABLE MEMBER!

KNOW YOUR MEDS BETTER THAN MOST

KNOW AND EMBRACE TECHNOLOGY – LEARNLEARNLEARN LEARN

EDUCATE PATIENTS WITH CURRENT AND FUTURE POTENTIAL THERAPIES IN A POSITIVE, SUPPORTIVE LIGHT

BE THE DIABETES EXPERT FOR YOUR PATIENTS AND A PRICELESS RESOURCE FOR YOUR REFERRING PROVIDERS



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SWITCHING GEARS – CLINICAL INERTIA:

- An interactive exchange for what prevents patients from advancing to next therapy/treatment and reaching personal and health goals



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CLINICAL INERTIA FROM THE CDE: WAIT. WHAT? NOT US.

- If you have a “favorite pump”
 - Why is it your favorite? Is it the one you know the best?

ALTERNATE QUESTION: WHAT IS THE BEST
PUMP FOR MY PATIENT? HOW CAN I SUPPORT
THEIR CHOICE?

WHO CAN DO PUMP STARTS

- CPT – What does this mean?
- CDE
- RN
- RD
- PHARM
- EX PHYS

OVERVIEW OF INSULIN PUMP THERAPY (CSII)

WHAT IS YOUR
FAVORITE INSULIN
PUMP?

PUMP HISTORY: CHAPTER ONE

- quick overview of pump technology from inception to AP

PATIENT SELECTION

- Setting expectations
- Risk/benefit
- Individualized criteria

CREATIVE PUMPING:OFF LABEL

- Flat meal dosing/no carb counting
- Meal size pre-sets
- U200
- U500
- Bolus only

PUMP THEORY: TAKING PATIENT FROM MDI TO CSII PDQ

- Definitions:
- Basal – basal insulins
- Bolus – RAI's
- TDD
- ICR
- ISF
- Targets

PUMP SELECTION

Criteria for pump selection

Insurance coverage of pump and supplies

Patient choice

Dexterity

Vision

Age

Technology

CGM interface

PUMP A: FEATURES

- I. With remote bolus ability
 - High contrast color screen
 - 100% waterproof at 12 feet for 24 hours
 - Ability to remote bolus discreetly and conveniently through the meter remote, no need to touch the pump

II. With CGM

Same features as above

Integrated with Dexcom G4 CGM

Color coded trend arrows and lines show the direction and the rate of change

IOB displayed on CGM home screen

Bolus recommendation is auto populated

CGM cloud sharing ability with separate receiver

FDA approved version with Dexcom G5 BlueTooth

PUMP O: FEATURES

- Tubeless: no need to disconnect for showers or activities
- Holds up to 200 units – change pod every 2-3 days
- Small/discrete
- Remote blousing with and integrated bg meter
- Waterproof pod
- Angled insertion
- Automated priming and cannula insertion.
- No need to see or handle a needle for insertion

PUMP M: FEATURES

- Intergrated system w/ CGM
- Screen options and menu map are easy to navigate
- Basal reduction based on predictive hypoglycemia sensor data
- More to come

PUPMP T: FEATURES

- High contrast color screen
- Software based platform that can be remote updated during warranty
- Built in Bluetooth radio capable of communicating with more than one device at a time and future technologies
- Integrated with Dexcom CGM sensors
- Rechargeable battery, using micro USB port
- Smallest insulin delivery increments available (0.1 u/hr with adjustments of 0.001 u)
- Durable housing with shatter resistant glass
- Small and compact size

MAKING THE RECOMMENDATION

- Verbage
- Supporting the patient
- Supporting the provider
- Knowing your clinical reps
- Shadowing other CDE's

THE RECOMMENDATION

“Based on X,Y,Z your patient would benefit from _____ pump.
We reviewed his/her insurance coverage, patient choice of
pump features and usability. Special consideration was given to
_____”

THE PUMP START

Physician order

Calculations TDD to basal rates

Formulas

ICR

Formulas

ISF

Formulas

Other considerations

PATIENT FOLLOW UP AND PUMP ADJUSTMENTS

- Timing
- Process
- Techniques
- Protocols

DOWNLOADS AND UPLOADS

- Pump products and software
- Web based or software based
- IT?
- HIPAA?
- What to look for, understand and recommend in data

CGM

- CGM w/ pumps
- Where we are today with products
- Where we are going
- SAP now

PETTING ZOO

- 15 minute rotations at each pump manufacture site.
- Each site will have a task
- You will be exposed to all manufactures currently on market
- Case studies
- Contact info for clinical reps for inquiries on certification or pump functionality

WRAP UP: PETTING ZOO AND FUTURE

- Which is your favorite pump?
- More to learn: become certified
- Advanced pump
- CGM
- More on uploads and downloads

THANK YOU!

Special Thanks to CDE's assisting at demo tables!

REFERENCES

- Putting Your Patients on a Pump. Karen Bolderman RD/CDE
- Pumping Insulin. John Walsh PA, Ruth Roberts, MA
- Insulin Pump Therapy: Best Practices in Choosing and Using Infusion Devices. AADE, 2011.
- Insulin Pump Therapy: Guidelines for Successful Outcomes. AADE Consensus Summit, 2008.