# Improving Care and Outcomes in Type 2 Diabetes Mellitus (T2DM): A Nurse Practitioner-Led Charge for Overcoming Insulin Inertia





willingness to try

it/stay on it."

"Able to reduce a

patient's A1C down

significantly after

initiating insulin."

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### Introduction

- Although achieving and maintaining adequate glycemic control is critical to reduce complications in T2DM, datasets illustrate that large proportions of patients with T2DM are not achieving glycemic goals
- ► Clinical inertia related to the failure to intensify or initiate treatment is a leading cause of poor glycemic control
- ▶ Both clinician- and patient-related barriers contribute to clinical inertia and challenges associated with intensifying
- Overcoming these barriers to help patients achieve and maintain an HbA1C of 7% or less has been shown to reduce microvascular complications and may contribute to long-term reduction of macrovascular complications
- Ultra-long-acting basal insulins may help mitigate several of the barriers associated with insulin use due to their flexible dosing (as a result of peakless PK/PD profiles and prolonged duration of action) and comparable efficacy to other basal insulins with a significantly lower risk of hypoglycemic events, particularly nocturnal hypoglycemia
- ► There is a clinical need to appreciate and address clinician- and patient-related factors that lead to clinical inertia and develop strategies to overcome these barriers and work collaboratively with patients to achieve optimal glycemic control

The American Association of Nursing Practitioners (AANP) and Med-IQ developed a multiphase intervention designed to connect 18 nurse practitioner (NP)-led practices with expert faculty mentors via a 30-minute, CE-accredited teleconference to coach them on best practices and actionable strategies to successfully overcome barriers related to intensification of therapy and selection of optimal insulin for patients with T2DM.

Implications for NPs: Understanding the clinical impact of practice assessment and quality improvement initiatives (QI) can lead to the development of more educational activities for clinicians that can ultimately improve patient care and outcomes as a result of clinician participation.

## Learning Objectives

- ► Integrate strategies to overcome patient barriers to insulin initiation
- Improve appropriate integration of basal insulin therapy
- Examine clinical data surrounding long-acting basal insulins, including differences in PK/PD properties

## Faculty

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## Methods



Between August 2018 and September 2019, 18 US-based, NP-led practices were

Deployed practice-assessment surveys designed to facilitate reflection on current processes for treatment intensification or initiation with basal insulin, which served to identify potential areas for improvement

► Teleconferences consisted of:

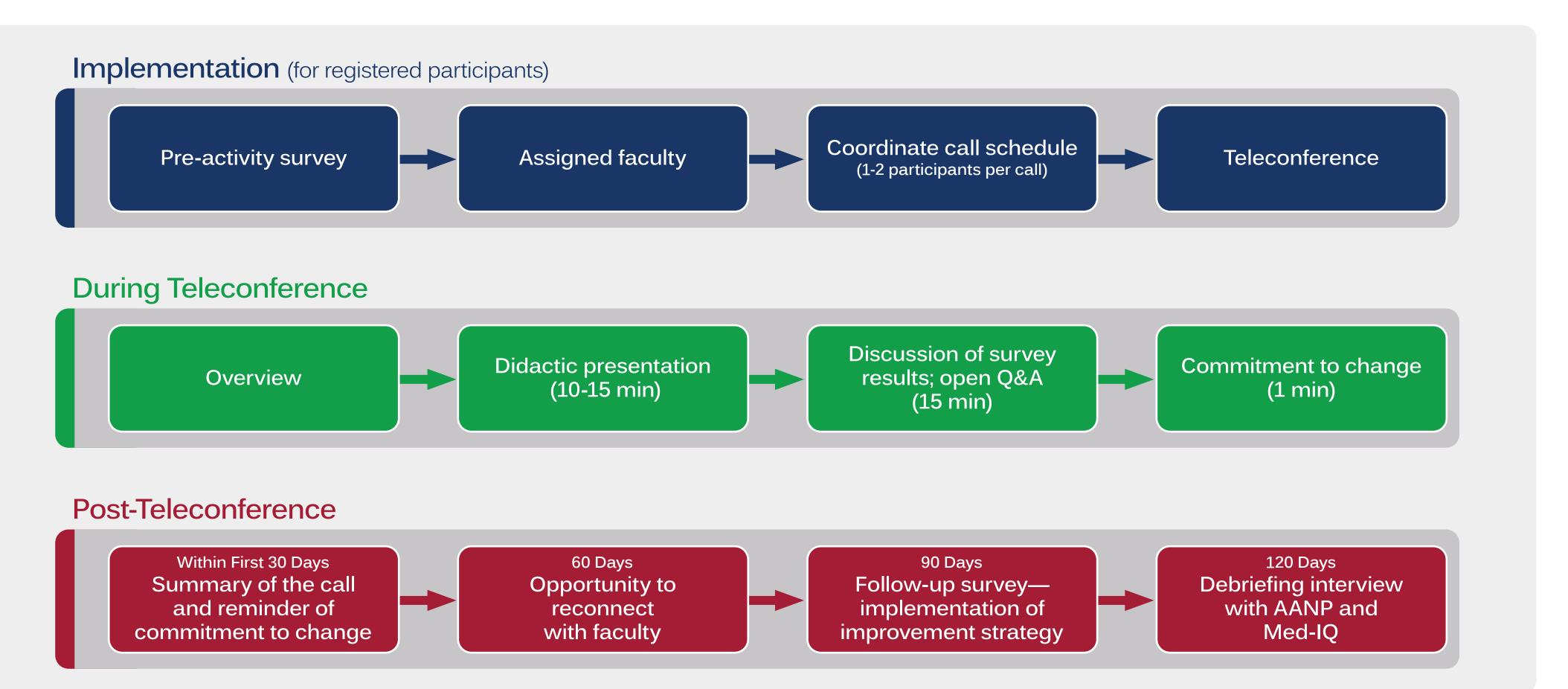
- Brief, standardized presentation focused on the current evidence base - Conversation regarding practice assessment results from Phase I - Faculty-led discussion regarding practice-

specific challenges and recommendations Identification of at least 1 area of their practice that the participant seeks to improve over the coming months (ie, "commitment to PHASE III
Targeted
reinforcement

that reinforced the area(s) identified for improvements in their clinics

Participants were offered the opportunity to reconnect with faculty mentors to discuss ongoing challenges/barriers

Emailed a link to a shortened version o the online practice assessment survey and an invitation to participant in a more in-depth follow-up phone interview



### Results

A total of 18 NPs responded to the practice assessment survey.

#### Practice Assessment Survey Results: Primary Barriers Related to Prescribing Basal Insulin (listed in order of importance)

- ► Concerns regarding cost/insurance coverage
- ► Patient resistance to starting insulin ► Safety/efficacy concerns
- Lack of time to counsel patients on insulin administration and use
- ► Determining when to intensify insulin
- Titrating basal insulin
- ► Concerns regarding dosing flexibility
- Selecting optimal insulin Practice Assessment Survey Results: Patient-Related Barriers to Prescribing

- Basal Insulin (listed in order of importance)
- ► Perception that insulin is too complicated or not easy to self-administer ► Fear of needles
- ► Perception that insulin is inconvenient
- ► Perception that insulin worsens diabetes
- ► Concerns about adverse events
- Self-blame/feeling of failure

### ommon Practice Improvement Strategies Identified During Teleconference

- ► Initiate insulin in appropriate patients
- Continue learning about how to use insulins in clinic to increase comfort level ► Identify individuals who may benefit from enrolling in patient-assistance programs or discount savings programs to reduce the costs associated with ultra-long-acting insulins
- ► Consider initiating insulin earlier for patients who are not meeting their
- ► Integrate long-acting or ultra-long-acting insulins for select patients
- ► Initiate bolus insulin in select patients with T2DM whose HbA1C levels are not controlled and who are currently taking basal inulin
- ► Adjust dose/medications in patients with diabetes whose HbA1C levels are not adequately controlled
- benefits of insulin ► For patients who have a fear of needles, demonstrate insulin administration in the office first

► Educate patients who are resistant to initiating insulin on the rationale for and

## References

Ali MK, et al. *N Engl J Med.* 2013;368:1613-24.

Eliaschewitz FG, et al. *Diabetol Metab Syndr.* 2016;8:2.

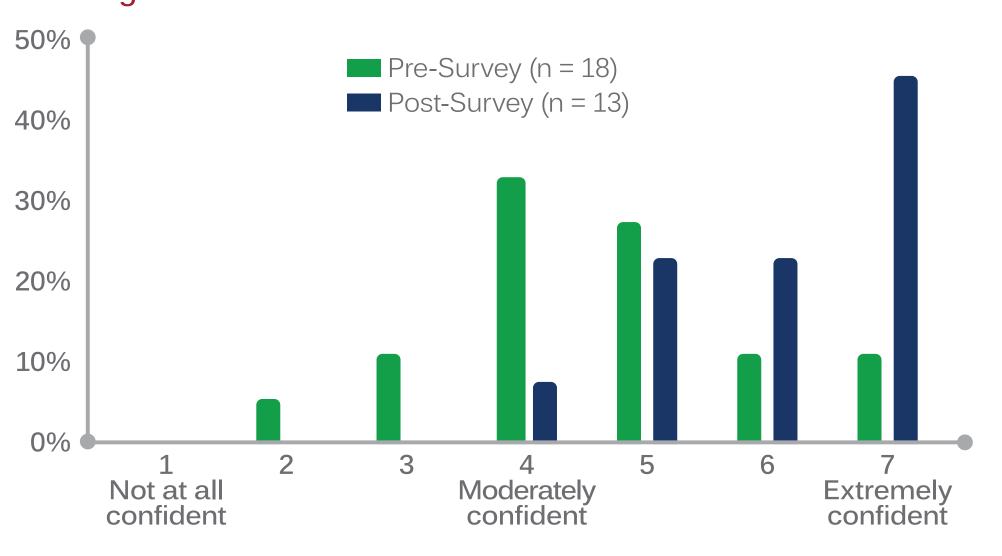
Khunti S, et al. *Ther Adv Endocrinol Metab.* 2019;10:2042018819844694.

Okemah J, et al. *Adv Ther.* 2018;35:1735-45.

A total of 13 NPs completed the survey following the educational intervention.

## Confidence in Ability to Prescribe Insulin Therapy **50%** • Pre-Survey (n = 18) Post-Survey (n = 13)

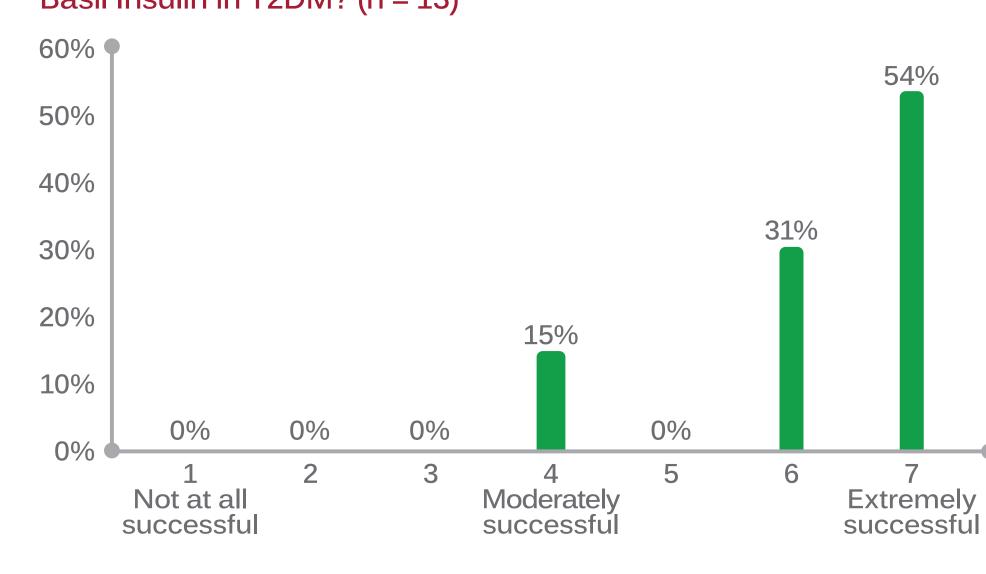
## Confidence in Ability to Address Patient Concerns About



Confidence Questions	Percentage of Responses	
Confidence in Ability to Titrate Basal Insulin	Pre-Survey (n = 18)	Post-Survey (n = 13)
Not at all confident (1)	5.6%	0%
2	11.1%	0%
3	11.1%	0%
Moderately confident (4)	22.2%	0%
5	16.7%	15.4%
6	22.2%	38.5%
Extremely confident (7)	11.1%	46.2%
Confidence in Ability to Understand the PK/PD Properties of Basal Insulin	Pre-Survey (n = 18)	Post-Survey (n = 13)
Not at all confident (1)	5.6%	0%
2	16.7%	0%
3	5.6%	0%
Moderately confident (4)	33.3%	7.7%
5	22.2%	23.1%
6	5.6%	38.5%
Extremely confident (7)	11.1%	30.8%

## Success in Implementing "Commitment to Change" Strategy (n = 13) Not at all successful successful successful

#### How Helpful Was the Initiative in Increasing Confidence in Using Basil Insulin in T2DM? (n = 13)



Confidence Questions	Percentage of Responses	
Confidence in Ability to Encourage Patients to Start Insulin Therapy	Pre-Survey (n = 18)	Post-Survey (n = 13)
Not at all confident (1)	0%	0%
2	5.6%	0%
3	5.6%	0%
Moderately confident (4)	44.4%	0%
5	16.7%	23.1%
6	11.1%	38.5%
Extremely confident (7)	16.7%	38.5%
Confidence in Ability to Titrate Basal Insulin	Pre-Survey (n = 18)	Post-Survey (n = 13)
Not at all confident (1)	5.6%	0%
2	11.1%	0%
3	22.2%	0%
Moderately confident (4)	16.7%	0%
5	22.2%	38.5%
6	11.1%	46.2%
Extremely confident (7)	11.1%	15.4%

"Encouraged me to be more "Prior to the educational consistent with bringing patients assistance received through this in for weekly nurse visits to titrate program, my confidence in treating with their basal insulin for them if they insulin was very low. The information were not confident in titrating received was extremely helpful for themselves." and provided in a clear, concise, and understandable manner." 'I was able to more "I initiated basal insulin in a confidently initiate insulin patient with T2DM who had been therapy for a patient with stable on 2 oral medications but newly diagnosed T2DM. suddenly had an increase in A1C The patient was able to from around 7 to 10. I was able to "Describing insulin reassure him that it was not a forever as 'natural' therapy nd felt more control over medication, necessarily, but that has increased patients' managing diabetes.

it was needed to bring about the

needed change rapidly and then,

based on his diet and exercise,

we might be able to

wean him off."

Conclusions

"I enjoyed

learning how to

change a patient

to 70/30 from basal

analog insulin."

- ► This initiative demonstrated that NPs can overcome barriers to treatment intensification with basal insulins through clinician self-assessment, CME education, expert faculty mentors, and the implementation of participant practice improvement plans
- Structured and formal QI interventions that provide NPs with opportunities to assess current evidence related to basal insulins, identify key practice support needs, and elicit objective insights from outside expert faculty have the potential to positively affect patient outcomes by overcoming clinical inertia

## Acknowledgements

Supported by an educational grant from Sanofi US. The funding source had no role in the execution, analysis, or development of the abstract associated with this initiative.