

# EVIDENCE SUMMARY

## Control and Prevent Diabetes



### WHAT IS CDC'S 6|18 INITIATIVE?

The CDC is partnering with health care purchasers, payers, and providers to improve health and control health care costs. CDC provides these partners with rigorous evidence about high-burden health conditions and associated interventions to inform their decisions to have the greatest health and cost impact. This initiative aligns evidence-based preventive practices with emerging value-based payment and delivery models.

### WHO'S AT RISK?

- About 86 million Americans age 20 or older have prediabetes (blood sugar level higher than normal, but not high enough for a diagnosis of diabetes), and 29 million people in the U.S. (9.3%) have diabetes.<sup>1</sup>
- People with prediabetes are at higher risk for developing type 2 diabetes and other serious health problems, including heart disease and stroke.
- Without lifestyle changes to improve their health, 15% to 30% of people with prediabetes will develop type 2 diabetes within 5 years.<sup>2</sup>
- Potential implications to payers: In 2012, total direct and indirect costs for diabetes in the United States were \$245 billion.<sup>3</sup>

### PROPOSED PAYER INTERVENTION

# 1

**Expand access to the National Diabetes Prevention Program (the National DPP), a lifestyle change program for preventing type 2 diabetes.**

# 2

**Promote screening for abnormal blood glucose in those who are overweight or obese as part of a cardiovascular risk assessment.**



## OPPORTUNITIES FOR PAYERS AND PROVIDERS

- Expand access to the National DPP.
- Promote referral to the National DPP for patients at risk for type 2 diabetes.
- Continue to support development of additional payer-supported National DPP models.



## KEY HEALTH AND COST EVIDENCE MESSAGES FOR PAYERS AND PROVIDERS

The National DPP is an evidence-based intervention that allows purchasers, payers, and providers to encourage patients to lose weight and avoid diabetes, which is a costly health condition. Weight loss resulting from the National DPP has many benefits, particularly in preventing or delaying type 2 diabetes and in controlling blood pressure and cholesterol. The National DPP is an intervention that purchasers, payers, and providers can use to improve their ability to meet and report on health plan performance measures that are linked to payment.<sup>4</sup>

## CURRENT PAYER COVERAGE (AS OF AUGUST 2015)

### MEDICARE

- ✓ Not universally covered.

### MEDICAID

- ✓ Varies by state and the availability of public-private partnerships to support National DPP programs.

### COMMERCIAL/PRIVATE

- ✓ Varies by plan; presently a benefit for state employees in eight states (1,060,181 beneficiaries); includes at least 30 commercial or Medicare Advantage plans.

## SUPPORTING HEALTH AND COST EVIDENCE: SCIENCE BEHIND THE ISSUE

In a systematic review (53 studies describing 66 programs) by The Community Guide of combined diet and physical activity promotion programs (either delivered by clinicians or trained community health workers) for people at increased risk of type 2 diabetes, the proportion of people who developed type 2 diabetes decreased by a median of 11 percentage points. The proportion of people who achieved normal blood sugar (normoglycemia) increased by a median of 12 percentage points in 6 studies. Fasting blood glucose was reduced (improved) by an average of 2.2 mg/dL. Hemoglobin A1c (a measure of long-term glucose levels) was reduced (improved) by an average of 0.08 percentage points. Blood pressure (15 studies) and cholesterol levels (10 studies) also improved.<sup>5</sup>



A second systematic review by the Community Guide of DPP cost-effectiveness (from the health system perspective) demonstrated that overall diabetes prevention programs have a median \$13,761/QALY, group-based programs yield a median \$1,819/QALY (5 studies), whereas individual-based programs yielded a median \$15,846/QALY (5 studies).<sup>6</sup>



A systematic review and meta-analysis of published U.S.-based studies that adapted the DPP trial's lifestyle intervention for real-world settings was conducted to determine which program features, such as the number of core sessions and type of intervention, affected weight loss. This review demonstrated that the average weight change 12 months after intervention was about 4% from the participants' baseline weight. Weight change was similar regardless of whether the intervention was delivered by clinically trained professionals and allied health personnel or by lay educators. The number of core sessions attended was strongly correlated with the number of core sessions offered. When the data were adjusted for sex and race or ethnicity, meta-regression analysis showed that every additional core session attended was associated with additional weight change of -0.26 percentage points.<sup>7</sup>



Several aspects of the etiology of type 2 diabetes suggest that both high-risk and whole-population approaches are necessary to strongly influence the diabetes epidemic. Randomized controlled trials and translation studies have demonstrated that type 2 diabetes can be prevented or delayed in those at high risk using a structured lifestyle intervention. A structured lifestyle change program such as the National DPP that contains the necessary components of workforce training, quality assurance through program recognition, an effective program delivery and payment model, and health marketing has been shown to positively influence the diabetes epidemic.<sup>8</sup>

## REFERENCES

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