DIABETES RISK ASSESSMENT

EXISTING DIABETES

RISK EXPLAINED

People in this category have reported type 1 or type 2 diabetes.

People with A1C within the recommended range are urged to talk to a doctor about avoiding complications of diabetes.

People with A1C above the recommended range are told to ask about controlling their blood sugar.

Those who do not know their A1C are urged to learn their A1C levels.

EXAMPLE PERSONA

Karla is a 45-year-old Hispanic female who has type 2 diabetes. Her blood pressure, cholesterol, and A1C levels are outside of the recommended ranges and she is currently taking medications to manage these risks.

Karla has a difficult time controlling her weight, and this is having a negative effect on her blood sugar levels. She has been seeing the same doctor for 5 years to treat her diabetes but has struggled to follow the diet plan they established. She recently started experiencing some pain and tingling in her legs and is worried about what this might mean, especially since her A1C readings have been slightly high for several months.

DOES THE USER HAVE A PRIMARY CARE PHYSICIAN?

YES

GOAL: ENROLL IN CHRONIC CARE MANAGEMENT PROGRAM

CUSTOMIZED CALL TO ACTION MESSAGES

Focus Call to Action (CTA) messaging on:

- Chronic care program enrollment.
- Appointment scheduling to discuss diabetes management.

PHONE CALL FOLLOW UP

Follow up with the user by phone call to:

- Schedule an appointment with primary care to discuss their results and any next-steps.
- Enroll them in a chronic care management program.
- Review the results report with them and explain their results.

FOLLOW-UP EMAILS

Customize your follow-up email content to explain:

- The importance of chronic care management and staying in touch with primary care.
- Possible complications of diabetes.
- How to manage blood sugar levels with lifestyle adjustments.

ENROLL IN CHRONIC CARE MANAGEMENT

Enroll the user in the appropriate chronic care management programs, where possible.

NO

GOAL: CREATE RELATIONSHIP WITH PRIMARY CARE

CUSTOMIZED CALL TO ACTION MESSAGES

Focus Call to Action (CTA) messaging on:

- Finding a primary care doctor.
- Chronic care program enrollment.
- Appointment scheduling.

PHONE CALL FOLLOW UP

Follow up with the user by phone call to:

- Find a primary care physician and set up an appointment.
- Enroll them in a chronic care management program.
- Review the results report with them and explain their results.

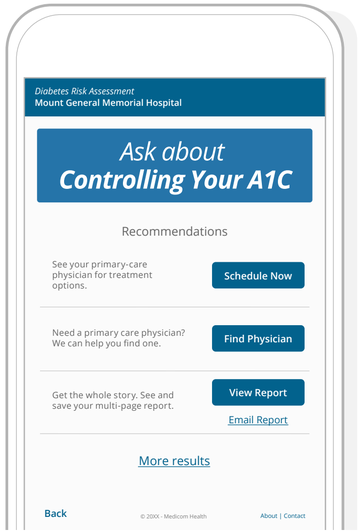
FOLLOW-UP EMAILS

Customize your follow-up email content to explain:

- The importance of building a relationship with a primary care physician and chronic care management.
- Possible complications of diabetes.
- How to manage blood sugar levels with lifestyle adjustments.

ESTABLISH PRIMARY CARE & ENROLL IN CHRONIC CARE

- The primary goal for these users is to establish a primary care relationship to manage their diabetes.
- Enroll the user in the appropriate programs, where possible.



OTHER CONSIDERATIONS

In addition to pre-existing diabetes, these people may have one or several other risk factors that increase their chances of developing complications of diabetes in the future.

These individuals are asked if their A1C levels are within the recommended range. People who answer “no” or “I don’t know” should receive more aggressive follow-up and should be strongly encouraged to schedule an appointment with primary care to address this issue.

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DIABETES RISK ASSESSMENT

VERY HIGH RISK

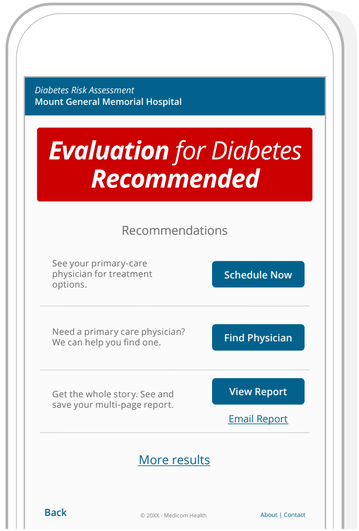
RISK EXPLAINED

People in this group are at risk for undiagnosed prediabetes or type 2 diabetes using the Bang[1] screening score.

The variables included in Bang are:
- Age
- Sex
- Weekly exercise
- Family history of diabetes
- Blood pressure or medication to control
- Obesity measure

Obesity measure is a calculation that takes into account sex, height, weight, ethnicity, and waist measurement to identify people with too much body fat.

[1] For more information, see Bang H. Development and Validation of a Patient Self-assessment Score for Diabetes Risk. *Annals of Internal Medicine.* 2009;151(11):775. doi:10.7326/0003-4819-151-11-200912010-00005



EXAMPLE PERSONA

Charlotte is a 37-year-old Caucasian female. Her BMI is 32 and her waist measures 40 inches. She walks for 45 minutes twice a week with a neighbor. Although she's taking medicine to control her high blood pressure, she considers herself in good health.

Charlotte took this HRA because her father has type 2 diabetes, so she was wondering what her future risk might be. She is surprised to learn that she might have undiagnosed high blood sugar.

OTHER CONSIDERATIONS

This group should be tested for high blood sugar through primary care.

They should also be educated about their risk factors for developing the condition, as well as preventive lifestyle habits that can reduce their risk.

Asian-American men and women have lower cut points for BMI and waist size. These sex- and ethnicity-based cut points for BMI and waist size are applied throughout the application.

DOES THE USER HAVE A PRIMARY CARE PHYSICIAN?

YES

GOAL: SCHEDULE DIABETES SCREENING

CUSTOMIZED CALL TO ACTION MESSAGES

Focus Call to Action (CTA) messaging on:

- Appointment scheduling (potentially with endocrinology).
- Health risk management programs.

PHONE CALL FOLLOW UP

Follow up with the user as soon as possible by phone call to:

- Schedule a diabetes screening with primary care or endocrinology.
- Review the results report with them and explain their results.
- Emphasize lifestyle changes that may help lower their risk.

FOLLOW-UP EMAILS

Customize your follow-up email content to explain:

- The importance of staying in touch with their doctor.
- The early signs of diabetes.
- What is endocrinology, and who should see an endocrinologist?

SCHEDULE SCREENING

- High-risk users should undergo diabetes screening.
- This group may also have other health conditions that warrant additional intervention.
- In most cases, patients in this group should be under the care of a primary care doctor or endocrinologist.

NO

GOAL: CREATE RELATIONSHIP WITH PRIMARY CARE & SCHEDULE SCREENING

CUSTOMIZED CALL TO ACTION MESSAGES

Focus Call to Action (CTA) messaging on:

- Finding a doctor.
- Appointment scheduling (potentially with endocrinology).
- Health risk management programs.

PHONE CALL FOLLOW UP

Follow up with the user as soon as possible by phone call to:

- Find a primary care physician and set up an appointment for screening.
- Review the results report with them and explain their results.
- Discuss lifestyle changes that may help lower their risk.

FOLLOW-UP EMAILS

Customize your follow-up email content to focus on:

- Building a relationship with a primary care physician.
- The early signs of diabetes.
- What is endocrinology, and who should see an endocrinologist?

ESTABLISH PRIMARY CARE & SCHEDULE SCREENING

- The primary goal for these users is to establish a primary care relationship and receive screening.
- This group may also have other health conditions that warrant additional intervention.
- In most cases, patients in this group should be under the care of a primary care doctor or endocrinologist.

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DIABETES RISK ASSESSMENT

HIGH RISK

RISK EXPLAINED

People in this group are at high risk of developing diabetes in the future because their health history includes one or both of these factors:

- Prediabetes
- A history of gestational diabetes (women only)

EXAMPLE PERSONA

Jim is a 54-year-old African American male. He smokes daily and does not exercise with any regularity. In spite of that, his weight and waist measurement are within the recommended ranges.

While at a community fair a few years ago, Jim learned at a local hospital booth that his blood sugar was 119 mg/dL. He followed-up with his primary care doctor and was diagnosed with prediabetes.

He hadn't thought much about his blood sugar since then, but learning now that it puts him at high risk for developing type 2 diabetes is worrisome. He wants to know what to do next.

DOES THE USER HAVE A PRIMARY CARE PHYSICIAN?

YES

GOAL: SCHEDULE DIABETES SCREENING

CUSTOMIZED CALL TO ACTION MESSAGES

Focus Call to Action (CTA) messaging on:

- Appointment scheduling (potentially with endocrinology).
- Health risk management programs.

PHONE CALL FOLLOW UP

Follow up with the user as soon as possible by phone call to:

- Schedule a primary care appointment for diabetes screening.
- Review the results report with them and explain their results.
- Discuss lifestyle changes that may help lower their near-term risk.

FOLLOW-UP EMAILS

Customize your follow-up email content to explain:

- The importance of staying in touch with their doctor.
- The signs and symptoms of diabetes.
- Talking to a doctor about metabolic health.
- What is endocrinology, and who should see an endocrinologist?

SCHEDULE SCREENING

- Most high-risk users should undergo screening for diabetes.
- This group may have underlying conditions that may warrant other interventions.
- In most cases, patients in this group should be under the care of a primary care doctor.

NO

GOAL: CREATE RELATIONSHIP WITH PRIMARY CARE & SCHEDULE SCREENING

CUSTOMIZED CALL TO ACTION MESSAGES

Focus Call to Action (CTA) messaging on:

- Finding a doctor.
- Appointment scheduling (potentially with endocrinology).

PHONE CALL FOLLOW UP

Follow up with the user as soon as possible by phone call to:

- Find a primary care physician and set up an appointment for diabetes screening.
- Review the results report with them and explain their results.
- Discuss lifestyle changes that may help lower their near-term risk.

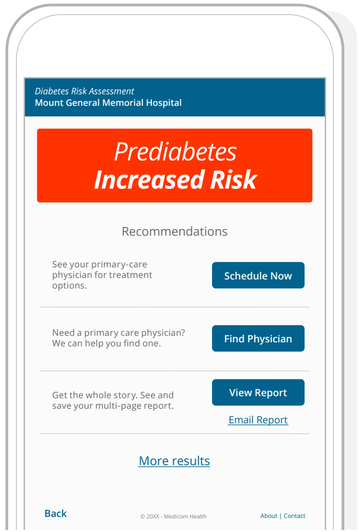
FOLLOW-UP EMAILS

Customize your follow-up email content to focus on:

- The importance of building a relationship with a primary care physician.
- The signs and symptoms of diabetes.
- Talking to a doctor about metabolic health.
- What is endocrinology, and who should see an endocrinologist?

ESTABLISH PRIMARY CARE & SCHEDULE SCREENING

- The primary goal for these users is to establish a primary care relationship and receive screening.
- This group may have underlying conditions that may warrant other interventions.
- In most cases, patients in this group should be under the care of a primary care doctor.



OTHER CONSIDERATIONS

People in this group are stratified as "high risk" within the client portal. Within the application itself, end-users see "increased risk" (see image at left).

This group should be screened for diabetes through primary care or endocrinology. These people should also be educated about their risk factors for developing the condition, as well as preventive lifestyle habits that may lower their risk.

DIABETES RISK ASSESSMENT

MODERATE RISK

RISK EXPLAINED

People in this group are at moderate risk for diabetes. They have at least 1 risk factor that increases the chance of developing diabetes in the future.

Risk factors include:

- Age over 44
- Male sex
- Family history of diabetes
- Fewer than 150 minutes moderate exercise per week
- Smoking within past year
- High blood pressure or on medication to control
- Abnormal cholesterol or on medication to control
- High blood sugar or on medication to control
- Excess body fat (**obesity measure***)

EXAMPLE PERSONA

Diana is a 41-year-old African-American woman. She does high-intensity cardio for 45 minutes twice a week and does not smoke or drink. Her blood pressure is normal, but her cholesterol is above the range recommended by her doctor.

Diana's waist measures 30 inches, but she is in the overweight range (BMI=26). She has lost weight several times in the past without being able to keep it off.

She is curious about her risk for type 2 diabetes because her mom was recently diagnosed with it. Diana found this assessment while searching her doctor's website for more information.

DOES THE USER HAVE A PRIMARY CARE PHYSICIAN?

GOAL: SCHEDULE A PRIMARY CARE SCREENING APPOINTMENT

YES

CUSTOMIZED CALL TO ACTION MESSAGES

Focus Call to Action (CTA) messaging on:

- Appointment scheduling.
- Health risk management programs available through your organization.
- Community wellness events at your organization.

PHONE CALL FOLLOW UP

Follow up with the user by phone call to:

- Schedule a primary care appointment to review their risks.
- Review the results report with them and explain their results.
- Discuss healthy lifestyle habits that may decrease their risk of diabetes.

FOLLOW-UP EMAILS

Customize your follow-up email content to explain:

- The importance of talking to a doctor about metabolic health.
- The early signs of diabetes or other metabolic diseases.
- Who should be screened for diabetes, and when?
- Lifestyle habits that can reduce the risk of diabetes.

PRIMARY CARE FOLLOW-UP

- Most moderate-risk users should be seen by primary care to address their risk factors and learn how to reduce their risk of diabetes.
- This group may have underlying conditions that warrant other interventions.
- In many cases, people in this group should be under the care of a primary care doctor.

NO

GOAL: CREATE RELATIONSHIP WITH PRIMARY CARE

CUSTOMIZED CALL TO ACTION MESSAGES

Focus Call to Action (CTA) messaging on:

- Finding a doctor.
- Appointment scheduling.
- Health risk management programs available through your organization.

PHONE CALL FOLLOW UP

Follow up with the user by phone call to:

- Find a primary care physician and set up an initial appointment.
- Review the results report with them and explain their results.
- Discuss healthy lifestyle habits that may decrease their risk of diabetes.

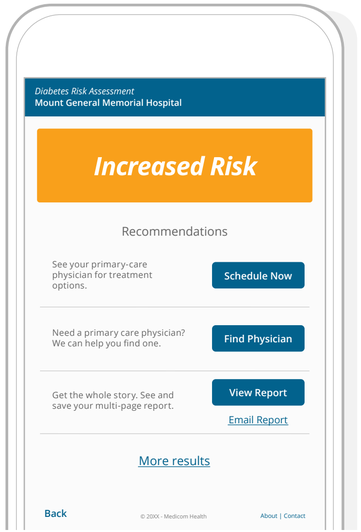
FOLLOW-UP EMAILS

Customize your follow-up email content to focus on:

- The importance of building a relationship with a primary care.
- The early signs of diabetes or other metabolic diseases.
- Who should be screened for diabetes, and when?
- Lifestyle habits that can reduce the risk of diabetes.

PRIMARY CARE FOLLOW-UP

- The primary goal for these users is to establish a primary care relationship and schedule an appointment.
- This group may have underlying conditions that warrant additional intervention.
- In many cases, people in this group should be under the care of a primary care doctor.



OTHER CONSIDERATIONS

People in this group are stratified as "moderate risk" within the client portal. Within the application itself, end-users see "increased risk" (see image at left).

People in this group do not meet the criteria for undiagnosed prediabetes or type 2 diabetes using the Bang1 screening score.

These individuals should be educated about lifestyle changes that can help prevent or delay diabetes. People without a primary care physician should be strongly encouraged to establish a primary care relationship and schedule an appointment to review their risks.

***Obesity measure** is a calculation that takes into account sex, height, weight, ethnicity, and waist measurement to identify people with too much body fat.

[1] For more information, see Bang H. Development and Validation of a Patient Self-assessment Score for Diabetes Risk. *Annals of Internal Medicine.* 2009;151(11):775. doi:10.7326/0003-4819-151-11-200912010-00005

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DIABETES RISK ASSESSMENT

MORE INFORMATION NEEDED

GOAL: SET UP APPOINTMENT FOR BLOOD SUGAR / CHOLESTEROL TESTS

RISK EXPLAINED

People in this category meet the following 2 criteria.

First, the questions they were able to answer did not put them in the moderate- to very-high-risk categories.

Second, they didn't know the answer to at least one of these questions:

- Family history of diabetes
- Cholesterol level
- Blood sugar level
- Waist measurement

EXAMPLE PERSONA

Jonathan is a 39-year-old Asian male. He quit smoking two years ago when he learned that his blood pressure was a littler higher than recommended. Since quitting, his blood pressure has returned to the healthy range. All of his other health indicators are good, but he didn't know his waist measurement. He has no known family history of diabetes.

Jonathan is health conscious and wants to know his diabetes risk. He isn't able to learn his risk without his waist measurement because it's an important factor in identifying excess body fat.

CUSTOMIZED CALL TO ACTION MESSAGES

Focus Call to Action (CTA) messaging portal on:

- Appointment scheduling with lab services.
- Finding a doctor (for users without a PCP).
- Relevant health content.

PHONE CALL FOLLOW UP

Follow up by phone with the user to:

- Set up an appointment to get their blood sugar and/or cholesterol tested.
- Explain the importance of knowing their waist measurement.
- Review the results report with them and explain their results.
- Encourage them to retake the assessment after gathering the missing information.

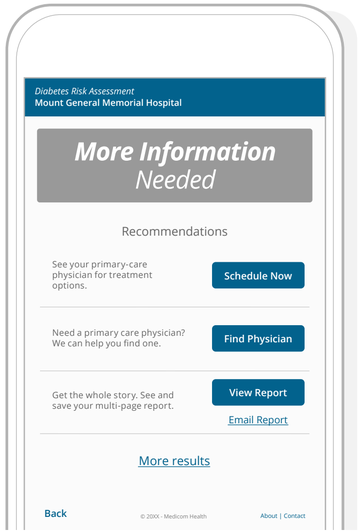
FOLLOW-UP EMAILS

Customize your follow-up email content to focus on:

- Emphasizing "knowing your numbers" for good metabolic health.
- Encouraging them to reassess their risk after having their numbers checked, measuring their waist, and/or learning their family history.
- Encouraging them to stay in touch with a primary care physician.
- Educating about early signs of diabetes or other metabolic conditions.

LAB APPOINTMENT & REASSESSMENT

- Schedule any applicable lab tests.
- Prompt them to return to the assessment to reassess their risk after learning their numbers.



OTHER CONSIDERATIONS

These people may be at very high, high, moderate, or low risk. They won't know which risk category they're in until they gather the missing answers.

If needed, these individuals should have their blood sugar and cholesterol checked and be encouraged to reassess their diabetes risk once they have answers to all of the questions.

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DIABETES RISK ASSESSMENT

LOW RISK

RISK EXPLAINED

People in this group are at low risk of diabetes because they:

- Don't have a diabetes diagnosis
- Don't meet the criteria for undiagnosed prediabetes or type 2 diabetes using the Bang1 screening score
- Don't meet the criteria for any other risk categories
- Do know their cholesterol level, blood sugar level, waist measurement, & family history of diabetes

[1] For more information, see Bang H. Development and Validation of a Patient Self-assessment Score for Diabetes Risk. *Annals of Internal Medicine.* 2009;151(11):775. doi:10.7326/0003-4819-151-11-200912010-00005

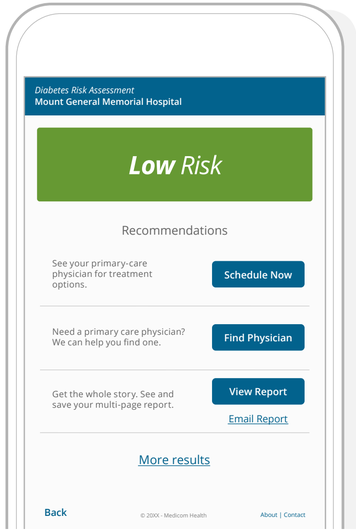
EXAMPLE PERSONA

Maria is a 42-year-old, Hispanic woman who has never smoked. She leads an active lifestyle and exercises 5 to 6 times per week. Her weight and waistline are in the "healthy" ranges, and all of her biometrics are within the recommended ranges.

She has never been diagnosed with any chronic condition, but both her paternal grandfather and maternal grandmother had type 2 diabetes, so she thinks she's at increased risk for developing the disease.

Maria took this assessment after seeing a hospital advertisement online. She was surprised to learn that she is at low risk for diabetes in spite of her family history and would like to know more about diabetes risk factors.

DOES THE USER HAVE A PRIMARY CARE PHYSICIAN?



OTHER CONSIDERATIONS

These people should be educated about lifestyle habits that may protect against developing diabetes over time.

GOAL: SCREEN FOR HEALTHY BEHAVIORS DURING ROUTINE PRIMARY CARE VISIT

YES

CUSTOMIZED CALL TO ACTION MESSAGES

Focus Call to Action (CTA) messaging on:

- Health fairs and other events sponsored by your organization.
- Appointment scheduling.

PHONE CALL FOLLOW UP

Follow up with the people by phone call to:

- Review the results report with them and explain their results.
- Encourage them to discuss their results with their primary care physician at their next routine visit.

FOLLOW-UP EMAILS

Customize your follow-up email content to explain:

- The importance of staying in touch with primary care.
- Lifestyle changes that may lower the risk of metabolic diseases like diabetes.
- Community wellness programs offered by your organization.

SCREEN FOR HEALTHY BEHAVIORS

- People at low risk should talk with primary care about risk factors during their next routine visit.
- Some people may be eligible for health risk management programs, such as smoking cessation.

GOAL: CREATE RELATIONSHIP WITH PRIMARY CARE

NO

CUSTOMIZED CALL TO ACTION MESSAGES

Focus Call to Action (CTA) messaging on:

- Finding a doctor.
- Health fairs and other events by your organization.
- Appointment scheduling.

PHONE CALL FOLLOW UP

Follow up with the individual by phone call to:

- Establish a primary care provider and encourage them to bring their results to their next visit.
- Review the results report with them and explain their results.

FOLLOW-UP EMAILS

Customize your follow-up email content to explain:

- The importance of building a relationship with primary care.
- Lifestyle habits that can lower the risk of metabolic diseases like diabetes.
- Community wellness programs offered by your organization.

SCREEN FOR HEALTHY BEHAVIORS

- These people should be connected with a primary care provider.
- Some people may be eligible for health risk management programs, such as smoking cessation.