

# Online Delivery of the Diabetes Risk Assessment Tool

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## Patient engagement and preventative health

- Traditional methods don't seem to be working as well
- Need to use a medium that people use on a daily/regular basis
- Most 40-49 year olds own a smartphone or have an email address
- Needs minimal patient effort
- Also think about practice staff (if it's too hard/time consuming for them, it's not worth the effort)

# Common methods of DRAT completion

## Delivery type

- Posted to patient
- Completed in waiting room (opportunistic)
- Completed during health assessment

## Downfalls

- Low response rate when posted
- Cost of postage, stationery, etc.
- Requires the patient to actually present to the clinic

**The Australian Type 2 Diabetes Risk Assessment Tool (AUSDRAT)**

1. Your age group

Under 25 years	<input type="checkbox"/> 0 points
26 - 44 years	<input type="checkbox"/> 2 points
45 - 54 years	<input type="checkbox"/> 4 points
55 - 64 years	<input type="checkbox"/> 6 points
65 years or over	<input type="checkbox"/> 8 points

2. Your gender

Female	<input type="checkbox"/> 0 points
Male	<input type="checkbox"/> 2 points

3. Your ethnicity/country of birth:

3a. Are you of Aboriginal, Torres Strait Islander, Pacific Islander or Maori descent?

No	<input type="checkbox"/> 0 points
Yes	<input type="checkbox"/> 2 points

3b. Where were you born?

Australia	<input type="checkbox"/> 0 points
Asia (including the Indian sub-continent), Middle East, North Africa, Southern Europe	<input type="checkbox"/> 2 points
Other	<input type="checkbox"/> 0 points

4. Have either of your parents, or any of your brothers or sisters been diagnosed with diabetes (Type 1 or Type 2)?

No	<input type="checkbox"/> 0 points
Yes	<input type="checkbox"/> 2 points

5. Have you ever been found to have high blood glucose (sugar) (for example, in a health examination, during an illness, during pregnancy)?

No	<input type="checkbox"/> 0 points
Yes	<input type="checkbox"/> 2 points

6. Are you currently taking medication for high blood pressure?

No	<input type="checkbox"/> 0 points
Yes	<input type="checkbox"/> 2 points

7. Do you currently smoke cigarettes or any other tobacco products on a daily basis?

No	<input type="checkbox"/> 0 points
Yes	<input type="checkbox"/> 2 points

8. How often do you eat vegetables or fruit?

Every day	<input type="checkbox"/> 0 points
Not every day	<input type="checkbox"/> 2 points

9. On average, would you say you do at least 2.5 hours of physical activity per week (for example, 30 minutes a day on 5 or more days a week)?

Yes	<input type="checkbox"/> 0 points
No	<input type="checkbox"/> 2 points

10. Your waist measurement taken below the ribs (usually at the level of the navel, and while standing)

Waist measurement (cm)

**For those of Asian or Aboriginal or Torres Strait Islander descent:**

<b>Men</b>	<b>Women</b>	<input type="checkbox"/> 0 points
Less than 90 cm	Less than 80 cm	<input type="checkbox"/> 2 points
90 - 100 cm	80 - 90 cm	<input type="checkbox"/> 4 points
More than 100 cm	More than 90 cm	<input type="checkbox"/> 7 points

**For all others:**

<b>Men</b>	<b>Women</b>	<input type="checkbox"/> 0 points
Less than 102 cm	Less than 88 cm	<input type="checkbox"/> 2 points
102 - 110 cm	88 - 100 cm	<input type="checkbox"/> 4 points
More than 110 cm	More than 100 cm	<input type="checkbox"/> 7 points

Add up your points

Your risk of developing type 2 diabetes within 5 years\*:

<input type="checkbox"/> 0 or less: Low risk	Approximately one person in every 100 will develop diabetes.
<input type="checkbox"/> 1-5: Intermediate risk	For scores of 4-5, approximately one person in every 10 will develop diabetes. For scores of 3-11, approximately one person in every 20 will develop diabetes.
<input type="checkbox"/> 6 or more: High risk	For scores of 12-15, approximately one person in every 14 will develop diabetes. For scores of 16-19, approximately one person in every 7 will develop diabetes. For scores of 20 and above, approximately one person in every 3 will develop diabetes.

\*The actual rates may vary considerably for risk of diabetes in those aged less than 25 years.

**If you scored 6-11 points in the AUSDRAT you may be at increased risk of type 2 diabetes. Discuss your score and your individual risk with your doctor. Improving your lifestyle may help reduce your risk of developing type 2 diabetes.**

**If you scored 12 points or more in the AUSDRAT you may have undiagnosed type 2 diabetes or be at high risk of developing the disease. See your doctor about having a fasting blood glucose test. Act now to prevent type 2 diabetes.**

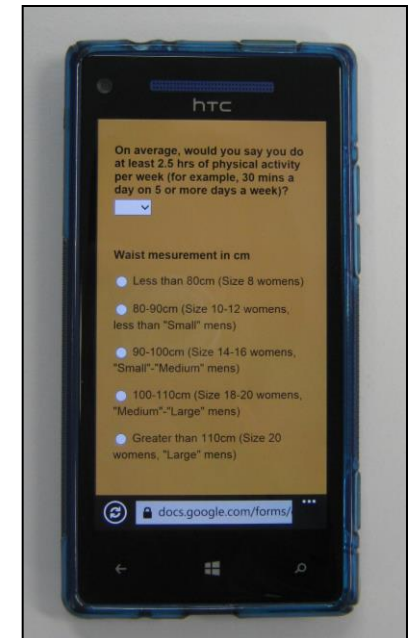
# Online DRAT completion

## Delivery type

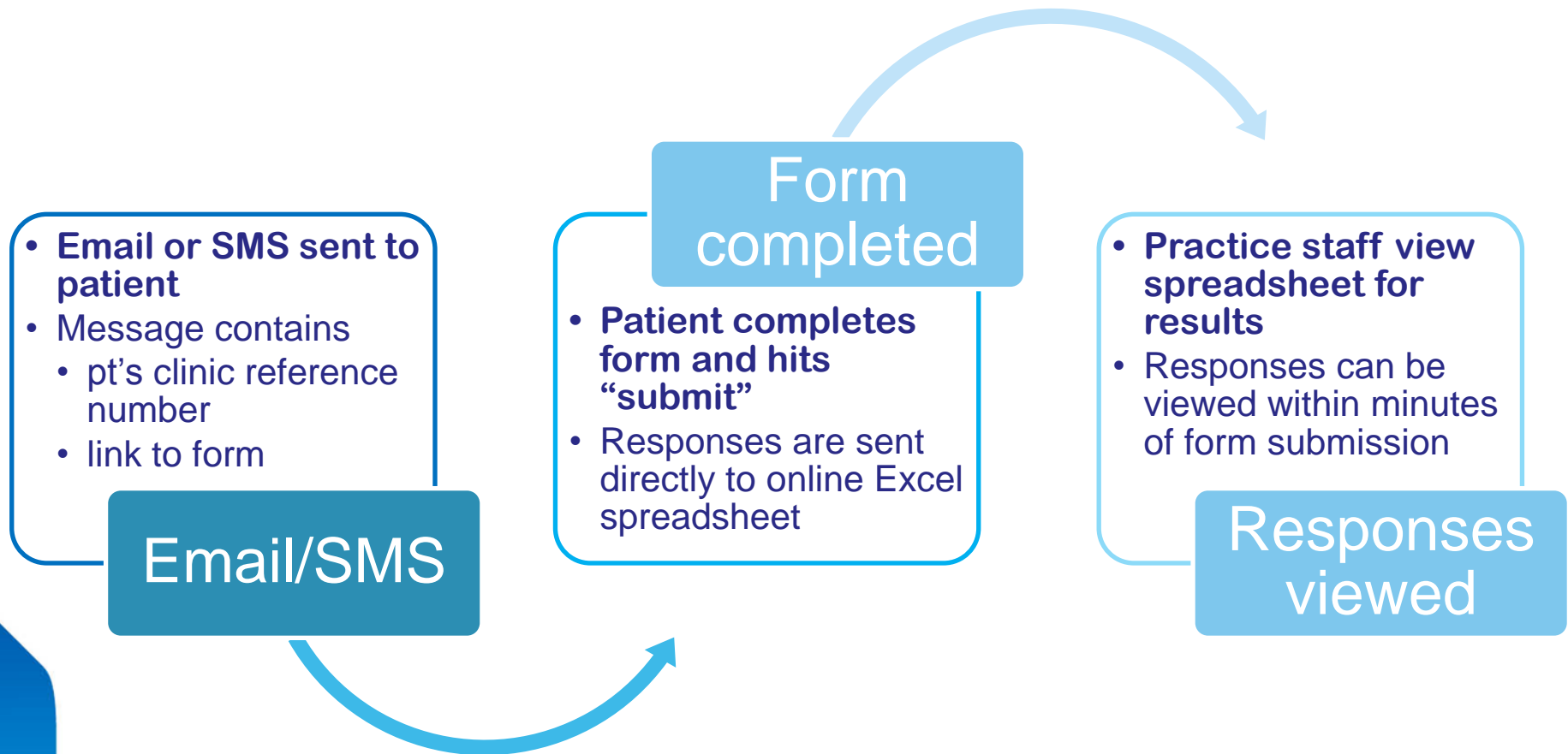
- Email or SMS to patient
- Message contains link to online form program
- Completed and submitted online via computer or smartphone, whenever is convenient to patient

## Benefits

- Higher response rate (approx 66% at test site)
- Virtually no-cost
- Automatic score calculation



# How it works



# Sample Email

Dear .....

The staff at Clinic X are dedicated to providing our community the best quality medical care. This not only means treating illness when it arises but preventing it.

If you are aged between 40 and 49 it is now time to examine your current state of health. This is the time to prevent illness rather than treat it. As a result your doctor is keen to know your risk of developing type 2 diabetes so that if the risk is high, we can do something about it now, before diabetes develops.

Those of us who live in the Glenelg region have one of the highest rates of type 2 diabetes in the state. We hope that by completing the Diabetes Risk Assessment Tool (the link is [here](#)), we will be able to assist those of us who are at risk, before diabetes develops.

Your clinic reference number is ..... (you can copy and paste this into the form. This allows us to protect your privacy and keep your results confidential).

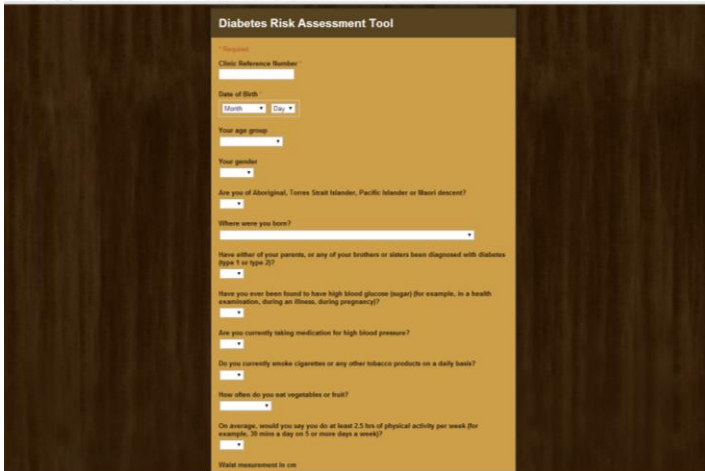
Please complete the short questionnaire and return it to us by pressing the "submit" button at the end of the form. Should your risk be determined as high our practice nurse will contact you to offer further support to reduce this risk. The results of your questionnaire will only be seen by your nominated GP and the practice nurse.

Thank you for participating

Regards

# Sample Forms

## Computer Screenshot



**Diabetes Risk Assessment Tool**

*Required*

Clinic Reference Number

Date of Birth  Month  Day

Your age group

Your gender

Are you of Aboriginal, Torres Strait Islander, Pacific Islander or Maori descent?

Where were you born?

Have either of your parents, or any of your brothers or sisters been diagnosed with diabetes (Type 1 or type 2)?

Have you ever been found to have high blood glucose (sugar) (for example, in a health examination, during an illness, during pregnancy)?

Are you currently taking medication for high blood pressure?

Do you currently smoke cigarettes or any other tobacco products on a daily basis?

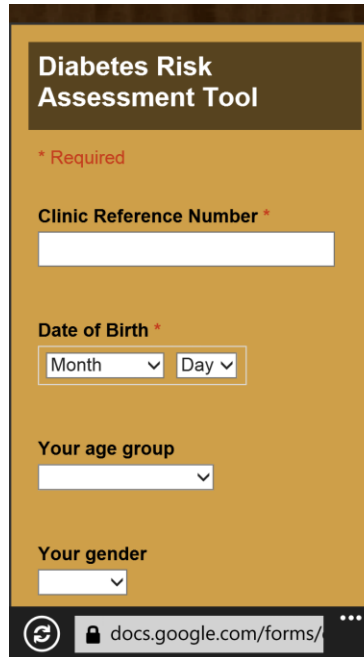
How often do you eat vegetables or fruit?

On average, would you say you do at least 2.5 hrs of physical activity per week (for example, 30 mins a day on 5 or more days a week)?

Waist measurement in cm



## Smartphone Screenshots



**Diabetes Risk Assessment Tool**

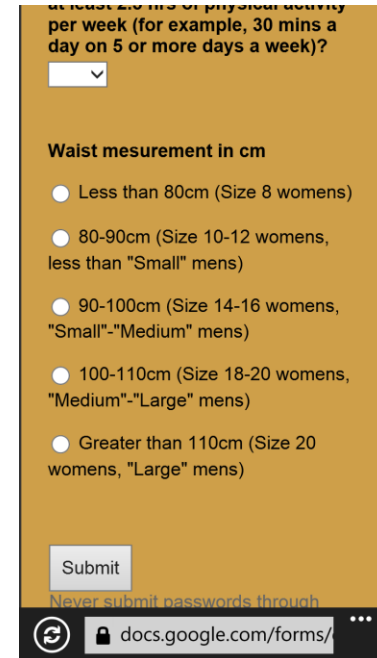
*\* Required*

Clinic Reference Number \*

Date of Birth \*  Month  Day

Your age group

Your gender



at least 2.5 hrs of physical activity per week (for example, 30 mins a day on 5 or more days a week)?

Waist measurement in cm

- Less than 80cm (Size 8 womens)
- 80-90cm (Size 10-12 womens, less than "Small" mens)
- 90-100cm (Size 14-16 womens, "Small"- "Medium" mens)
- 100-110cm (Size 18-20 womens, "Medium"- "Large" mens)
- Greater than 110cm (Size 20 womens, "Large" mens)

Submit

Never submit passwords through

# Sample Responses

Diabetes Risk Assessment Tool (Responses)

Timestamp	Clinic Reference Number	Date of Birth	Your age group	Your gender	Are you of Aboriginal, Torres Strait Islander, Pacific Islander or Maori descent?	Where were you born?	Have either of your parents, or any of your brothers or sisters been diagnosed with diabetes (type 1 or type 2)?	Have you ever been found to have high blood glucose (sugar) during an illness, pregnancy?	Are you currently taking medication for high blood pressure?	Do you currently smoke cigarettes or any other tobacco products on a daily basis?	How often do you eat vegetables or fruit?	On average, would you say you do at least 2.5 hrs of physical activity per week (for example, 30 mins a day on 5 or more days a week)?	messe
4/22/2014 16:59:14	123	Feb 1	45-54 years	Female	No	Asia (including the Indian sub-continent), Middle East, North Africa, Southern Europe	No	No	Yes	No	Every day	No	80-90cm 12 wom than "S" Less th (Size 8)
4/22/2014 17:00:54	111	Sep 2	under 35 years	Female	No	Australia Asia (including the Indian sub-continent), Middle East, North Africa, Southern Europe	No	No	No	No	Every day	No	90-100c 16 wom "Small" men") Greater 110cm ( women)
4/22/2014 18:09:28	1234	Dec 1	35-44 years	Male	Yes		No	Yes	Yes	No	Not every day	No	
7/23/2014 12:45:59	12345678	Jan 26	45-54 years	Male	No	Australia	Yes	No	No	No	Every day	Yes	

Form Responses | DRAT Scores

DRAT scores are automatically calculated and colour-coded

Diabetes Risk A

A1	Timestamp					Total	AF
1	Timestamp	Clinic Reference	Date of Birth	Your age group	Your gender		
2	4/22/2014 16:59:14	123	Feb 1	45-54 years	Female	13	41
3	4/22/2014 17:00:54	111	Sep 2	under 35 years	Female	2	41
4	4/22/2014 18:09:28	1234	Dec 1	35-44 years	Male	26	41
5	7/23/2014 12:45:59	12345678	Jan 26	45-54 years	Male	41	41
6						41	41
7						41	41
8						41	41
9						41	41
10						41	41
11						41	41
12						41	41
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19						41	41
20						41	41
21						41	41
22						41	41
23						41	41
24						41	41
25						41	41



## Patient Follow-up

### **Staff can access spreadsheet to view results**

- Patient identified using:
  - clinic reference number
  - day and month of birth (for confirmation of identity)
- DRAT score can be entered into medical record
- Patients with high risk can be called for appointment to discuss results
- Patients with medium-low risk can have a recall set for future monitoring

## Potential Issues

### **Privacy:**

- Patient identified using clinic reference number so no identifiable personal details are stored

### **Administration:**

- Requires patient email address, mobile number
- Patients should be asked for their consent to be contacted via email/SMS

# Acknowledgements

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Australian Government  
Department of Health



**Australian Government**  

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