

# Improving the quality of type 2 diabetes care for your community

## A summary of research findings for Aboriginal and Torres Strait Islander Health Workers/Health Practitioners



Approximately 7 in 50 Aboriginal and Torres Strait Islander adults have type 2 diabetes...



... compared with 2 in 50 non-Indigenous Australians

Aboriginal and Torres Strait Islander people are at least 3 times more likely to have type 2 diabetes than non-Indigenous Australians<sup>1</sup>



This is a summary of important findings from a continuous quality improvement (CQI) program for type 2 diabetes care in Aboriginal and Torres Strait Islander primary health care (PHC). The program has been in place for more than 10 years,<sup>2,3,4</sup> with 175 health centres across Australia giving the ABCD National Research Partnership permission to analyse data from this program.

Researchers looked at data from clinical audits in community controlled, government and non-government health centres in very remote, remote, and non-remote areas. Over a number of years they measured and compared the following five items of type 2 diabetes care:

- 1 laboratory tests
- 2 physical checks by the health centre team
- 3 physical checks by specialists
- 4 brief interventions for nutrition and exercise
- 5 education and counselling interventions for tobacco and high-risk alcohol use.

The research found that even though health centre settings were different, they shared common stories about how to improve care for Aboriginal and Torres Strait Islander people with diabetes.<sup>2,3,4</sup> The messages in these stories are also important when caring for people with other chronic illnesses, such as heart disease and kidney disease.

## Key messages for action

1

Keep participating in your health centre's CQI program. Ongoing CQI will improve diabetes care for your community

3

Encourage clients with type 2 diabetes to attend the health centre regularly

2

Use CQI to improve systems for clients to access care, and for coordinating type 2 diabetes care

4

Use follow-up, recall and referral systems to make sure all clients with type 2 diabetes get all services recommended in care guidelines

# 1

## Keep participating in your health centre's CQI program. Ongoing CQI will improve diabetes care for your community

The delivery of most items of diabetes care improved as more CQI cycles were completed, but there were different patterns of improvement depending on the location of the health centre.

In both remote and non-remote health centres, delivery of physical checks by health centre teams improved as more CQI cycles were completed. Physical checks by specialists also improved with CQI, but there were still many people without a record of receiving recommended checks by specialists.

Delivery of laboratory tests improved for remote health centres only.

Why did different types of care improve differently with CQI? One reason could be that higher level health system factors – such as workforce policies, emphasis on adult health assessments and point-of-care testing programs – affect the delivery of different items of care in different ways over time.

It is important to understand how system-wide factors influence the delivery of care, as this will help to ensure that strategies developed at higher levels of the health system are able to improve the long-term delivery of all recommended care processes – wherever health centres are located.<sup>3,4</sup>

**Commitment to CQI over time is very important for making a difference to the quality of care. What can your team do to ensure that CQI continues in your health centre?**

# 2

## Use CQI to improve systems for clients to access care, and for coordinating type 2 diabetes care

Remote and very remote area health centres have the challenge of being single health care providers for spread-out populations. Health centres in urban areas and large towns have the challenge of coordinating and monitoring care for clients who may use a number of service providers for their chronic illness care. Good systems for recording client information, follow-up and recall, and care and management are important for providing clients with high-quality, well-coordinated care in all locations.

The research findings linked CQI to improvements in type 2 diabetes care wherever health centres were located, but the extent of improvement differed by location. Very remote and remote health centres showed the most improvement while participating in CQI, followed by health centres in non-remote areas.<sup>4</sup>

**How has your health centre team used CQI to improve service coordination and systems for diabetes care?**

### What the research shows

The longer a health centre participates in a CQI program the more likely it is that scheduled services will be delivered and that the quality of diabetes care will improve – an ongoing CQI program is needed to get results

As more CQI cycles are completed, there is less variation in the quality of care between different health centres

Factors at higher levels of the health system can influence which types of care improve with CQI

We need to understand more about the system-wide factors that influence the delivery of care. Strategies are needed at higher levels of the health system to improve the long-term delivery of all recommended care processes – wherever care is delivered<sup>3,4</sup>

### What the research shows

Good systems for follow-up and recall help health centres to face the different challenges of delivering care in urban areas and large towns (non-remote), remote and very remote areas

CQI is linked to improvements in type 2 diabetes care wherever health centres are located

In all areas, improving coordination between service providers can build on the benefits of CQI<sup>3,4</sup>

### 3 Encourage clients with type 2 diabetes to attend the health centre regularly

As with other chronic illness care, clients who get type 2 diabetes care as recommended in clinical guidelines are those who can access certain services at regular intervals. It is not surprising that health centres with a higher percentage of clients attending in the six months prior to an audit were more likely to provide best practice care, compared with those where clients had not recently attended.

The data show variations in client attendance between health centres in different locations. Very remote health centres recorded the best attendance rates – about 95% of clients with type 2 diabetes had visited in the six months before the audit – with remote areas next best at 89%.

In non-remote areas, however, only about 75% of this client group had attended in the six months prior to the audit.<sup>4</sup> Regular client attendance may be more challenging for health centres in large towns and urban areas, because clients are able to access a variety of service providers.<sup>3,4</sup>

#### Client attendance – Type 2 diabetes



What story does your CQI data tell about the attendance of clients who have type 2 diabetes?

### 4 Use follow-up, recall and referral systems to make sure all clients with type 2 diabetes get all services recommended in care guidelines

The data show that older clients with type 2 diabetes are more likely to have multiple chronic illnesses and severe diseases, and thus are more likely to receive recommended services than younger clients. Similarly, in most age groups those clients with co-morbidities and complications are more likely to get recommended services than those without.<sup>3,4</sup> This may be because there are more opportunities for care (more visits), or because health centres work mostly on managing high-risk clients. It may also be due to improvements in health systems, such as recalls and reminders, and better communication between specialists and health teams.

Overall, women, older people and clients with multiple chronic illnesses and complications are more likely to receive specialist physical checks. This means that many men and younger clients who have diabetes, and some clients with less complex or severe type 2 diabetes, are missing out on recommended care.<sup>3</sup>

How well are health centre systems working to support your team to provide all items of recommended care to all clients with diabetes?

#### What the research shows

Clients who attend health centres regularly and often are more likely to get best practice care

Health centres in remote and very remote areas may be more likely to achieve regular client attendance than health centres in non-remote areas<sup>4</sup>

#### What the research shows

Older clients with type 2 diabetes are more likely to receive recommended services than younger clients

Many men and younger clients with diabetes are missing out on recommended care

Some clients with less complex or severe type 2 diabetes are missing out on recommended care

Health centre systems need to be strengthened in ways that support delivery of all recommended items of quality care for all clients with type 2 diabetes<sup>3,4</sup>

## What is continuous quality improvement?

CQI is a structured organisational process for involving people in planning and executing a continuous flow of improvement to provide quality health care that meets or exceeds expectations.<sup>5</sup>

Within health centres, CQI is a systematic way of using data to guide changes to the way care is organised, structured or designed to improve the quality of care and programs.<sup>6</sup>

By employing CQI audit tools to collect data from clients' records, health centres are able to compare this information with guidelines for recommended care. This process identifies which items of care are being delivered to a high standard and where improvements to delivery could be made. Health centre teams use this information to plan and make changes to their systems so that clients have better quality care. Repeating this cycle continues to improve services.<sup>7,8</sup>

## References

- 1 Australian Bureau of Statistics (ABS) 2013, *Aboriginal and Torres Strait Islander Health Survey: First Results, Australia 2012–13*, ABS Cat. No. 4727.0.55.001, ABS, Canberra.
- 2 Si, D., Bailie, R., Dowden, M., et al. 2010, Assessing quality of diabetes care and its variation in Aboriginal community health centres in Australia, *Diabetes Metabolism Research and Reviews*, 26:464–73.
- 3 Schierhout, G., Matthews, V., Connors, C., Thompson, S., Kwedza, R., Kennedy, C. & Bailie, R. 2015, Improvement in delivery of type 2 diabetes services differs by mode of care: A retrospective longitudinal analysis in the Aboriginal and Torres Strait Islander Primary Health Care setting. Under review.
- 4 Matthews V., Schierhout, G., McBroom, J., et al. 2014, Duration of CQI participation: A key factor explaining improvement in delivery of type 2 diabetes services to Aboriginal and Torres Strait Islander communities, *BMC Health Services Research*, 14:578.
- 5 Sollecito, W. & Johnson J. (eds) 2013, *McLaughlin and Kaluzny's Continuous Quality Improvement in Health Care*, 4th edn, Jones & Bartlett Learning, Burlington, MA.
- 6 O'Neill, S., et al. 2011, Identifying continuous quality improvement publications: What makes an improvement intervention 'CQI?', *BMJ Quality & Safety*, 20(12):1011–19.
- 7 Bailie, R., et al. 2007, Indigenous health: Effective and sustainable health services through continuous quality improvement, *Medical Journal of Australia*, 186(10):525–7.
- 8 Wise, M., et al. 2013, *National Appraisal of Continuous Quality Improvement Initiatives in Aboriginal and Torres Strait Islander Primary Health Care*, The Lowitja Institute, Melbourne.

## Acknowledgments

The active support, enthusiasm and commitment of the staff and management of the participating health services and research organisations, and of the ABCD National Research Partnership Project team, have been vital to the success of the ABCD Project. This support is gratefully acknowledged.

This project has been supported by funding from the National Health and Medical Research Council (#545267) and the Lowitja Institute, and by in-kind and financial support from a range of community controlled and government agencies.

## For more information

**ABCD National Research Partnership**

**e** [abcd@menzies.edu.au](mailto:abcd@menzies.edu.au)

**t** +61 7 3169 4201

**w** [www.menzies.edu.au/abcd](http://www.menzies.edu.au/abcd)

**One21seventy**

**e** [one21seventy@menzies.edu.au](mailto:one21seventy@menzies.edu.au)

**t** 1800 082 474

**w** [www.one21seventy.org.au](http://www.one21seventy.org.au)

**Prepared by:** Alison Laycock, guided by Lynette O'Donoghue, Damian Rigney and Phillipa Cole

**With feedback from:** R. Bailie, V. Matthews, G. Schierhout, D. Si, A. Sheahan, C. Croft, F. Cunningham, J. Bailie, D. Mosca, S. Ferguson-Hill, A. De Witt, C. Juanta-Avila, A. Graham, R. Kwedza, S. Street, J. Mein, J. Fagan, J. Newham, P. Ryan, K. Copley, J. Campbell, D. Aanundsen, L. Patel, V. Gordon and participants at NT CQI Collaborative, November 2014

**Date:** May 2015

# Improving the quality of type 2 diabetes care for your community

A summary of research findings for Community Health Boards

Aboriginal and Torres Strait Islander people are at least 3 times more likely to have type 2 diabetes than non-Indigenous Australians<sup>1</sup>



Approximately 7 in 50 Aboriginal and Torres Strait Islander adults have type 2 diabetes...



... compared with 2 in 50 non-Indigenous Australians

This is a summary of important findings from a continuous quality improvement (CQI) program for type 2 diabetes care in Aboriginal and Torres Strait Islander primary health care (PHC). The program has been in place for more than 10 years,<sup>2,3,4</sup> with 175 health centres across Australia giving the ABCD National Research Partnership permission to analyse data from this program.

Researchers looked at data from clinical audits in community-controlled, government and non-government health centres in very remote, remote, and non-remote areas. Over a number of years they measured and compared the following five items of type 2 diabetes care:

- 1 laboratory tests
- 2 physical checks by the health centre team
- 3 physical checks by specialists
- 4 brief interventions for nutrition and exercise
- 5 education and counselling interventions for tobacco and high-risk alcohol use.

The research found that even though health centre settings were different, they shared common stories about how to improve care for Aboriginal and Torres Strait Islander people with diabetes.<sup>2,3,4</sup> The messages in these stories are also important when caring for people with other chronic illnesses, such as heart disease and kidney disease.

## Key messages for action

- 1 Provide board and management support for CQI. The CQI program needs to keep going over time to improve the quality of diabetes care
- 2 Put a high priority on health centre and patient information and recall systems that work well
- 3 Resource the health centre team to provide best practice care for all clients with type 2 diabetes

# 1

## Provide board and management support for CQI. The CQI program needs to keep going over time to improve the quality of diabetes care

The delivery of most items of diabetes care improved as more CQI cycles were completed, but there were different patterns of improvement, depending on the location of the health centre. In both remote and non-remote health centres, delivery of physical checks by health centre teams improved as more CQI cycles were completed. Physical checks by specialists also improved with CQI, but there were still many people without a record of receiving recommended checks by specialists.

Delivery of laboratory tests improved for remote health centres only.

Why did different types of care improve differently with CQI? One reason could be that higher level health system factors – such as workforce policies, emphasis on adult health assessments and point-of-care testing programs – affect the delivery of different items of care in different ways over time.

It is important to understand how system-wide factors influence the delivery of care, as this will help to ensure that strategies developed at higher levels of the health system are able to improve the long-term delivery of all recommended care processes – wherever health centres are located.<sup>3,4</sup>

**Commitment to CQI over time is very important for making a difference to the quality of care. How can the board ensure that CQI continues in your health centre or service?**

### What the research shows

The longer a health centre participates in a CQI program the more likely it is that scheduled services will be delivered and that the quality of diabetes care will improve – an ongoing CQI program is needed to get results

As more CQI cycles are completed, there is less variation in the quality of care between different health centres

Factors at higher levels of the health system can influence which types of care improve with CQI

We need to understand more about the system-wide factors that influence the delivery of care. Strategies are needed at higher levels of the health system to improve the long-term delivery of all recommended care processes – wherever care is delivered<sup>3,4</sup>

# 2

## Put a high priority on health centre and patient information and recall systems that work well

### What the research shows

Good systems for follow-up and recall help health centres to face the different challenges of delivering care in urban areas and large towns (non-remote), remote and very remote areas

CQI is linked to improvements in type 2 diabetes care wherever health centres are located

Clients who attend health centres regularly and often are more likely to get best practice care

Health centres in remote and very remote areas may be more able to achieve regular client attendance than those in non-remote areas

In all areas, improving coordination between service providers can build on the benefits of CQI<sup>3,4</sup>

Remote and very remote health centres have the challenge of being single primary health care providers for spread-out populations. Health centres in urban areas and large towns have the challenge of coordinating and monitoring care for clients who use a number of service providers for their chronic illness care. Good systems for recording client information, follow-up and recall, and care and management are important for providing clients with high-quality, well-coordinated care in all locations.

The research findings linked CQI to improvements in type 2 diabetes care wherever health centres were located, but the extent of improvement differed by location. Very remote and remote health centres showed the most improvement while participating in CQI, followed by health centres in non-remote areas.<sup>4</sup>

As with other chronic illness care, clients who get type 2 diabetes care as recommended in clinical guidelines are

those who can access certain services at regular intervals. It is not surprising that health centres with a higher percentage of clients attending in the six months prior to an audit were more likely to provide best practice care, compared with those where clients had not recently attended.

The data show variations in client attendance between health centres in different locations. Very remote health centres recorded the best attendance rates – about 95% of clients with type 2 diabetes had visited in the six months before the audit – with remote areas next best at 89%.

In non-remote areas, however, only about 75% of this client group had attended in the six months before the audit.<sup>4</sup> Regular client attendance may be more challenging for health centres in large towns and urban areas because clients are able to access a variety of service providers.<sup>3,4</sup>

### Client attendance – Type 2 diabetes



Are the information systems in your health centre or service supporting regular attendance and coordinated care for clients with chronic illnesses?

### 3 Resource the health centre team to provide best practice care for all clients with type 2 diabetes

The data show that older clients with type 2 diabetes are more likely to have multiple chronic illnesses and severe diseases, and thus are more likely to receive recommended services than younger clients. Similarly, in most age groups those clients with co-morbidities and disease complications are more likely to get recommended services than those without.<sup>3,4</sup> This may be because there are more opportunities for care (more visits), or because health centres work mostly on managing high-risk clients. It may also be due to improvements in health systems, such as recalls and reminders, and better communication between specialists and health teams.

Overall, women, older people and clients with multiple chronic illnesses and complications are more likely to receive specialist physical checks. This means that many men and younger clients who have diabetes, and some clients with less complex or severe type 2 diabetes, are missing out on recommended care.<sup>3</sup>

How well are your health centre systems and resources supporting staff to provide all items of recommended care to all clients with diabetes?

### What the research shows

Older clients with type 2 diabetes are more likely to receive recommended services than younger clients

Many men and younger clients with diabetes are missing out on recommended care

Some clients with less complex or severe type 2 diabetes are missing out on recommended care

Health centre systems need to be strengthened in ways that support delivery of all recommended items of quality care for all clients with type 2 diabetes<sup>3,4</sup>

## What is continuous quality improvement?

CQI is a structured organisational process for involving people in planning and executing a continuous flow of improvement to provide quality health care that meets or exceeds expectations.<sup>5</sup>

Within health centres, CQI is a systematic way of using data to guide changes to the way care is organised, structured or designed to improve the quality of care and programs.<sup>6</sup>

By employing CQI audit tools to collect data from clients' records, health centres are able to compare this information with guidelines for recommended care. This process identifies which items of care are being delivered to a high standard and where improvements to delivery could be made. Health centre teams use this information to plan and make changes to their systems so that clients have better quality care. Repeating this cycle continues to improve services.<sup>7,8</sup>

## References

- 1 Australian Bureau of Statistics (ABS) 2013, *Aboriginal and Torres Strait Islander Health Survey: First Results, Australia 2012–13*, ABS Cat. No. 4727.0.55.001, ABS, Canberra.
- 2 Si, D., Bailie, R., Dowden, M., et al. 2010, Assessing quality of diabetes care and its variation in Aboriginal community health centres in Australia, *Diabetes Metabolism Research and Reviews*, 26:464–73.
- 3 Schierhout, G., Matthews, V., Connors, C., Thompson, S., Kwedza, R., Kennedy, C. & Bailie, R. 2015, Improvement in delivery of type 2 diabetes services differs by mode of care: A retrospective longitudinal analysis in the Aboriginal and Torres Strait Islander Primary Health Care setting. Under review.
- 4 Matthews V., Schierhout, G., McBroom, J., et al. 2014, Duration of CQI participation: A key factor explaining improvement in delivery of type 2 diabetes services to Aboriginal and Torres Strait Islander communities, *BMC Health Services Research*, 14:578.
- 5 Sollecito, W. & Johnson J. (eds) 2013, *McLaughlin and Kaluzny's Continuous Quality Improvement in Health Care*, 4th edn, Jones & Bartlett Learning, Burlington, MA.
- 6 O'Neill, S., et al. 2011, Identifying continuous quality improvement publications: What makes an improvement intervention 'CQI'?, *BMJ Quality & Safety*, 20(12):1011–19.
- 7 Bailie, R., et al. 2007, Indigenous health: Effective and sustainable health services through continuous quality improvement, *Medical Journal of Australia*, 186(10):525–7.
- 8 Wise, M., et al. 2013, *National Appraisal of Continuous Quality Improvement Initiatives in Aboriginal and Torres Strait Islander Primary Health Care*, The Lowitja Institute, Melbourne.

## Acknowledgments

The active support, enthusiasm and commitment of the staff and management of the participating health services and research organisations, and of the ABCD National Research Partnership Project team, have been vital to the success of the ABCD Project. This support is gratefully acknowledged.

This project has been supported by funding from the National Health and Medical Research Council (#545267) and the Lowitja Institute, and by in-kind and financial support from a range of community controlled and government agencies.

## For more information

**ABCD National Research Partnership**

**e** [abcd@menzies.edu.au](mailto:abcd@menzies.edu.au)

**t** +61 7 3169 4201

**w** [www.menzies.edu.au/abcd](http://www.menzies.edu.au/abcd)

**One21seventy**

**e** [one21seventy@menzies.edu.au](mailto:one21seventy@menzies.edu.au)

**t** 1800 082 474

**w** [www.one21seventy.org.au](http://www.one21seventy.org.au)

**Prepared by:** Alison Laycock, guided by Lynette O'Donoghue, Damian Rigney and Phillipa Cole

**With feedback from:** R. Bailie, V. Matthews, G. Schierhout, D. Si, A. Sheahan, C. Croft, F. Cunningham, J. Bailie, D. Mosca, S. Ferguson-Hill, A. De Witt, C. Juanta-Avila, A. Graham, R. Kwedza, S. Street, J. Mein, J. Fagan, J. Newham, P. Ryan, K. Copley, J. Campbell, D. Aanundsen, L. Patel, V. Gordon and participants at NT CQI Collaborative, November 2014

**Date:** May 2015