

INDIVIDUALISED DIABETES CARE

Does individualising diabetes care result in significantly better health outcomes than routine diabetes care for people with type 2 diabetes?

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Introduction: Diabetes and the individualisation of care

Diabetes mellitus includes a number of disorders characterised by significant morbidity and mortality from chronic microvascular and macrovascular complications. Most commonly diagnosed is type 2 diabetes, which typically presents as insulin resistance and impaired insulin secretion. It is a serious health challenge and priority in New Zealand. The condition is associated with high personal and social health costs, and disease prevalence is increasing over the years. Availability of different diabetes therapies and evidence of the benefits and risks of different approaches to care has increased, so there is more emphasis placed on the need for individualised diabetes care.

Issue: Complexities of diabetes care

- ♦ Increased knowledge base from new studies and risk-benefit trials about different diabetes therapies and approaches to care, and the increasing emergence of a variety of pharmacological therapies for diabetes give people with type 2 diabetes more options to choose from in terms of care and treatment
- ♦ A patient-centred approach is being emphasised by diabetes authorities, instead of strictly following treatment algorithms and 'routine' care

The trending towards individualisation of care must be backed up by evidence, so the question must be asked:

Does individualising diabetes care result in significantly better health outcomes than routine diabetes care for people with type 2 diabetes?

Conclusion

Individualising diabetes care can have significant health implications for people with type 2 diabetes,. It can result in better health outcomes and improved quality of life. Recommendations are to:

- ♦ Provide support and education for health providers on individualising diabetes care — emphasis put on the delivery of individualised care may overwhelm health care providers who may lack sufficient knowledge to be able to individualise diabetes care
- ♦ Consider individual patient perspective and adapt health education, goals and targets, and interventions to patient needs

Evidence: Key components of individualised diabetes care

Individualised Health Education

Studies suggest that effective diabetes health education is achieved by first understanding the individual patient perspective and then adapting the health information to the patient's needs (Brämberg, Dahlborg-Lyckhage, & Määttä, 2012; Koonce, Giuse, Kusnoor, Hurley, & Ye, 2015). Personalised educational materials targeted to health literacy levels and learning style preferences can significantly increase diabetes knowledge (Koonce et al., 2015).

Individualised Interventions

Lifestyle interventions (diet and exercise) are already known to produce better health outcomes for those with type 2 diabetes, but tailoring to patient's needs and preferences promote better empowerment and self-management (Yu et al., 2014). With a wider range of drugs available for diabetes, there are also more opportunities to individualise pharmacological diabetes therapy (Paschou & Leslie, 2013).

Individualised Health Goals and Targets

Studies suggest early intensive control of blood glucose is beneficial for newly diagnosed patients, however, high-risk, late-stage patients gain no benefit from intensive blood glucose control (Riddle & Karl, 2012; Subramanian & Hirsch, 2014; Turner et al., 1998). Priorities can be different for each person with diabetes.

Individualised Diabetes Care

References

- Brämberg, E., Dahlborg-Lyckhage, E., & Määttä, S. (2012). Lack of individualized perspective: a qualitative study of diabetes care for immigrants in Sweden. *Nursing & Health Sciences*, 14(2), 244 – 249. <http://dx.doi.org/10.1111/j.1442-2018.2012.00684.x>
- Koonce, T., Giuse, N., Kusnoor, S., Hurley, S., & Ye, F. (2015). A personalized approach to deliver health care information to diabetic patients in community care clinics. *Journal of the Medical Library Association*, 103(3), 123 – 130.
- Paschou, S., & Leslie, R. (2013). Personalizing guidelines for diabetes management: twilight or dawn of the expert?. *Bio Med Central*, 11(161). <http://dx.doi.org/10.1186/1741-7015-11-161>
- Riddle, M., & Karl, D. (2012). Individualizing targets and tactics for high-risk patients with type 2 diabetes. *Diabetes Care*, 35(10), 2100 – 2107.
- Subramanian, S., & Hirsch, I. (2014). Personalized diabetes management: moving from algorithmic to individualized therapy. *Diabetes Spectrum*, 27(2), 87 – 91.
- Turner, R., Holman, R., Cull, C., Stratton, I., Matthews, D., Frighi, V., ... Hadden, D. (1998). Intensive blood-glucose control with sulphonylureas or insulin compared with conventional treatment and risk of complications in patients with type 2 diabetes (UKPDS 33). *The Lancet*, 352(9131), 837-53. Retrieved from <http://search.proquest.com.op.idm.oclc.org/docview/199026363?accountid=39660>
- Yu, R., Yan, L., Wang, H., Ke, L., Yang, Z., Gong, E., ... Wu, Y. (2014). Effectiveness of a community-based individualized lifestyle intervention among older adults with diabetes and hypertension, Tianjin, China, 2008 – 2009. *Preventing Chronic Disease*, 11. <http://dx.doi.org/10.5888/pcd11.120333>

Table 1. PECOT model of search question (Schneider, Whitehead, LoBiondo-Wood, & Haber, 2013)

PECOT category	Information in relation to question	Explanation
Patient/problem	People with type 2 diabetes	Type 2 diabetes is increasing in prevalence, not just in adults, but also younger individuals as well.
Exposure/intervention	Individualised/personalised care	Articles that compared personalised diabetes care to routine diabetes care were reviewed.
Comparison	Routine care	
Outcome	Better health outcomes	The review explores whether or not significantly better health outcomes arise from individualising diabetes care.
Timeframe	N/A	

Summary

Evidence regarding the significance of individualising diabetes care was reconstructed into the form of a poster to facilitate knowledge transfer. Knowledge transfer or knowledge translation is any process that promotes transfer of evidence into respective disciplines; exchanging, disseminating, synthesising or applying knowledge within a complex system of interactions between researchers and knowledge-users (Canadian Institutes of Health Research, 2015; Ilic & Rowe, 2013).

A poster was chosen as the method of knowledge transfer because it could catch attention, provide a concise overview of the topic and be disseminated to a wide audience wherein individuals could go through information at their own pace (Forsyth, Wright, Scherb, & Gaspar, 2010; Ilic & Rowe, 2013). Although passive in nature, posters can increase knowledge, and change attitudes and behaviours when integrated with other educational interventions, such as oral presentations (Ilic & Rowe, 2013).

Consistency of font size and type and line spacing, alignment, contrast of light background and dark text, standardised formatting and use of a minimal number of colours were integrated for better visual aesthetics (Zerwic et al., 2010). The colour blue and circles were incorporated into the design because the universal symbol for diabetes is the blue circle (International Diabetes Federation, 2015).

References

- Canadian Institutes of Health Research. (2015). *About us—CIHR*. Retrieved from <http://www.cihr-irsc.gc.ca/e/29418.html>
- Forsyth, D., Wright, T., Scherb, C., & Gaspar, P. (2010). Disseminating evidence-based practice projects: poster design and evaluation. *Clinical Scholars Review*, 3(1), 14–21.
- Ilic, D., & Rowe, N. (2013). What is the evidence that poster presentations are effective in promoting knowledge transfer? A state of the art review. *Health Information and Libraries Journal*, 30(1), 4–12.
- International Diabetes Federation. (2015). *Blue circle*. Retrieved from <http://www.idf.org/bluecircle>
- Schneider, Z., Whitehead, D., LoBiondo-Wood, G., Haber, J. (2013). *Nursing and midwifery research methods and appraisal for evidence-based practice* (4th ed.). Sydney, N.S.W.: Mosby.
- Zerwic, J., Grandfield, K., Kavanaugh, K., Berger, B., Graham, L., & Mershon, M. (2010). Tips for better visual elements in posters and podium presentations. *Educ Health (Abingdon)*, 23(2), 267.