

Interprofessional Education in Diabetes Care

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Contributor: Samira Sidani , Kunal D. Patel

Diabetes is a leading non-communicable disease with a huge and predictably increasing burden on individuals, societies and governments. Interprofessional education (IPE) aims to enhance healthcare providers' competence and patient care by providing well-organised, coordinated interprofessional care (IPC) within teams of healthcare professionals of different disciplines. Interprofessional practices are crucial in diabetes care. However, evidence on the effect of diabetes-specific IPE on diabetes outcomes is limited.

diabetes care

diabetes outcomes

interprofessional education (IPE)

interprofessional collaboration (IPC)

1. Introduction

Diabetes is one of the most prevalent non-communicable diseases in the world [1]. It is an arguably familiar disease as it has been thoroughly researched over the years [2]. Furthermore, notable advancements in its treatment have been achieved [2]. Despite these facts, diabetes remains a substantial and remarkably worsening health and economic burden that policymakers and governments strive to control and mitigate [1][2]. The International Diabetes Federation (IDF) stated in its 2021 report that diabetes is "spiralling out of control" [1]. Accordingly, every effort leading to the prevention and treatment of diabetes and avoidance or delay of diabetes complications must be considered. Amongst those efforts, techniques like interprofessional education (IPE) and interprofessional collaboration (IPC) have been beneficial to patients with complex, chronic diseases [3].

IPE occurs when professionals from two or more disciplines learn with, from and about each other to optimise healthcare delivery by enhancing teamwork and communication skills, thus strengthening health systems and improving health outcomes [3][4].

IPE can be integrated into health profession curricula and introduced to existing practices via professional development and continued medical education. It is a combination of knowledge, skills, values, attitudes and behaviours that constitute collaborative practice [5][6]. Interprofessional collaboration (IPC) refers to the joint efforts of HCPs from different disciplines to work together with the common goal of providing high-quality patient care [6]. Health workers are ready for collaborative practice when they have learnt and are competent in interprofessional teamwork. Optimal care is provided when a team of HCPs works together and at equal measure, each member being aware of their own role and knowledgeable, supportive and appreciative of the other members' roles in the care provision [3][4]. This is when IPE emerges as an essential aspect of care and when collaboration results in a

synergistic effect that benefits the patients and refines HCPs' skills, attitudes and knowledge [4]. Interprofessional strategies can effectively equip HCPs to provide enhanced care both individually and as a team, thus empowering people with diabetes to manage the multi-faceted challenges associated with their condition more effectively [7][8][9].

Despite being identified as approaches to care provision that enhance care services, IPE and IPC arguably have some overlapping features, which makes drawing conclusions on their distinct effects on improving aspects of health a bit challenging [10]. For example, the definitions for IPE and IPC partially overlap, which makes the conceptual demarcation of the two processes hard to identify and hinders the establishment of a profound evidence base on interprofessional strategies that are most effective in healthcare [10]. Additionally, the close-knit nature of IPE and IPC makes many researchers use the terms interchangeably as they report on their effects on improving care provision, and IPE is often used as an umbrella term to encompass any interprofessional activity [11].

The use of IPE in healthcare reportedly provides the highest quality of patient care, improving patient safety, healthcare services and the individual skills of every HCP team member [12][13]. In a meta-analysis aimed at determining the effectiveness of IPE on improving students' knowledge, skills and attitudes, the positive impact and effectiveness of IPE programmes have been shown in multiple healthcare disciplines [12]. The health professions in which IPE has been assessed include emergency department nurses and physicians, primary health care practitioners, pharmacists, medical and allied health students and social care professionals, among others [12][13][14]. Diabetes care is also one of the many disciplines in which IPE has been proven beneficial as it improves confidence, knowledge and quality of diabetes care [3][4]. The improvement in the quality of diabetes care was reflected through specific parameters, including significantly reduced management errors, enhanced blood glucose monitoring, increased foot assessment and improved practice efficiency (number of patients seen per hour) [4][7].

2. Interprofessional Education in Diabetes Care

For chronic diseases to be managed more effectively, operative collaborative relationships must be established between healthcare practitioners from different disciplines, which can be achieved through teamwork. This is equally true for the management of diabetes as a disease of complex nature and multisystem involvement, of which prevalence continues to rise [1]. Due to this increasing prevalence, people with diabetes are more often being treated, whether in the inpatient or outpatient settings, by HCPs who are not always adequately trained to provide optimal diabetes care, which causes delays in care provision and suboptimal patient outcomes [15]. Additionally, quality-improvement collaboratives that are well integrated and patient centred are cost effective for large groups of people with diabetes [16]. This calls for developing an effective and efficient collaborative workforce equipped with the skills and knowledge to confidently manage diabetes in a timely manner [15]. At the core of providing effective, efficient healthcare services is IPE as a didactic program adopted to teach HCPs from different disciplines and its practical application, interprofessional collaboration, which describes how service to patients is provided within the multidisciplinary team of HCPs [14][17]. Two main features of IPE and IPC are the subject of recent research. Firstly, the effect of IPE and IPC has been evaluated on different aspects of the providers' treatments of people with diabetes and other chronic diseases, while the other research parameter is the impact of IPC interventions on

patient outcomes. While most studies ascertain an overall positive effect on HCPs' practice [9][17][18], the extent to which IPE and IPC improve chronic disease outcomes in patients is a question with an answer that is not yet as conclusive but has been studied in many systematic reviews and meta-analyses [7][15].

Diabetes self-management (DSM) is a vital aspect of non-pharmacologic diabetes care that, when adequately applied, dramatically impacts the development and progression of diabetes by achieving good glycaemic control, reducing diabetes complications and improving the quality of life in a cost-effective manner [19][20]. Accordingly, the near normalisation of blood glucose is essential to the treatment plan, and extreme fluctuations in it should, ideally, be minimised [20][21]. The face-to-face interaction between diabetes patients and clinicians does not often exceed two hours in a year, while for the rest of the time, patients and/or families are left to care for this complex disease on their own [19]. Despite being effective, engagement and compliance to self-care behaviours are generally low [19]. The way IPE and IPC may positively impact diabetes outcomes could either be through patients becoming more empowered to improve their DSM after being taught the basics of DSM and the available support by IPC teams or by being cared for in centres where IPC is common practice [22][23][24], which, in turn, influences specific patient behaviours that impact diabetes outcomes.

References

1. International Diabetes Federation. IDF Diabetes Atlas, 10th ed.; Brussels, Belgium. 2021. Available online: <https://www.diabetesatlas.org> (accessed on 18 June 2022).
2. Bommer, C.; Sagalova, V.; Heesemann, E.; Manne-Goehler, J.; Atun, R.; Bärnighausen, T.; Davies, J.; Vollmer, S. Global Economic Burden of Diabetes in Adults: Projections from 2015 to 2030. *Diabetes Care* 2018, 41, 963–970.
3. Health Professions Networks Nursing & Midwifery Human Resources for Health Framework for Action on Interprofessional Education & Collaborative Practice. 2010. Available online: http://www.who.int/hrh/nursing_midwifery/en/ (accessed on 16 December 2020).
4. Herring, R.; Pengilley, C.; Hopkins, H.; Tuthill, B.; Patel, N.; Nelson, C.; Currie, A.; Russell-Jones, D.L. Can an interprofessional education tool improve healthcare professional confidence, knowledge and quality of inpatient diabetes care: A pilot study? *Diabet. Med.* 2013, 30, 864–870.
5. Witt Sherman, D.; Flowers, M.; Rodriguez Alfano, A.; Alfonso, F.; De Los Santos, M.; Evans, H.; Gonzalez, A.; Hannan, J.; Harris, N.; Munecas, T.; et al. An Integrative Review of Interprofessional Collaboration in Health Care: Building the Case for University Support and Resources and Faculty Engagement. *Healthcare* 2020, 8, 418.
6. IPEC (Interprofessional Education Collaborative). Core Competencies for Interprofessional Collaborative Practice: 2016 Update. 2016. Available online: <https://ipec.memberclicks.net/assets/2016-Update.pdf> (accessed on 25 June 2022).

7. Nagelkerk, J.; Thompson, M.E.; Bouthillier, M.; Tompkins, A.; Baer, L.J.; Trytko, J.; Booth, A.; Stevens, A.; Groeneveld, K. Improving outcomes in adults with diabetes through an interprofessional collaborative practice program. *J. Interprof. Care* 2018, 32, 4–13.
8. De La Rosa, M.; Pitts, S.; Chen, P.H. An interprofessional collaboration of care to improve clinical outcomes for patients with diabetes. *J. Interprof. Care* 2020, 34, 269–271.
9. Kangas, S.; Rintala, T.M.; Jaatinen, P. An integrative systematic review of interprofessional education on diabetes. *J. Interprof. Care* 2018, 32, 706–718.
10. Reeves, S.; Goldman, J.; Gilbert, J.; Tepper, J.; Silver, I.; Suter, E.; Zwarenstein, M. A scoping review to improve conceptual clarity of interprofessional interventions. *J. Interprof. Care* 2011, 25, 167–174.
11. Reeves, S. An overview of continuing interprofessional education. *J. Contin. Educ. Health Prof.* 2009, 29, 142–146.
12. Guraya, S.Y.; Barr, H. The effectiveness of interprofessional education in healthcare: A systematic review and meta-analysis. *Kaohsiung J. Med. Sci.* 2018, 34, 160–165.
13. Zanotti, R.; Sartor, G.; Canova, C. Effectiveness of interprofessional education by on-field training for medical students, with a pre-post design. *BMC Med. Educ.* 2015, 15, 121.
14. Bridges, D.R.; Davidson, R.A.; Odegard, P.S.; Maki, I.V.; Tomkowiak, J. Interprofessional collaboration: Three best practice models of interprofessional education. *Med. Educ. Online* 2011, 16, 6035.
15. Atsalos, C.; Payk, M.; O'Neill, A.; Inglis, S.; Cheung, N.W.; Jackson, D. Meeting the challenges posed by an escalating diabetes healthcare burden: A mixed methods study. *Contemp. Nurse* 2019, 55, 469–485.
16. Schouten, L.M.T.; Niessen, L.W.; van de Pas, J.W.A.M.; Grol, R.P.T.M.; Hulscher, M.E.J.L. Cost-effectiveness of a quality improvement collaborative focusing on patients with diabetes. *Med. Care* 2010, 48, 884–891.
17. Pascucci, D.; Sassano, M.; Nurchis, M.C.; Cicconi, M.; Acampora, A.; Park, D.; Morano, C.; Damiani, G. Impact of interprofessional collaboration on chronic disease management: Findings from a systematic review of clinical trial and meta-analysis. *Health Policy* 2021, 125, 191–202.
18. Riskiyana, R.; Claramita, M.; Rahayu, G.R. Objectively measured interprofessional education outcome and factors that enhance program effectiveness: A systematic review. *Nurse Educ. Today* 2018, 66, 73–78.
19. American Diabetes Association. 4. Lifestyle Management: Standards of Medical Care in Diabetes —2018. *Diabetes Care* 2018, 41 (Suppl. 1), S38–S50.

20. Shrivastava, S.R.; Shrivastava, P.S.; Ramasamy, J. Role of self-care in management of diabetes mellitus. *J. Diabetes Metab. Disord.* 2013, 12, 14.
21. Choudhary, P.; Genovese, S.; Reach, G. Blood Glucose Pattern Management in Diabetes: Creating Order from Disorder. *J. Diabetes Sci. Technol.* 2013, 7, 1575–1584.
22. Khan, N.; Sapsed, S. Diabetes foot complication: Assessing primary and secondary outcomes of multidisciplinary team versus standard care (a systematic review). *Int. J. Diabetes Dev. Ctries.* 2017, 37, 129–136.
23. Ching, D.L.; Forte, D.; Aitchison, L.; Earle, K. Is An Inter-Professional Education Programme Effective in Promoting Collaboration and Improving Diabetes Care? Article Points. *Diabetes Prim. Care* 2015, 17, 132–137. Available online: <https://www.pcdsociety.org/resources/details/is-an-inter-professional-education-programme-effective-in-promoting-collaboration-and-improving-diabetes-care> (accessed on 28 June 2022).
24. Janson, S.L.; Cooke, M.; McGrath, K.W.; Kroon, L.; Robinson, S.; Baron, R.B. Improving Chronic Care of Type 2 Diabetes Using Teams of Interprofessional Learners. *Acad. Med.* 2009, 84, 1540–1548.

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