ORIGINAL ARTICLE

Asclepius

Assessing the Opinions of Primary Health-care Professionals on Consultant-led Multidisciplinary Team Meetings in the Care of Patients with Diabetes in East London, United Kingdom: A Questionnaire Survey

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ABSTRACT

Background: Consultant-led multidisciplinary team (MDT) meetings in primary care in diabetes were introduced in Tower Hamlets in 2008. These meetings include an update on key performance indicators, a clinical update in diabetes, and a discussion of difficult diabetes cases. **Aims:** This study aims to assess the opinions of primary health-care professionals (PHPs) on consultant-led MDT meetings in improving the care of patients with diabetes in Tower Hamlets, East London. **Methods:** A researcher attended diabetes MDTs over a 2-month period and undertook a questionnaire survey at the end of each meeting. Quantitative and thematic analysis of responses was undertaken. **Results:** Quantitative analysis suggests that PHPs found the MDT meetings beneficial, believed that the MDTs helped reduce referral rates and thought that their knowledge of diabetes care was improved. Nurses were statistically significantly more likely to strongly agree with the statements, "*I would recommend that these meetings occur in other localities*," "*there are clear goals for this MDT meeting,*" and "*these MDT meetings are an effective use of my time.*" General practitioners were statistically significantly more likely to agree with the statement, "*this MDT meeting interferes with my other clinical work.*" In the qualitative analysis, case discussion and education were two recurrent themes. **Conclusion:** PHPs in Tower Hamlets find consultant-led MDT meetings in diabetes in primary care valuable. MDT meetings in other long-term conditions in primary care could also be valuable.

Key words: Primary health-care professionals, multidisciplinary team, community diabetes

Article Points

What is known about this topic?

- Most routine diabetes care in the UK is delivered by PHPs, with specialists delivering care for complex patients.
- Diabetes care requires education and support for PHPs. This may be delivered through community-based MDT meetings.

What this paper adds

- This survey suggests that PHPs view consultant-led diabetes MDT as extremely valuable in improving diabetes care.
- Qualitative results suggested that case discussion and education in the MDT meetings are highly beneficial for PHPs.
- MDT meetings for long-term conditions are a useful way to improve education for PHPs and drive improvements in the management of these conditions.

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INTRODUCTION

Diabetes services face significant challenges in delivering high-quality diabetes care in the face of the growing prevalence of the condition. Tower Hamlets is a deprived, multiethnic borough in East London. About 40% of the population of the borough are of South Asian or African Caribbean origin.[1] The borough has a rapidly growing prevalence of T2D – with a quadrupling of numbers in the past 14 years (4040 people with known T2D in 2004; 17,052 in 2018).[2]

In 2008, Tower Hamlets became a pilot site for integrated care in diabetes.[3] We have previously described this model of diabetes care, which has led to significant improvements in diabetes outcomes in the population.[4] One key element of this model involves regular consultant-led network diabetes multi-disciplinary team meetings (MDTs) which offer an opportunity for primary health care professionals (PHPs) to discuss diabetes issues and complex cases with a consultant in diabetes within the general practice.

The aim of the survey was to determine the opinions of PHPs attending the network diabetes MDTs on whether they felt the MDT enabled better diabetes care, and what changes could be suggested to improve the MDT.

METHODS

Approval for the study was obtained from the clinical governance lead in the Department of Diabetes and Metabolism at the Royal London Hospital, and ethical approval was not required as this was considered a service evaluation. The network diabetes MDT occurs in each network on a bimonthly basis. Each meeting involves discussion around network diabetes performance, a clinical update in diabetes, and finally, a chance to discuss any difficult diabetes cases the PHPs had seen.

One researcher (AC) attended an MDT meeting in each network and undertook a questionnaire survey of PHPs attending the meetings. The questionnaire used a Likert scale to assess agreement with a series of statements about the MDTs plus space to allow free-text comments [Appendix 1]. The questionnaire was also emailed to other PHPs in the networks who had attended the network meetings in the past.

Two methods were used to determine what to include in the questionnaire. The first was to include questions based on literature review. The second method involved discussion between the researcher and the consultant in diabetes. To gain a more detailed insight, the questionnaire included three questions with spaces for free-text responses. Formal psychometrical evaluation of the questionnaire was not undertaken.

Analysis

SPSS was used to analyze the quantitative data. Demographic data were analyzed using appropriate descriptive statistics. For the Likert scale questions, median and the interquartile range for each were described. Comparisons were performed for the Likert scale questions between networks, number of years attending the MDT, job titles, psychologist attendance, duration of meeting, and questionnaires emailed versus completed in the MDT meeting. The Kruskal–Wallis H test was used to examine the association between the responses and the following variables: Networks, job titles, and duration of the meetings. The Spearman's rank correlation test was used to examine the association between the number of years the responders had attended the MDT meetings and their responses. The Mann–Whitney U-test was used to examine the association between the responses and the following variables: Psychologist attendance and questionnaires emailed versus questionnaires completed in the MDT meeting. Thematic analysis of the free-text responses in the questionnaire was undertaken.

RESULTS

The overall response rate for completion of the questionnaire by those attending the MDT or emailing the questionnaire was 78.3%. About 62.8% of the questionnaires were completed at the MDT and the rest were emailed. The median number of years that the responders had attended the MDT meetings was 4 years (interquartile range 1.5 years). The job title that occurred most frequently was general practitioner (39.5%), followed by practice nurse (27.9%). Table 1 shows the median and interquartile ranges of responses to the Likert scale questions. Overall, the MDT meetings were highly valued by the PHPs and were deemed to be useful, improve knowledge of diabetes, helped to reduce referral rates, and were engaging and responsive.

Analysis of the question responses according to job titles was undertaken. Nurses were statistically significantly more likely to strongly agree with the statements, "*I would recommend that these meetings occur in other localities*" (Kruskal–Wallis H test: 7.595, DF: 2, $P = 0.022$), "*there are clear goals for this MDT meeting*" (Kruskal–Wallis H test: 7.368, DF: 2, $P = 0.025$), and "*these MDT meetings are an effective use of my time*" (Kruskal–Wallis H test: 11.958, DF: 2, $P = 0.003$). GPs were statistically significantly more likely to agree with the statement, "*this MDT meeting interferes with my other clinical works*" (Kruskal–Wallis H test: 11.410, DF: 2, $P = 0.003$).

Further analysis suggested that the longer PHPs had attended the meetings, the less likely they were to strongly agree with the statement, "*These meetings should occur more often than every 2 months*" (Spearman's rank correlation coefficient: −0.221, $P = 0.048$). In addition, the longer the PHPs had attended the meetings, the more likely they were to strongly agree with the statement, "*I feel involved in the discussion*"

Table 1: Median and interquartile ranges of responses to the Likert scale questions

Questions	Median	IQR
1. I find these network MDT meetings useful	5.00	4.75–5.00
2. I believe that these meetings reduce my referral rates to secondary diabetes care	5.00	4.00–5.00
3. I am an equal member of these meetings	5.00	4.00–5.00
4. The duration of the meetings is too long	2.00	1.00–2.00
5. My knowledge of diabetes care is increased by attending these meetings	5.00	4.00–5.00
6. I would recommend that these meetings occur in other localities	5.00	4.00–5.00
7. There are clear goals for this MDT meeting	5.00	4.00–5.00
8. These meetings should occur more often than every 2 months	3.00	2.00–4.00
9. There is a good team atmosphere in these MDT meetings	5.00	4.00–5.00
10. These MDT meetings are an effective use of my time	5.00	4.00–5.00
11. I would prefer a webinar version of the meeting	2.00	1.00–3.00
12. This MDT meeting interferes with my other clinical work	2.00	2.00–2.00
13. I feel involved in the discussion	4.00	4.00–5.00
14. These MDT meetings help me provide more personalized care	4.00	4.00–5.00
15. Too many different disciplines attend this meeting	2.00	2.00–2.00
16. These MDT meetings help me provide better mental health support	3.00	3.00–4.00
17. The consultant that runs the meeting is engaging	5.00	5.00–5.00

MDT: Multidisciplinary team

(Spearman's rank correlation coefficient: 0.290, $P = 0.009$). Those who completed the questionnaires at the MDT were statistically significantly more likely to strongly agree with the statement, "*the Consultant that runs the meeting is engaging*" (Mann–Whitney U-test: 648.000, $P = 0.048$).

A clinical psychologist attended the MDT meetings in networks 2 and 7. There was a close to a significant association between the statement, "*These MDT meetings help me provide better mental health support*" and the networks that had a clinical psychologist attend (Mann–Whitney U-test: 375.000, $P = 0.071$).

Thematic analysis

Six main themes were identified in the free-text responses to the statement "*Please give two suggestions on how to improve the MDT*:" Education, information before and after the MDT meetings, other specialists attending the meetings, more case discussion, and more attendees and timing.

Five main themes were identified in the free-text responses to the statement, "*Please explain how these MDT meetings have had an impact on your referral rates*:" Reduced referral rates due to discussion of cases, reduced referral rates due to education, and emailing the diabetes consultant reduces referral rates, not sure whether referral rates are reduced by MDTs and referral rates are increased.

Four main themes were identified in the free-text responses to the question: "*In what way do you find these MDT meetings useful*?:" Education, case discussion, networking, and interactive.

DISCUSSION

We have previously reported that a service redesign of diabetes services for patients in a deprived multiethnic community, underpinned by patient and professional education, and specialist support for PHPs has led to improvements in diabetes outcomes.[4,5] The network diabetes MDT has been fundamental to this model as it enables relationships between specialists and PHPs to be developed. This has led to a significant reduction in referrals to specialist care, despite rapid rise in the prevalence of the condition.

The present study reports the opinions of PHPs on the role of the diabetes MDT on the management of diabetes in primary care. Our survey suggests that PHPs view the consultant-led diabetes MDT as extremely valuable and central to the improvements in diabetes care seen in the area. PHPs who had attended the meetings for a longer time were more likely they were to agree that they felt involved in the discussion and the less likely to agree that the meetings should occur more often than every 2 months. Qualitative results suggested that case discussion and education in the MDT meetings are highly beneficial for the PHPs.

Previous studies suggest that MDT work can have positive impacts on patients with T2D. One study explored GPs satisfaction with H2M, which is an MDT for patients living

with HIV and hepatitis C.[6] This scheme involved monthly case conferences and all the GPs surveyed found these conferences instructive, a time to clarify treatment, and a good source of feedback for patients. The results of our survey show similar results. A case study of managing diabetes mellitus in a primary health-care center in Lebanon was published.[7] This intervention included provider support through devising standardized guidelines for the management of patients with T2D by PHPs. Patient education was provided, as was education for the PHPs. An endocrinologist visited the health center every 2 weeks to provide support. The outcomes of this intervention were the development of team spirit and support, continuity of care, and improvement of documentation. Our study also shows that there is a good team atmosphere when a diabetes consultant attends MDT meetings in diabetes and adds that these MDT meetings help the PHPs provide more personalized care. The previous studies have not assessed MDT meetings in primary care and there is a lack of research into what PHPs think of MDT diabetes care. This is the gap the researcher aimed to fill.

The strengths of this study are that this is the first research conducted on the views of PHPs on consultant-led MDT meetings in diabetes in primary care. Quantitative and qualitative data were analyzed, and a good response rate of 78.3% was achieved. There are weaknesses of the study that should be mentioned. Approximately a third (37.2%) of questionnaires were emailed, which might have led to recall bias. The "ceiling effect" may have occurred as 9 of the 17 Likert scale questions (52.9%) had a median response of 5.00 (strongly agree), which means that the relationships with other variables could be disguised.[8] Similarly, acquiescent response bias may have occurred as 11 of the 17 Likert scale questions (64.7%) had a median response of 4.00 or 5.00 (agree and strongly agree).

CONCLUSION

Long-term conditions such as diabetes, cardiovascular disease, respiratory disease, or mental health are common issues dealt with by PHPs but sometimes require the assistance of specialists. Referral to specialist clinics can lead to long waits for patients to receive appropriate care. Therefore, a potential way of improving education for PHPs and improving access to advice is to have a regular MDT between PHPs and specialists. The diabetes MDT has been shown to be effective in improving care, education, and reducing waiting times in our area. Our survey suggests that PHPs value accesses to the MDT as a way of getting advice clinical problems, which require some specialist advice. A number of PHPs suggested that the MDT should be expanded to include other specialist areas such as respiratory or cardiovascular disease. Indeed, recently, some renal physicians have attended diabetes MDTs to offer some specific renal advice and guidance, particularly as diabetes is the most common cause of chronic kidney disease in the local area. Areas where the MDT could be improved include information before and after the MDT meetings – agendas and minutes were suggested. PHPs who attended the MDTs were a self-selecting group; they were interested in diabetes and most had some degree of specialist training in diabetes. One challenge for the MDT is to widen its catchment, to attract more PHPs who require further training in diabetes care. Suggestions such as a monthly newsletter could be considered. The possibility of a "webinar-based" MDT was also suggested, which would enable more people to access the discussion.

In summary, therefore, we describe a survey of PHPs opinions on a diabetes MDT. PHPs valued the opportunity to discuss complex cases, learn more about diabetes care, and exchange ideas about management. PHPs felt that MDTs with clinicians in other specialties such as cardiovascular or respiratory disease would be valuable.

REFERENCES

1. Tower Hamlets Corporate Research Unit. Mid-2016 Population Estimates Tower Hamlets; 2017. Available from: https://www.towerhamlets.gov.uk/Documents/Borough_statistics/Population/Mid_2016_Population_Estimates_for_Tower_Hamlets.pdf. [Last accessed on 2018 Jul 13].
2. Tower Hamlets Council. Type 2 Diabetes Factsheet. Tower Hamlets Joint Strategic Needs Assessment; 2015. Available from: https://www.towerhamlets.gov.uk/Documents/Public-Health/JSNA/Type_2_diabetes.pdf. [Last accessed on 2018 Jul 13].
3. Raine R, Wallace I, Bhaird C, Xanthopoulou P, Lanceley A, Clarke A, *et al*. Improving the effectiveness of multidisciplinary team meetings for patients with chronic diseases: A prospective observational study. Health Serv Deliv Res 2014.
4. Hull S, Chowdhury TA, Mathur R, Robson J. Improving outcomes for patients with Type 2 diabetes using general practice networks: A quality improvement project in East London. BMJ Qual Saf 2014;23:171-6.
5. Chowdhury TA, Huda B. A decade of change in diabetes services in a deprived multiethnic inner city area: Diabetes in Tower Hamlets. Br J Diabetes 2016;16:188-92.
6. Sternhell P, Landstra J, Andersson-Noorgard K. H2M: A GP-focused multidisciplinary team for patients living with HIV and hepatitis C. Australas Psychiatry 2012;20:220-4.
7. Arevian M. The significance of a collaborative practice model in delivering care to chronically ill patients: A case study of managing diabetes mellitus in a primary health care center. J Interprof Care 2005;19:444-51.
8. Salkind N. Encyclopedia of Research Design. Thousand Oaks: SAGE Publications Ltd.; 2010.

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APPENDIX 1

Community diabetes MDT meeting questionnaire

General Information

1) What is your job title?
2) How many years have you been attending these network MDT meetings in Tower Hamlets?

Please think about the network MDT meetings that you attend and indicate whether you agree or disagree with each of the following statements.

Please place a tick for each statement as appropriate.

	Strongly disagree	Disagree	Uncertain	Agree	Strongly agree
1. I find these network MDT meetings useful					
2. I believe that these meetings reduce my referral rates to secondary diabetes care					
3. I am an equal member of these meetings					
4. The duration of the meetings is too long					
5. My knowledge of diabetes care is increased by attending these meetings					
6. I would recommend that these meetings occur in other localities					
7. There are clear goals for this MDT meeting					
8. These meetings should occur more often than every 2 months					
9. There is a good team atmosphere in these MDT meetings					
10. These MDT meetings are an effective use of my time					
11. I would prefer a webinar version of the meeting					
12. This MDT meeting interferes with my other clinical work					
13. I feel involved in the discussion					
14. These MDT meetings help me provide more personalized care					
15. Too many different disciplines attend this meeting					
16. These MDT meetings help me provide better mental health support					
17. The consultant that runs the meeting is engaging					

18. Please give two suggestions on how to improve this MDT meeting.
19. Please explain how these MDT meetings have had an impact on your referral rates.
20. In what way do you find these MDT meetings useful?

Thank you for taking the time to complete this questionnaire.