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Physicians' Perceptions of the Type 2 Diabetes Multidisciplinary Treatment Team: A Qualitative Study

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Abstract

Purpose—The purpose of this study was to explore physicians' perceptions of the multidisciplinary type 2 diabetes treatment team.

Methods—Nineteen physicians (74% endocrinologists; 26% primary care) participated in semi-structured interviews. Audiorecorded data were transcribed, coded, and analyzed using thematic analysis and NVivo 8 software.

Results—Physicians considered the multidisciplinary team, including a physician and diabetes educator, as very important to diabetes treatment. Participants described how diabetes with its many co-morbidities and challenging lifestyle recommendations, is difficult for any single physician to treat. They further described how the team's diverse staff offers complementary skills and more contact time for assessment and treatment of patients, developing treatment relationships, and supporting patients in learning diabetes self-care. Physicians stressed the necessity of regular and ongoing communication among team members to ensure patients receive consistent information, and some reported that institutional factors interfere with intra-team communication. They also expressed concerns about the team approach in relation to individualized treatment and patients' reluctance to see multiple providers.

Conclusions—This study highlights physicians' positive perceptions of and concerns about the type 2 diabetes multidisciplinary team. Further study of diabetes educators' and patients' perceptions of the team approach is needed.

Keywords

type 2 diabetes; treatment team; qualitative research

Type 2 diabetes is a complex chronic disease with multiple comorbidities.¹ It is among the most common chronic diseases and a leading cause of death in the world today.² Patients with type 2 diabetes face challenging self-care regimens that could include weight reduction, increased physical activity, following diabetes nutrition guidelines, administering oral agents, non-insulin injectables, or insulin, and monitoring blood glucose levels. Physicians

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who treat type 2 diabetes face competing clinical concerns³ and complex treatment situations that require that they prescribe more medications and make more frequent adjustments in dosages in order for patients to attain lower levels of hemoglobin A1C, blood pressure, and LDL cholesterol.⁴ Furthermore, although early and proactive treatment of diabetes with the goal of achieving close to normal glucose levels can reduce complications,⁵ many patients still do not achieve evidence-based A1C goals.^{6,7}

The Chronic Care Model of treatment proposes the multidisciplinary team as an important component of improved diabetes treatment.⁸ The multidisciplinary team is comprised of diverse health care professionals who communicate regularly and on a continuing basis about a defined group of patients.⁹ Standards for diabetes medical care note the importance of multidisciplinary diabetes care teams.¹⁰ Although studies using multidisciplinary teams in diabetes treatment reported positive treatment outcomes,^{8,11} there is a paucity of research on how members of the diabetes treatment team view the team approach. Therefore, exploring how physicians perceive the multidisciplinary team is a first step in gaining greater understanding of the benefits and barriers of type 2 diabetes treatment teams and their impact on care. Thus, this study explored physicians' expectations and perceptions of the multidisciplinary diabetes treatment team.

Research Design and Methodology

Research Design

The authors conducted in-depth interviews with endocrinologists and primary care physicians who treat patients with type 2 diabetes. In-depth interviewing is a qualitative technique involving intensive one-on-one interviews with a small number of participants¹². This approach provides detailed information about an individual's beliefs and behaviors. The authors explored physicians' perceptions of the multidisciplinary type 2 diabetes treatment team.

Sample

The authors employed criterion sampling¹³, a form of purposive sampling, to recruit physicians who met the following criteria: (1) English-speaking; (2) endocrinologist or primary care physician with five years of postresidency training; and (3) at least 5% of practice consisting of patients with type 2 diabetes. Criterion sampling is useful for identifying participants who meet predetermined criteria of importance, thus ensuring quality of the data collected and the veracity of data saturation. Physicians were recruited via telephone, e-mails, and letters to Boston area hospitals, clinics, and practices. The Joslin Diabetes Center Committee on Human Subjects approved the research protocol. All physicians provided informed written consent prior to participation.

Data Collection

The authors devised a semi-structured interview guide and field-tested it for flow and clarity of the questions. A clinical psychologist and a health psychologist, two experienced interviewers, asked physicians broad, open-ended questions about their expectations of the diabetes treatment team and factors that contribute to the success and/or failure of the diabetes treatment team. For example, 2 questions included in the survey were: "What are your expectations of the treatment team? How does the treatment team contribute to treatment success or failure?" Interviewers used directive probes to elicit additional information and clarify questions; interviewers also wrote field notes to capture key points and observations from the interviews. Interviews were conducted at Boston area hospitals, clinics, and practices, and lasted 30 to 60 minutes. All interviews were digitally audiorecorded and transcribed. The authors performed a quality check of the transcribed

files while listening to the interview recordings to validate the transcriptions. Names and identifiers were removed to protect physician confidentiality.

Two criteria were used to evaluate the sampling: adequacy and appropriateness.^{14,15} Adequacy addresses the volume of the data, or, in other words, whether adequate data support the emergent insights. Appropriateness addresses the quality of the data, or, in other words, whether the data provide the descriptive and interpretive depth required to clearly delineate themes. Using these criteria, data were collected until saturation was reached, that is until no new information was generated from the interviews (redundancy).

Data Analysis

The multidisciplinary research team - which consisted of health psychologists, a clinical psychologist, an endocrinologist, and 2 research assistants - performed content analysis by independently marking and categorizing key words, phrases, and texts to identify themes.¹⁶⁻¹⁸ Specifically, the authors used line-by-line analysis to develop codes using the research questions as guides and compared codes of new transcripts to existing codes to characterize the overarching themes using NVivo 8 software (QSR International, Victoria, Australia). The research team met weekly over the course of a year to code the data; discrepancies were reviewed, discussed, and resolved through consensus. After the transcripts were coded and reviewed, 1 member of the research team (EAB) coded the marked transcripts in NVivo 8 software. Qualitative software such as NVivo 8 helps researchers categorize, sort, and arrange data so that large amounts of data are organized and easily retrieved.

To support credibility/validity and dependability/reliability of the data, the authors triangulated data sources, methods, and investigators and tracked the decision-making process using an audit trail.^{19,20} The audit trail included a description of the research steps conducted from the development of the project to the presentation of findings.

Results

Nineteen physicians (74% endocrinologists and 26% primary care physicians; see Table 1 for demographic information) participated in semi-structured interviews. There were no discernable differences between types of physicians. Transcript exemplars indicating identification number and sex are included with quotations (eg, Physician 100M/F). Through thematic analysis, 3 themes emerged from physicians' descriptions of the multidisciplinary type 2 diabetes treatment team: Composition of the Team, Benefits of Diverse Staff and Concerns with Team Approach.

Composition of the Team

Seventeen physicians reported working as part of a multidisciplinary diabetes team, and only 2 physicians (primary care) reported not having a treatment team in their practices; however, they both described wanting to work with a team. For example, 1 of these 2 physicians without a team (116 M) stated: I would like to have a diabetes teacher.

I would like someone, at least to be initially available to help patients get started on insulin. If I could have someone help me get them started on insulin, then I don't have to waste time sending them to other people who do this, and also I could be more enthusiastic about using it rather than fighting a hopeless battle with pills that are inadequate.

Most study physicians (74%) described the core multidisciplinary treatment team as including a physician and clinical diabetes educator (nurse and/or dietician/nutritionist) and

less frequently, a pharmacist or exercise physiologist. Sixteen percent described an expanded team that included specialists such as mental health professionals, ophthalmologists, nephrologists, cardiologists, and podiatrists - to whom patients were referred for psychosocial difficulties or diabetes complications. Physicians did not elaborate on whether the expanded team's input influenced the core team's approach or how often communication with this team occurred.

Physicians were specifically queried about their reactions to patients' mental health concerns; their descriptions varied as to addressing these concerns and making referrals to mental health professionals. Almost all physicians described the importance of "inquiring, listening, being empathic, and establishing rapport" when faced with patients' psychosocial difficulties. Some endocrinologists described referring patients with mental health concerns to their primary care physicians: "If someone's really hurting I might suggest that they talk to their primary care doctor about what's going on" (114M). Both endocrinologists and primary care physicians described, "Encouraging them to see a real mental health professional" (102M). Some primary care physicians described how addressing mental health concerns was part of their role: "I think a big part of primary care is helping people with emotional aspects of health.... when you're primary care that's the most important thing you can do for someone is listening and helping them" (112F).

Benefits of Diverse Staff

Physicians in this study considered the team approach as very important to the treatment of type 2 diabetes patients. They noted how diabetes, with its many co-morbidities and challenging lifestyle recommendations, is difficult for a single physician to treat in an office visit. They further described how team members' specific skills and the collective abilities of the team working together offer a more complete model of care than any 1 physician can supply. For example, 1 physician (109M) stated:

Together they'll [team members] know more than I personally do. Together they can do more than I personally do. They'll get histories that I'm not able to get. They'll be able to provide counseling and insights that I simply don't have the expertise in. Together I expect the team to achieve better outcomes for the patient than if I were by myself.

Another physician (110M) described how the physician and nurse educator combine their skills and efforts for a more thorough patient assessment and development of a more realistic treatment plan.

I can come up with all of these grand schemes that I think look great, and the nurse educator will really see if this is something realistic. They'll assess the patient, their level of health care literacy, understanding, ability to implement these programs. So they're the reality tests.... Things may sound good to me, but maybe the patient doesn't tell me all the issues and barriers and problems that might prevent that.

A third physician (108M) discussed how team members sometimes initiate treatment changes in a more timely fashion than physicians might do on their own. He described the patient situation as: "So you change my blood pressure medicine, but you don't see me for three months...but if I [the patient] saw other team members in between, and they knew what the plan was, then they could make adjustments ...too."

Some study physicians described how the multidisciplinary treatment team offered patients more contact time with providers and thereby greater availability to and familiarity with patients. They further described how physicians were limited in the amount of time they could spend with patients. One physician (110M) noted that "the patient calls them [diabetes educators] more than me." Another physician (107F) described that "the nurse assesses the

needs as well as meets the needs” of patients by “checking in or giving detailed instructions.” A third physician (110M) reported that nurses and nutritionists are needed for “particularly difficult patients who really need to be seen every few weeks.”

Some physicians discussed how the team approach helps patients learn diabetes self-care. For example, 1 physician (115F) stated: “...to hear something from more than 1 person helps to solidify in the patient’s mind that this is good for them.” Another physician (118F) stated: “I think the more ways someone can hear about diabetes ...the better as far as success.” A third physician (102M) explained how team members reinforced learning by being “available and open to answer questions that the patient has ...and providing both positive and negative feedback.”

Finally, physicians described how the team approach helped patients develop treatment relationships and offered more opportunities to find a compatible provider-patient match. For example, 1 physician (111M) stated, “The nurse may be much more effective than I am in terms of communicating and getting them [patients] involved in understanding what’s going on.” Another physician (107F) reported: “There are so many people [on the team] that even if they [patients] don’t click with one of them, there’s bound to be somebody else. And I think it’s important that they find somebody that they feel understands them and cares about them.”

Concerns with the Team Approach

Although all study physicians described the treatment team as a positive and important part of diabetes treatment, they also expressed some concerns about difficulties that may arise in the use of the treatment team. Thirty-two percent described difficulties maintaining regular intra-team communication and how institutional factors such as providers’ schedules and the lack of consistent team membership interfere with communication and effectiveness of the treatment team. They also described how the treatment team might be problematic for some patients.

Physicians acknowledged how the treatment team’s multiple messages reinforce learning of diabetes patient self-care, and an equal number described the difficulty with and necessity of patients receiving consistent information through regular and ongoing communication among team members. As 1 physician (103F) stated, “I think there are many messages that the authors can give patients, and when the authors don’t act as a team and give a coordinated message, that’s the most devastating thing.” A second physician (108M) reported the necessity but infrequency of intra-team communication: “I guess the treatment team is really helpful when they are able to communicate with each other about what’s going on. It’s something that I think doesn’t happen in most treatment teams.” Another important concern was how team members resolved differences of opinion to prevent operating independently when discussing recommendations with patients. For example, 1 physician (101M) reported:

Well, that we’d work together and ...work as a team and give a consistent message to the patient...and that each would have his own role...if the dietitian’s suggesting one thing, and if I have some other idea, I wouldn’t tell the patient this. I would... talk to the dietitian if there’s some disagreement.

A few physicians described how institutional factors impede regular team communication. For example, 1 physician (104F) reported on the negative effects of a lack of consistent team membership: “Sometimes you’re not always sure who’s going to be on the patient’s team, which makes communication more difficult.” Another physician (108M) described how the institution’s physical space and providers’ schedules also may impede team communication:

The problem is more a physical process.... if the nurse were sitting in the same office with the physician or around the corner they would be able to talk about things more, but our scheduling, the fact that we're busy and in different places make it harder. I think that's a particular problem for primary care offices where their team members are more likely not to be in the same building, and their communication with them can be delayed.

A few physicians also expressed concerns about the team approach in relation to addressing patients' individualized treatment needs. One physician (103M) cautioned against the team approach becoming formulaic and noted the importance of individualized treatment: "You can't treat diabetes like an assembly line where everybody requires the same interventions...." A second physician (105M) stressed that "the team needs to be tailored to each patient." Finally, another physician (104M) raised concerns about some patients' reluctance to see the team's multiple providers including nurses and dietitians: "Some patients don't want to have a team or don't understand the importance of a team.... It's logistically difficult for them to come to these appointments, and they're not sure why they need to see anyone other than a doctor."

Conclusions and Implications

This qualitative study interviewed 19 physicians (primary care and endocrinologists) and found that all considered the multidisciplinary treatment team as essential to their work with type 2 diabetes patients. Study physicians described how the core multidisciplinary team including physicians and diabetes educators offered complementary skills and more contact time for the assessment and treatment of patients. They also described an expanded team that included specialists to whom patients were referred for mental health concerns or diabetes complications. They discussed how the core team could assist patients in learning diabetes self-care through consistent messages, repetition of information, reinforcement and feedback of self-care behaviors, and greater availability to deal with diabetes concerns that may arise. They further discussed how regular and ongoing communication among team members was mandatory for effective team functioning, but some expressed concerns that institutional factors impede this communication. They also voiced concerns about how the team approach may affect individualized treatment and how some patients were reluctant to see the team's multiple providers. Finally, study participants discussed how patients with diabetes need more time and availability than most physicians in a 1-person practice can provide.

As the diabetes epidemic increases, primary care physicians more frequently manage complicated diabetes patients who present with many co-morbidities²¹. Diabetes treatment has become more complex, and the number of clinical concerns addressed during primary care visits has increased to a greater extent than has visit duration, resulting in less available physician time to address each individual problem.²² Thus, team members' increased availability to and familiarity with diabetes patients may be crucial to improved diabetes care. Further, in today's medical world, there is a pronounced need for the multidisciplinary team approach that improves A1C and LDL cholesterol results, adherence to medical guidelines, patients' satisfaction, and health outcomes.²³⁻²⁵

Patients often have difficulties integrating self-care regimens into their lifestyles^{26,27}, which may lead to frustrations, emotional struggles, and diabetes complications^{28,29}. The American Diabetes Association's Standards of Medical Care recommend psychosocial screening and follow-up to overcome barriers to self-care and stress the need for a treatment environment that includes: 1) incorporation of psychological assessment into routine care, 2) establishment of emotional well-being as part of diabetes management, and 3) use of the patient-provider relationship as a foundation to increase patients' acceptance of mental

health referrals.¹⁰ Some primary care physicians described addressing mental health concerns as part of their role whereas other physicians described making referrals to the expanded team's mental health specialists. Interestingly, physicians did not raise how or whether mental health concerns are discussed in core team meetings. This absence is particularly noteworthy because of the increased focus on type 2 diabetes patients needing psychosocial support to help with initiation of insulin, therapy³⁰ lifestyle challenges, and ongoing self-care³¹. These physicians' challenges with patients' social and emotional difficulties are discussed elsewhere.³²

Several participants in the present study noted how institutional factors (eg, physical space, providers' schedules, and non-consistent team membership) impede regular team communication and team effectiveness. Other studies also reported how institutional factors, such as communication barriers and constant changing of team members, interfere with the most efficient use of the diabetes treatment team.³³ Therefore, further study of the ways institutional factors interfere with the efficiency of team operations is needed.

A limitation of this study is the somewhat homogenous sample (e.g., 100% now practicing in the Boston area, 79% non-Hispanic white). Another limitation includes the greater number of endocrinologists than primary care physicians. Further, study physicians may manifest a potential bias in their responses because of social desirability.

This qualitative study interviewing physicians is the beginning step in gaining greater understanding of team members' views of the multidisciplinary diabetes team approach. Interviewing other core team members - including diabetes educators, nurses, nurse practitioners, and dieticians - as well as patients could provide a more comprehensive understanding of the team's impact on type 2 diabetes treatment. Further, exploring how or whether the expanded team of specialists contributes to team treatment planning for type 2 diabetes patients also is essential. Finally, exploring factors that promote intra-team communication and help overcome institutional barriers to that communication is needed.

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References

1. Stevens PE, Schernthaner G, Raptis S, Wanner C, Scherhag A, Lameire N. Characteristics, cardiovascular comorbidity and medicines management in patients with type 2 diabetes and CKD: results of the IRIDIEM study. *Kidney Blood Press Res.* 2010; 33(2):119–128. [PubMed: 20424472]
2. Amos AF, McCarty DJ, Zimmet P. The rising global burden of diabetes and its complications: estimates and projections to the year 2010. *Diabet Med.* 1997; 14 (Suppl 5):S1–85. [PubMed: 9450510]
3. Parchman ML, Pugh JA, Romero RL, Bowers KW. Competing demands or clinical inertia: the case of elevated glycosylated hemoglobin. *Ann Fam Med.* May-Jun;2007 5(3):196–201. [PubMed: 17548846]
4. Grant RW, Devita NG, Singer DE, Meigs JB. Improving adherence and reducing medication discrepancies in patients with diabetes. *Ann Pharmacother.* Jul-Aug;2003 37(7–8):962–969. [PubMed: 12841801]
5. Stratton IM, Adler AI, Neil HA, et al. Association of glycaemia with macrovascular and microvascular complications of type 2 diabetes (UKPDS 35): prospective observational study. *BMJ.* Aug 12; 2000 321(7258):405–412. [PubMed: 10938048]
6. Engelgau MM, Geiss LS, Saaddine JB, et al. The evolving diabetes burden in the United States. *Ann Intern Med.* Jun 1; 2004 140(11):945–950. [PubMed: 15172919]

7. Del Prato SFA, Munro N, Nesto R, Zimmet P, Zinman B. Global Partnership for Effective Diabetes Management. Improving glucose management: ten steps to get more patients with type 2 diabetes to glycaemic goal. *Int J Clin Pract.* 2005; 59:1345–1355. [PubMed: 16236091]
8. Bodenheimer T, Wagner EH, Grumbach K. Improving primary care for patients with chronic illness: the chronic care model, Part 2. *JAMA.* Oct 16; 2002 288(15):1909–1914. [PubMed: 12377092]
9. Wagner EH. The role of patient care teams in chronic disease management. *BMJ.* Feb 26; 2000 320(7234):569–572. [PubMed: 10688568]
10. Standards of medical care in diabetes--2011. *Diabetes Care.* Jan; 2011 34 (Suppl 1):S11–61. [PubMed: 21193625]
11. DiPiero A, Dorr DA, Kelso C, Bowen JL. Integrating systematic chronic care for diabetes into an academic general internal medicine resident-faculty practice. *J Gen Intern Med.* Nov; 2008 23(11): 1749–1756. [PubMed: 18752028]
12. Patton, M. How to use qualitative methods in evaluation. London: Sage; 1987.
13. Patton, M. Qualitative evaluation and research methods. 2. Newbury Park: Sage; 1990.
14. Morse, J.; Field, PA. Qualitative Research Methods for Health Professionals. 2. Thousand Oaks, CA: Sage Publications; 1995.
15. Morse, J.; Field, P. Nursing Research: The Application of Qualitative Approaches. 2. London: Chapman and Hall; 1996.
16. Pope, C.; Mays, N. Qualitative Research in Health Care. 2. London: BMJ Books; 2000.
17. Krippendorff, K. Content Analysis: An Introduction to Its Methodology. 2. Thousand Oaks, CA: Sage Publications; 2004.
18. Neuendorf, K. The Content Analysis Guidebook. Thousands Oaks, CA: Sage Publications; 2002.
19. Miles, MB.; Huberman, AM. Qualitative Data Analysis: An Expanded Sourcebook. 2. Thousand Oaks, California: SAGE Publications, Inc; 1994.
20. Russell CK, Gregory DM. Evaluation of qualitative research studies. *Evid Based Nurs.* Apr; 2003 6(2):36–40. [PubMed: 12710415]
21. Bloom FJ, Graf T, Anderer T, Stewart WF. Redesign of a diabetes system of care using an all-or-none diabetes bundle to build teamwork and improve intermediate outcomes. *Diabetes Spectrum.* 2010; 23:165–169.
22. Abbo ED, Zhang Q, Zelder M, Huang ES. The increasing number of clinical items addressed during the time of adult primary care visits. *J Gen Intern Med.* Dec; 2008 23(12):2058–2065. [PubMed: 18830762]
23. Anderson RM, Funnell MM. Patient empowerment: myths and misconceptions. *Patient Education and Counseling.* Jun; 2010 79(3):277–282. [PubMed: 19682830]
24. Ciccone MM, Aguilino A, Cortese F. Feasibility and effectiveness of a disease and care management model in the primary care system for patients with heart failure and diabetes. *Vasc Health Risk Manag.* 2010; 6:297–305. [PubMed: 20479952]
25. Borgermans L, Goderis G, Van Den Broeke C, et al. Interdisciplinary diabetes care teams operating on the interface between primary and specialty care are associated with improved outcomes of care: findings from the Leuven Diabetes Project. *BMC Health Serv Res.* 2009; 9:179. [PubMed: 19811624]
26. Maddigan SL, Majumdar SR, Johnson JA. Understanding the complex associations between patient-provider relationships, self-care behaviours, and health-related quality of life in type 2 diabetes: a structural equation modeling approach. *Qual Life Res.* Aug; 2005 14(6):1489–1500. [PubMed: 16110929]
27. Nelson KM, Reiber G, Boyko EJ. Diet and exercise among adults with type 2 diabetes: findings from the third national health and nutrition examination survey (NHANES III). *Diabetes Care.* Oct; 2002 25(10):1722–1728. [PubMed: 12351468]
28. Diabetes Control and Complications Research Group. The effect of intensive treatment of diabetes on the development and progression of long-term complications in insulin-dependent diabetes mellitus. The Diabetes Control and Complications Trial Research Group. *N Engl J Med.* Sep 30; 1993 329(14):977–986. [PubMed: 8366922]

29. Peyrot M, Rubin RR, Lauritzen T, Snoek FJ, Matthews DR, Skovlund SE. Psychosocial problems and barriers to improved diabetes management: results of the Cross-National Diabetes Attitudes, Wishes and Needs (DAWN) Study. *Diabet Med.* Oct; 2005 22(10):1379–1385. [PubMed: 16176200]
30. Jenkins N, Hallowell N, Farmer AJ, Holman RR, Lawton J. Initiating insulin as part of the Treating To Target in Type 2 Diabetes (4-T) trial: an interview study of patients' and health professionals' experiences. *Diabetes Care.* Oct; 2010 33(10):2178–2180. [PubMed: 20592050]
31. Saatci E, Tahmiscioglu G, Bozdemir N, Akpinar E, Ozcan S, Kurdak H. The well-being and treatment satisfaction of diabetic patients in primary care. *Health Qual Life Outcomes.* 2010; 8:67. [PubMed: 20626879]
32. Beverly EA, Hultgren BA, Brooks KM, Ritholz MD, Abrahamson MJ, Weinger K. Understanding Physicians' Challenges When Treating Type 2 Diabetic Patients' Social and Emotional Difficulties: A qualitative study. *Diabetes Care.* Mar 16.2011
33. Janson SL, Cooke M, McGrath KW, Kroon LA, Robinson S, Baron RB. Improving chronic care of type 2 diabetes using teams of interprofessional learners. *Acad Med.* Nov; 2009 84(11):1540–1548. [PubMed: 19858812]

Table 1

Demographic Characteristics of Physicians

	Mean \pm SD (n=19)	Range
Age (years)	48.2 \pm 9.3	34–63
Years in medical practice	20.8 \pm 10.1	7–38
Percent of practice with type 2 diabetes	52.4 \pm 25.2	7.5–95
Female (percent)	42.1	
Nonhispanic white (percent)	78.9	
Endocrinologist (percent)	73.7	