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CoMac Communication System: A feasibility implementation of language-centered intervention in T2DM

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The CoMac Communication System is a scientifically tested set of tools to individualize Diabetes Self-Management Education and Support (DSMES), in order to speak to persons with type 2 diabetes (T2DM) in their own language and reflecting their own worldviews and health beliefs.

The implementation site was a diabetes care clinic in a Midwestern U.S. hospital network with an AADE/DEAP accredited DSMES. As part of the clinic's regular patient flow, 72 participants completed the online CoMac psychosocial segmentation survey and received the CoMac linguistically tailored patient-centric communication.

Qualitative monthly interviews with the participating healthcare providers (HCPs), conducted during the study period of six months, provided evidence that the system can be successfully implemented into the DSMES practice. The HCPs benefited from knowing the individual psychosocial profiles and the language use of the participants. This better alignment of language and style of talking, "words matter," lead to more efficient and effective behavioral goal setting with the participants. An aggregate program clinical outcome analysis provided further evidence to suggest that this rigorous linguistic analysis of patient talk, combined with scientifically tested psychosocial predictors of patient behavior, leads to person-centered communication with a positive impact on the clinical process as well as patient outcomes.

Although this was not a randomized trial, a naturally occurring control group of 48 participants emerged. These patients received the clinic's standard DSMES, with the exception of the use of the CoMac system's tools. A1C levels from the first visit to the follow-up visit for each group were compared. The A1C levels of the treated/intervention group decreased from 8.9 to 7.3. The non-treated/control group's levels went from 8.3 to 7.6. A multiple regression analysis with the A1C level change as the dependent variable was conducted. The independent variables of age, gender, and starting weight were not significant predictors of the A1C and the CoMac intervention treatment. Patients with higher initial A1Cs showed a greater decline in A1Cs by the end of the study. The key variable of interest, treated with the CoMac intervention, had a one-tailed t-value of -0.422, with a probability value of 0.037. Although a cause-and-effect relationship is not being claimed, the significantly improved A1C levels of the intervention group are compelling.

As diabetes care teams and delivery models expand, the use of person-centered language tools is an innovation to be considered as healthcare systems adopt increasingly effective population management in DSMES.