Smoking Cessation Among Diabetic Patients in Kerala, India: 1-Year Follow-up Results From a Pilot Randomized Controlled Trial

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Considering the adverse health effects of smoking, the American Diabetes Association recommends smoking cessation among diabetic patients (1). One-year follow-up data on smoking cessation among diabetic patients are not available (2). We conducted this study to find the effectiveness of diabetes-specific smoking cessation counseling by a nondoctor health professional (NDHP) in addition to quitting advice by a doctor at 1 year. We recruited 224 adult male diabetic patients aged ≥18 years who smoked in the previous month from two diabetes clinics of Kerala for our randomized controlled trial. They were randomized into two equal groups: intervention-1 and intervention-2. Patients in both groups were asked and advised by a doctor to quit smoking and education materials on smoking-related complications were provided. The intervention-2 group received four additional diabetes-specific 30-min smoking cessation counseling sessions at baseline and 1, 3, and 6 months using the five "As" (Ask, Assess, Advise, Assist, Arrange) and the five "Rs" (Relevance, Risks, Rewards, Roadblocks,

Repetition) from a trained and certified NDHP. The NDHP at each clinic was instructed to document the details of cessation counseling offered to a sample of 15 patients using the five As and five Rs. One of the authors (M.N.) conducted an examination based on these 15 brief interventions to assess their cessation skills. University of Arizona issued a certificate for the counselor titled "Basic Tobacco Cessation Competency" on successful performance in the examination. The intervention was stopped at 6 months and the results were published (3).

We followed up 86.6% of patients either in the hospital or at their homes directly or through phone calls at 1 year (Fig. 1) and assessed the quit rate (abstinence of smoking for at least 7 days is reported to highly correlate with prolonged abstinence [4]) and harm reduction (reduction of smoking more than 50% of baseline use). Salivary cotinine tests after 1-year follow-up confirmed self-reported cessation in 86% (5). Odds of quitting in intervention-2 group, adjusted for age, education, occupation, presence of any other chronic disease,

duration of diabetes, and number of cigarettes/bidis smoked per day at baseline, were significantly higher compared with intervention-1 group (adjusted odds ratio [AOR] 3.35; 95% CI 1.82–6.18). Similarly, the odds of quitting or harm reduction in the intervention-2 group were higher compared with the intervention-1 group (AOR 2.21; 95% CI 1.24–3.93). Our NDHP with a university degree was a regular employee of the clinic. NDHPs, including nurses and other grassroot-level health professionals employed by the various Indian state governments, can be adequately trained in brief intervention as part of the ongoing national program for prevention and control of cancer, diabetes, cardiovascular disease, and stroke and can provide smoking cessation counseling similar to our NDHP. Similarly, using the funds from this national program, doctors in both the public and private sector attached to diabetes clinics can be given orientation to the need for smoking cessation among smokers attending these clinics. This team approach for smoking cessation is likely to result in a

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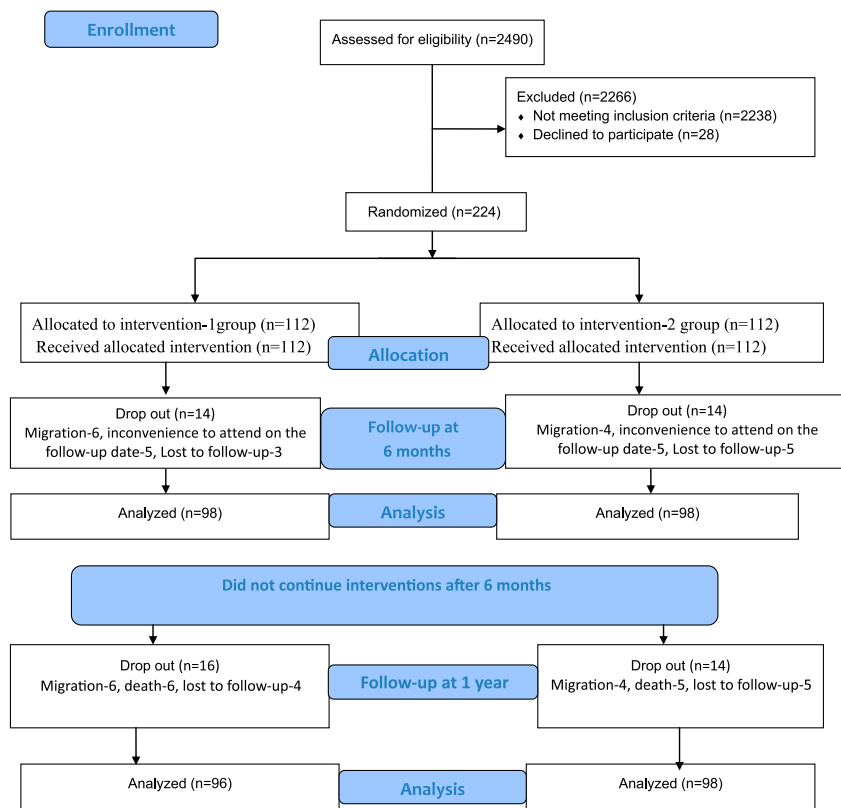
Figure 1—Patient flow diagram.

reduction of diabetes complications due to smoking.

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