Therapeutic failure, poor quality of life and high economic costs have been linked to poor adherence to medication in type 2 diabetes (T2D). The study aimed to assess patients’ glycemic control, knowledge of T2D and adherence to medications, and evaluate the impact of mobile telephone-based intervention on these indices. A one-year retrospective review of pharmacy refill records was followed by a 6-months’ randomized controlled intervention conducted among 120 newly diagnosed T2D patients in a tertiary healthcare facility in Nigeria. Participants were assigned into two equal (n = 60) control and intervention groups. Intervention comprised daily short message service (SMS) follow-up messaging to the intervention group alongside usual care services. Control group received no SMS. Primary (HbA1c) and secondary (knowledge and adherence) outcome indices were measured and compared pre- and post-intervention. Same questionnaires were administered at baseline and post-intervention to both groups. Chi square test was used to examine association of variables while two-sample t-test was conducted to compare mean pre- and post- intervention scores in both groups at p < .05. Intervention significantly improved glycemic control (HbA1c reduction) (p= 0.01). For control group, mean pre- and post- intervention knowledge scores were 2.798 and 3.118 respectively (t = 1.1368, p = .2705) while intervention group recorded 2.714 and 4.193 respectively (t = 5.6772, p <.001) on a 5-point Likert scale. Pre- and post- intervention adherence scores for control group were 3.804 and 4.013 respectively, (t = 0.2343, p = .8182) while intervention group had 3.430 and 6.859 respectively (t = 6.3216, p >.001) on the 8-point Morisky Medication Adherence Scale (MMAS-8). Patients initially had poor glycemic control, fair knowledge of T2D and low adherence to medications. SMS intervention significantly improved all three indices. Policy reforms in healthcare financing is recommended for sustainable provision of mHealth follow-up in diabetes care.