

Online Supplement:

Expanded Data Analysis Description for the Trajectories Analyses:

To examine rehospitalization within the first three months of index hospitalization as a predictor of suicidal ideation during the follow-up period, we used latent class growth modeling (LCGM), implemented using a PROC TRAJ procedure(38,39) in SAS (version 9.2). We build on previous findings where LCGM was used to identify three distinct suicidal ideation trajectory groups across four time points (baseline, 3-,6-, and 12-months after hospitalization)(4). This analytic approach identifies different latent trajectory classes, where individuals in a given class follow a distinct pattern of change over time, not expecting that individuals change in the same direction across time; instead, participants are allowed to follow different growth patterns with varying strength and direction of change over time, forming discrete trajectory classes. As described in greater detail elsewhere(4), we initially fitted models with up to 4 trajectories to identify the best-fitting (allowing for linear, quadratic, or cubic trends in any given class). The best-fitting model was selected using Bayesian information criterion (BIC). Relative to models with 2 and 4 trajectory groups, a 3 group-model was the best solution supported by BIC values. These trajectories were characterized by: (a) a group with subclinical suicidal ideation (Group 1), a group with highly elevated suicidal ideation at hospitalization but rapid decline (Group 2), and a group with highly elevated ideation at hospitalized that was chronically elevated (Group 3)(4). For this study, we extended the three-trajectory model and analyses to examine if rehospitalization within the 3 months of discharge enhanced or attenuated the subsequent course of suicidal ideation trajectories, i.e. SIQ measured after the rehospitalization. We followed the methodology proposed by

Jones and Nagin(38,39,40) whose approach demonstrates the capacity for testing if, and the extent to which, an event (in this case, rehospitalization) alters the course of an outcome during the period of the trajectory's unfolding (in this case, suicidal ideation) while simultaneously controlling for important covariates (e.g., baseline variables). The impact of rehospitalization for subsequent ideation is treated as a covariate on measurement points after the "event" (after rehospitalization).

An advantage of examining the influence of rehospitalization within multiple trajectory groups, rather than across averaged suicidal ideation for the whole sample, is the explicit and simultaneously accounting for differences in suicidal ideation severity at hospitalization and during the follow-up such that differences between rehospitalized and non-rehospitalized adolescents are minimized. In the current analyses, we also controlled for covariates measured at hospitalization that may influence the likelihood of rehospitalization and trajectory group membership itself. Examining rehospitalization's impact is thus limited to adolescents with similar "longitudinal histories." Thus, the analysis is allowing us to answer the question if rehospitalization is associated with a different course of suicidal ideation within an otherwise similar group.

Because the sample was drawn from an intervention study, we controlled for intervention effects; however because it was non-significant and did not alter the results, intervention assignment was removed from the final model.