We describe a method of analytic evolution of distribution amplitudes (DA) that have singularities, such as non-zero values at the end-points of the support region, jumps at some points inside the support region and cusps. We illustrate the method by applying it to the evolution of a flat (constant) DA, antisymmetric flat DA and then use it for evolution of the two-photon generalized distribution amplitude. Our approach has advantages over the standard method of expansion in Gegenbauer polynomials, which requires infinite number of terms in order to accurately reproduce functions in the vicinity of singular points, and over a straightforward iteration of an initial distribution with evolution kernel. The latter produces logarithmically divergent terms at each iteration, while in our method the logarithmic singularities are summed from the start, which immediately produces a continuous curve, with only one or two iterations needed afterwards in order to get rather precise results.