The $k$-weak dynamic number of a graph $G$ is the smallest number of colors we can use to color the vertices of $G$ in such a way that each vertex $v$ of degree $d(v)$ sees at least $\min\{r, d(v)\}$ colors on its neighborhood. The chromatic number of a hypergraph $H$ is the smallest number of colors we can use to color the vertices of $H$ in such a way that each edge of size at least 2 sees at least 2 different colors.

2-weak dynamic coloring of graphs is a well-studied subject, as it has a close relation to proper coloring of hypergraphs. Here we study $k$-weak dynamic coloring of graphs when $k \geq 3$. We use the discharging method to prove that all planar graphs have 3-weak dynamic number at most 6. We also use the Probabilistic methods to determine upper bounds for $k$-weak dynamic number of $d$-regular graphs. (Received July 29, 2017)