In this overview article, we review the literature on design and analysis of recursive algorithms for reconstructing a time sequence of sparse signals from compressive measurements. The signals are assumed to be sparse in some transform domain or in some dictionary. Their sparsity patterns can change with time, although, in many practical applications, the changes are gradual. An important class of applications where this problem occurs is dynamic projection imaging, e.g., dynamic magnetic resonance imaging (MRI) for real-time medical applications such as interventional radiology, or dynamic computed tomography.