Background and aims: Evidence Reversal (ER) is the phenomenon whereby new evidence—most often strong randomized controlled trials—finds an already established clinical practice to be less effective, or even more harmful, than was originally believed. This phenomenon is very prevalent with up to 46% of trials testing an already established practice leading to a reversal of that practice. Before reducing the adverse impact of reversals on clinical practice, we must first understand the phenomenon and how it has been explored. The objectives of this review are to explore the terminology and definitions for ER in the literature and then map the terms onto a framework.

Methods: Multiple academic and grey literature databases were systematically searched between 2000 and 2016 using combinations of relevant subject headings and key words. Hand searches of relevant journals, websites, and blogs were also performed. Two reviewers independently screened the returned citations and performed data extraction and quality assessment using a modified AMSTAR rating tool. All reviews and collections of studies that discussed aspects or examples of ER—either directly or indirectly—were included.

Results: After the removal of duplicate citations, 48936 items were retrieved for screening. The final number of included reviews was 87. The concept of reversal first appeared in the literature in the early 2000s, but the majority of articles have been published in the past four years. Terms for ER that we found in our search include: medical reversal, de-implementation, de-adoption, un-diffusion, disinvestment, abandonment, discontinuation, Proteus phenomenon, contradicted findings, POEMS likely to change practice, evidence to change practice, and overtreatment. These terms, and others, have been mapped onto a framework for identifying reversal in the literature. The overall quality of the articles was very low.

Conclusion: Evidence reversal, though not a new phenomenon, has only recently been explored in the literature. There are many different terms for the process of reversal and identifying medical practices to be targeted for reversal. Consensus should be reached on which terms are most appropriate so that subject headings can be developed and cohesion can be brought to this emerging field of meta-research.