

Appendix 1:

We took a broad approach to searching the biomedical literature in PubMed by including both MeSH terms (Official Terms — Medical Subject Headings — for PubMed/Medline), and Keywords — words used by authors in the titles and abstracts of article citations that may or may not be identical to official MeSH Terms. Using keywords along with MeSH Terms allowed us to capture articles that are not yet or may never be indexed using only official MeSH Terms. For example, newly added citations that are “in-process” or citations in journals that are out of scope of the MEDLINE core of PubMed might not be found if we searched only using the official MeSH Terms (Canese K, Weis S. PubMed: The Bibliographic Database. 2002 Oct 9 [Updated 2013 Mar 20]. In: *The NCBI Handbook [Internet]*. 2nd edition. Bethesda (MD): National Center for Biotechnology Information (US); 2013-. Available from: <http://www.ncbi.nlm.nih.gov/books/NBK153385/>).

There are three concepts constituting the goal of this paper, which is “...to describe the MU [Meaningful Use] program relative to anesthesiologists, with a specific focus on whether it is possible to meet the eligible provider reporting criteria of MU using Anesthesia Information Management Systems (AIMS) in various contexts.” The three concepts derived from this goal are: Information Systems, Anesthesia, and Management.

Using the PubMed database, we grouped Mesh Terms with Keywords that represent the Information Systems and Anesthesia concepts separately (See PubMed Step-by-Step Search Strategy below), connecting the synonymous/related terms for each concept with the Boolean

Connector “OR” to create sets of citations for each. We searched only one Keyword, Management, for the third concept to ensure that it would be present in all citations retrieved. We filtered the results to reflect the time period January 1, 2000 through October 6, 2014. Below is the step-by-step process that we used, corresponding to the information in the table in Appendix 1: PubMed Search Strategy 01/01/2000 to 10/06/2014.

PubMed Step-by-Step Search Strategy:

| Search | Query | Items Found |
|---------------|---|--------------------|
| #1 | "Information Systems" [Mesh] | 164435 |
| #2 | "Information Management" [Mesh] | 3395 |
| #3 | “Electronic Health Records”[Mesh] | 6443 |
| #4 | "Medical Records Systems, Computerized"[Mesh] | 25455 |
| #5 | "electronic medical record*" | 3312 |
| #6 | emr | 4069 |
| #7 | ehr | 2839 |
| #8 | #1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 | 176061 |
| #9 | “Anesthesia”[Mesh] | 159535 |
| #10 | "Anesthesiology"[Mesh] | 16870 |
| #11 | perioperative* | 69819 |
| #12 | "operating room" | 22823 |
| #13 | Anesthes* | 307995 |
| #14 | Anaesthes* | 109586 |

| | | |
|-----|--|---------|
| #15 | #9 OR #10 OR #11 OR #12 OR #13 OR #14 | 443875 |
| #16 | Management | 1922438 |
| #17 | #8 AND #15 AND #16 | 1951 |
| #18 | #17 AND Publication date from 2000/01/01 to 2014/10/06 | 1333 |

The PubMed query can be accessed via the following hyperlink, which can be copied and pasted to a web browser. For an up-to-date review of recent publications, the reader is encouraged to visit the PubMed link and adjust the Publication Date field (see below) to the desired date range:

[http://www.ncbi.nlm.nih.gov/pubmed/?term=\(\(%22Information+Systems%22%5BMesh%5D\)+OR+\(%22Information+Management%22%5BMesh%5D\)+OR+\(%22Electronic+Health+Records%22%5BMesh%5D\)+OR+\(%22Medical+Records+Systems%2C+Computerized%22%5BMesh%5D\)+OR+\(%22electronic+medical+record*%22\)+OR+\(emr\)+OR+\(ehr\)\)+AND+\(\(%22Anesthesia%22%5BMesh%5D\)+OR+\(%22Anesthesiology%22%5BMesh%5D\)+OR+\(perioperative*\)\)+OR+\(%22operating+room%22\)+OR+\(Anesthes*\)\)+OR+\(Anaesthes*\)\)+AND+\(Management](http://www.ncbi.nlm.nih.gov/pubmed/?term=((%22Information+Systems%22%5BMesh%5D)+OR+(%22Information+Management%22%5BMesh%5D)+OR+(%22Electronic+Health+Records%22%5BMesh%5D)+OR+(%22Medical+Records+Systems%2C+Computerized%22%5BMesh%5D)+OR+(%22electronic+medical+record*%22)+OR+(emr)+OR+(ehr))+AND+((%22Anesthesia%22%5BMesh%5D)+OR+(%22Anesthesiology%22%5BMesh%5D)+OR+(perioperative*))+OR+(%22operating+room%22)+OR+(Anesthes*))+OR+(Anaesthes*))+AND+(Management)

The screenshot shows the PubMed search results page. The search bar contains the query: `((("Information Systems"[Mesh]) OR ("Information Management"[Mesh]) OR ("Electronic Health Re...)) AND ((("Anesthesia"[Mesh]) OR ("Anesthesiology"[Mesh]) OR (perioperative*))) OR (%22operating+room%22)+OR+(Anesthes*))+OR+(Anaesthes*))+AND+(Management`. The results are sorted by 'Recently Added' and show two articles. A 'Publication date' filter is open, showing a 'Custom date range' dialog box with fields for YYYY, MM, and DD. The results are sorted by 'Recently Added'.

Appendix 1 –

To represent the three concepts inherent to our topic (“Information Systems”, “Anesthesia,” and “Management”), we created separate sets of citations in PubMed by combining Medical Subject Headings (Mesh Terms) with keywords using the Boolean connector “OR” within each set (we used only a keyword for the “management” set, to ensure that the term would be present in all citations retrieved). We then combined the three sets using the Boolean connector “AND,” resulting in 1,951 citations published between January 1, 2000, and October 6, 2014.