

Using Cloud Computing to Update your Anesthesia Intranet

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Learner Audience: Anesthesiology residents, medical students, faculty and staff at a tertiary care teaching hospital.

Background: Internal intranet websites in academic medical centers are difficult to maintain. Maintenance depends on a limited group of salaried personnel (who have concurrent clinical duties), communication between a Webmaster and staff, and consistent participation of members who want to update content. Updates are often delayed, information becomes dated, and the intranet is often not utilized to its full extent.

Cloud technology offers an alternative to traditional intranet design and maintenance. The term "cloud" is used in computer science as a metaphor for the Internet, where the cloud depicts the Internet in computer network diagrams as an abstraction of its underlying infrastructure. Typical cloud computing providers deliver common business applications online which are accessed from a web browser, while the software and data are stored on servers. This paradigm can increase the volume, quality, and content of information transferred with minimal human expenditures.

Needs Assessment: An existing intranet website was not conducive to updates or transfer of information, and had not been updated for approximately 3 years.

Hypothesis: Cloud technology will foster a greater transfer of current anesthesia information. A universal account would facilitate frequent and rapid updates unlike a traditionally maintained intranet

Curriculum Design: The content of the department intranet was transferred to a cloud technology server using a universal login. A variety of review articles were compiled and loosely grouped according to physiologic systems and type of anesthetic. Articles are searchable by content as well as title and folder. This format permits rapid transfer of technology among residents and staff, and can be updated and maintained on a daily basis. Folders were created for faculty teaching, which permitted dissemination of information as well as intraoperative teaching.

This format allowed access to departmental protocol information: renal transplant//glucose control//bypass checklists. It is also used access management protocols for rare cases. Uploads of articles and transfer of information could be conducted by anyone with access to the universal account.

Google docs (document) software is free software from the Google Corporation. A universal account was created that permitted faculty residents and staff to utilize a common account.

This software is unique in that permits collection and dissemination of PDFs, word documents, Power Point presentations and Excel spreadsheets. The software was initially created to facilitate group editing of documents in an online format to facilitate transfer of information. Updates over the past two years including increasing file size, multiple file uploads, downloads of the entire library, and search ability of content have increased the utility of the software and its application in a learning environment.

Outcome: Transfer of information increased dramatically. Over the course of two years, over 1800 anesthesia review articles were added to this password protected information database. This paradigm of information sharing is useful for maintaining anesthesia intranets, but also expands information sharing between institutions.