ACC/AHA GUIDELINES: A NOVEL TECHNOLOGY TO ACCESS CLINICALLY RELEVANT INFORMATION AT THE POINT-OF-CARE

ACC Poster Contributions
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Background: Adherence to evidence-based guidelines is of critical importance to provide highest quality care to patients with cardiovascular disease. The ACC/AHA Practice Guidelines and the Expert Consensus Documents provide vetted compilations of recommendations based upon evidence-based medicine. However, these documents exist in a textbook format, each comprising several hundred pages with multiple specific recommendations interspersed throughout the document. It is difficult and time consuming for a user to access an answer to a clinically-relevant question, especially at the point-of-care, when medical knowledge is most critical.

Methods: A novel technology has been developed which can be used to automatically read volumes of unstructured data and classify categorically, determining relevancy and managing ambiguity. This technology then develops a natural language processing to answer direct specific questions. A computer generated analysis provides the ability to locate and highlight specific information within documents by comparing the meaning of keywords, phrases, and questions presented by users against the meaning of words in the documents. This results in “chunks” of clinically relevant important information from vetted guidelines which directly answer patient related questions.

Results: The technology was applied to the ACC/AHA Guideline on Adult Congenital Heart Disease (124 pages). Using this technology, a group of 30 experienced cardiologists were asked clinically relevant questions related to patients with adult congenital heart disease. This online e-technology allowed the users to rapidly and accurately answer the specific clinical questions.

Conclusions: The use of this novel technology has been demonstrated to provide rapid access to clinically relevant knowledge from ACC-vetted sources. Relevance, navigation and presentation of documents can be tailored to their type and designed around the attributes of the user and the context of the task performed to further enhance the clinical utility of this tool.