The Department of Health and Human Services suggests emerging technologies like natural language processing and machine learning could improve the burdens brought on by administrative and electronic health record (EHR) processes for health care providers.

Its final report released Friday follows requirements set forth by the 21st Century Cures Act that directs HHS to “establish a goal for burden reduction relating to the use of EHRs, develop a strategy for meeting that goal and develop
recommendations to meet the goal.”

Although technology in health IT has “dramatically changed the practice of medicine and clinical care in the United States,” the report says, there is “a growing consensus that, while it has made an unprecedented amount of information about patients available to them, technology has yet to make the practice of medicine easier for physicians and other health care professionals.”

Among the challenges health care providers face with current systems are clinical documentation, health IT usability and user experience, EHR reporting, and public health reporting.

“Many existing documentation requirements were crafted with paper-based systems and acute or chronic single-system medical problems in mind” and “have not been updated to account for the current integration of health IT systems, increased complexity of patients and treatment options, and the increased need for longitudinal, coordinated care,” the report says. “At the same time, health IT solutions have not adequately addressed a range of administrative processes health care providers face.”

This includes implementing existing technology solutions, such as natural language processing and machine learning, that could eliminate redundant and excessive documentation (“note bloat”) and administrative burdens for prior authority. However, there is still a lack of standardization and automation around these processes, according to the report.

The report recommends that HHS “support automation of ordering and prior authorization processes for medical services and equipment through adoption of standardized templates, data elements and real-time standards-based electronic transactions between providers, suppliers and payers,” as well as offer incentives for technology that can “generate and exchange standardized data supporting documentation needs for ordering and prior authorization processes.”

Another challenge health care providers face is the lack of standardization in EHR graphical user interfaces that doctors juggle between multiple health care systems, which can risk patient safety. The report states there is currently “no certification requirement that health IT designers use a standardized design format.”

Apart from acknowledging cognitive burdens on health care providers due to poor
EHR usability — such as alert fatigue, decreased therapeutic patient-provider relationships and information overload — the report also points out the lack of easy authentication technologies for physicians.

“During the course of a typical clinical shift, clinicians must log in to an EHR system many times because clinicians are often mobile and work in many spaces throughout a facility in a single shift. There are various authentication technologies available for implementation that could ease this burden, but unfortunately they are not implemented universally,” the report says. “The decisions made during the implementation phase can significantly affect the user experience and have patient safety implications.”

In addition to incorporating those technologies, the report suggests ways to improve usability through better alignment of EHRs with the clinical workflow and harmonizing design elements to reduce redundancy and cognitively taxing tasks, as well as promoting proper integration of EHRs in the physical environment of the clinician.

Lastly, the report notes the need for improved information exchange through public and private health care entities.

“The opioid epidemic highlights the need for the bi-directional exchange of health information to support both public health agencies implementing broad-scale initiatives and health care providers seeking to prevent and treat opioid use disorder among patients,” it states.

One of the many recommendations the report states to address this is promoting standards-based API emerging technologies. Another is for HHS to increase the adoption of “electronic prescribing of controlled substances with consideration for provider-specific preferences, workflow and use of available standards.”

While there are a variety of factors that influence the successful implementation and improvement of health care IT systems, the report suggests its recommendations could be achievable in three to five years and that the agency should be able to fulfill them through existing authority or significant ability to implement these strategies to improve health care.

“The HHS strategy and recommendations for burden reduction described here encompass a range of incremental changes to allow clinicians to enjoy the benefits of greater interoperability while producing benefits for patients and the
health care system overall,” HHS Secretary Alex Azar said in the report. “We look forward to feedback about these recommendations from the health care community.”