**Introduction:** Clinical audit (CA) is a methodology that allows identifying the practices that occurred during the healthcare process and compare with the performance established for each situation. The execution of this methodology is presented as one of the strategic pillars of the Clinical Governance management system. Due to the relevance of this strategy to the healthcare process, presenting the use of an Artificial Intelligence (AI) to perform CA in healthcare service may help others healthcare institutions in its applicability. **Method:** Descriptive study, of experience report type. The study scenario was a Minas Gerais state’s Hospital Complex, which has a Clinical Governance sector since 2015. **Results:** Considering the necessity of having a tool that could expedite the CA process, increase the sampling, enable a safe, cost-saving data extraction, and perform a technical and impartial analysis, in 2018 the CA method was reconstructed within an AI system, patented as Lya®. It was built inside an electronic health records, and it is used as a diagnostic support tool. Allowing data control, with Lya® is possible to construct the patient’s severity and the care risks, allowing to trace the line of care that must be followed to achieve the best outcome of healthcare. **Conclusion:** Lya® has shown positive results once its enables a safe data extraction with time and costs reduction. Aiming a proactive, non-reactive, clinical management system, the use of AI allows that healthcare professionals have more information to make more assertive choices in assistance of the patient.