This paper presents a data-driven approach to graphically presenting text-based patient journals while still maintaining all textual information. The system first creates a timeline representation of a patient's physiological condition during an admission, which is assessed by electronically monitoring vital signs and then combining these into Early Warning Scores (EWS). Hereafter, techniques from Natural Language Processing (NLP) are applied on the existing patient journal to extract all entries. Finally, the two methods are combined into an interactive timeline featuring the ability to see drastic changes in the patient's health, and thereby enabling staff to see where in the journal critical events have taken place.