The aim of the paper is to outline an innovative project of the existing evidence-based paediatric course at a 'bench to bedside' learning platform. Three-year experience based on the feedback gathered from students has demonstrated that the students' actual clinical cases may improve uptake of EBM knowledge. The current curriculum includes formal training for use of online search skills by medical librarians as well as interactive web-based tutorials. Students work in pairs, they are assigned an actual patient case, ask a clinical question, and select an article that would assist in answering their question. The online curriculum consists of self-learning as well as facilitated units. Each pair of students has to go through evaluation afterwards. In general, students have confirmed the value in the curriculum, but many of them cited the time commitment as a weakness. Based on the results of SWOT analysis we have defined a set of innovative parameters to eliminate the weaknesses: online collection of peer-reviewed students’ paediatric cases with repeated common diagnoses but different complications; lecture podcasts; PICO seminars for group discussion of clinical questions and their relevance; (e)-mentoring. The innovated educational prescription will be demonstrated on the example of acute lymphoblastic leukaemia complications.