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*Software Applications with Medical Knowledge Can Improve Health Care Education*

As a surgical educator, I have to answer the same difficult question several times a day: "How much of this procedure should I let this resident do?" While I know it's important to give the resident independence (autonomy), I also want to ensure the patient is safe and has the best outcome. We have developed a software platform (Entrustable) to help reconcile these competing interests and provide a more informed answer to this age-old question - so we can have the best outcomes today while still developing skilled providers for tomorrow. The answers lie in surgical logbooks, which are highly detailed representations of past experience. Theoretically, logs contain enough information to answer questions about someone's capabilities or how much supervision they might require.

Recent technological advances have allowed us to model human knowledge about surgery and medicine into structures that computers can use to interpret medical experiences, and grant the right amount of autonomy. Entrustable takes input about experiences and creates output about entrustability, educational progress, learning gaps, and surgical experience. It is currently a well-established and working prototype that is ready for testing in real-world situations where autonomy decisions are being made. There is no competing platform, so there is great opportunity in being first to market. The number of potential users in educational programs, as well as independent practice is enormous and largely untapped. Educators, institutions, accrediting bodies, insurance providers, risk managers, hospital administrators and the public would have much to gain from more accurate analyses of experience.