Resident work hour restrictions do not improve patient safety in surgery: a critical appraisal based on 7 years of experience in Switzerland

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Abstract

In 2005 the Swiss government implemented new work-hour limitations for all residency programs in Switzerland, including a 50-hour weekly limit. The reduction in the working hours of doctors in training implicate an increase in their rest time and suggest an amelioration of doctors’ clinical performance and consequently in patients’ outcomes and safety - which was not detectable in a preliminary study at a large referral center in Switzerland. It remains elusive why work-hour restrictions did not improve patient safety. We are well advised to thoroughly examine and eliminate the known adverse effects of reduced work-hours to improve our patients’ safety.

The two main issues of work-hour restrictions in medicine in Western countries were the improvement of patients’ safety and the doctors’ working conditions. Preceding the idea and implementation of restricted work hours and regulated work shifts were, exemplarily, the milestone Libby Zion case in 1984, some evidence that brings worsened results in clinical performance and simulated tasks [1,2], the view that overtired and inadequately supervised residents are a dangerous weak point in patient care [3], and the political will to approach the problem of doctors’ extensive work hours.

In consequence of this milestone case and based on grand jury recommendations, the New York State Department of Health implemented junior doctors’ work hours limitations restricted to 80 hours a week in 1989 and subsequently, the US Accreditation council for Graduate Medical Education implemented nationwide duty-hours standards by July 1, 2003 with some modifications in 2008 [4-6].

In the United Kingdom restrictions on residents’ work hours were introduced in 1996 with a progressive reduction in junior doctors’ working hours based on the European Working Time Directive [7]. On January 1, 2005 the Swiss government implemented new work-hour limitations for all residency programs in Switzerland [8], including a 50-hour weekly limit with a maximum overtime of 2 hours per day and 140 hours per year, respectively, and at least 11 hours of rest between duty periods. Overtime per day may exceed 2 hours during work-free business days or in emergency cases. Daily rest time may be reduced to 9 hours several times a week, as long as the resting time amounts to 12 hours, averaged over 2 weeks.

The reduction in the working hours of doctors in training implicate an increase in their rest time and suggest an amelioration of doctors’ clinical performance and consequently in patients’ outcomes and safety. This seems very plausible and is furthermore supported by some evidence in standardized tasks in the lab. However, in real-world conditions the anticipated positive effect of reduced working hours on patients’ care is not detectable. Therefore, several questions arise: whether the reduction of working hours has been adequately implemented by the departments, how strict the residents’ adherence to the restrictions is, and whether residents will use their off-time effectively for recovering; it is well known that work hours are frequently underreported by residents [9]. Two reviews provide compelling evidence that residents are more rested after implementation of work-hour restrictions [10,11]. It remains unclear whether the studies are able to show what they intend: Even when methodological weaknesses (frequently single training sites

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Conclusions
Considering the different number of work hours for doctors-in-training in the United States and in Switzerland and the failure of improvement in patients’ outcome and safety with 80 hours as well as 50 hours, the focus of regulatory agencies and labor unions should change from hours worked to other aspects within work-hour limits (e.g. unpaid extracontractual work). Reflecting the critics of decreased professionalism due to less responsibility it might be pathbreaking to qualitatively assess arguments among decision-makers what the main impediments to reduction in working hours are. We are well advised to thoroughly examine and eliminate the known adverse effects of reduced work-hours to improve our patients’ safety.

Competing interests
UL and RK are employed by the Spitalzentrum Biel. UL is the Director of Surgery at Spitalzentrum Biel. The authors declare no other competing interests related to this editorial.

Authors’ contributions
All authors contributed equally to drafting this editorial, and read and approved the final version of the manuscript.

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Received: 8 June 2012 Accepted: 8 June 2012
Published: 20 July 2012

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doi:10.1186/1754-9493-6-17
Cite this article as: Businger et al.: Resident work hour restrictions do not improve patient safety in surgery: a critical appraisal based on 7 years of experience in Switzerland. Patient Safety in Surgery 2012 6:17.

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