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Cadaveric courses in oral and maxillofacial surgery- Is it time for a new approach?

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Skill-based cadaveric courses are an essential part of surgical training. Traditionally courses that involve the transfer of skills are design by surgeons with a teaching interest. The clinical pressures of the current UK NHS (although similar pressures seem to be reflected internationally), mean it is becoming more difficult to run skill-based courses. Those clinicians involved in the organisation of cadaveric courses will recognise difficulties relating to time, funding, appropriate facilities as well as trainee participation. Traditionally successful courses were designed around the principle of andragogy[1] (Knowles, 1984). Specifically based on these principles[1,2], the organising team takes into account the following: Adults need to be involved in the planning and evaluation of their instruction; experience provides the basis for the learning activities; adults are most interested in learning subjects that have immediate relevance and impact to their job; adult learning is problem-centred rather than content-orientated. We now understand that there are several other essential aspects for effective adult learning. Some of these include a clearly defined scope which is advertised and limited to a specific audience. This attracts adults that are interested in the skills that the course offers and have immediate relevance to their job /role. Successful courses in the UK or Europe involve collaborations with specific experts and trainers. Often the timetable is reviewed by several clinicians. In surgery traditionally, this was based on the relevant experiences of the faculty. Activities included in the course may involve the construction of simulations. In this way, the participants are involved in the planning and the evaluation of their given instructions. The course structure can be usefully based on the SMART model (Objectives must be Specific, Measurable, Achievable, Relevant, Time-bound)[3]. For objectives that relate more to behaviour change, the A-B-C-D Model (Audience, Behaviour, Condition, Degree)[4], is often used. The aim of teaching / training sessions is to simulate the real experience. Cadaveric courses in Oral and Maxillofacial surgery aim to transfer skills that are often required during stressful procedures. Hence the simulations need to be as realistic as possible. As a specialty we need to ensure that are trainees can perform specific skills under ‘stressful’ conditions. The benefits of ‘realistic simulations’ are well recognised in Advanced Trauma Life Support (ATLS) courses with the introduction of “role play”, termed a moulage[5]. Advances in technology may be helpful in providing realistic simulation experiences for participants. For example, it is possible to provide ‘pulsatile’ cadavers. This can be especially useful in procedures such as free-flap raising and microvascular anastomotic techniques. It allows the participant to evaluate their work as well as facing more realistic conditions. At present, only a handful of courses in Germany offer such an experience. Human factors rarely feature in simulation courses. For example,

surgeons will be required to go back to theatre at night due to complications (e.g. free flap failure) after a long day of operating. There are several publications related to human factors and their effect on patient safety[6,7]. This is currently not simulated in any of the available courses although we are aware of a single course in Germany where this will be attempted. It seems logical that course organisers include the impact of human factors in their time tables and that trainee surgeons actively participate in these courses.

In our experience as both Faculty and learners in a myriad of course in the UK and abroad it appears that the feedback process to the participants is not robust. Feedback is essential but very few courses are able to offer useful summative feedback and even formative feedback is limited by concerns around attracting and keeping participants.

There are several environmental aspects that can enhance learning. The course organisers need to pay attention to the experiences, knowledge, skills and beliefs that the students bring to the courses. Clearly a learner-centred environment needs to intersect with a knowledge-centred and an assessment-centred environment. With developments in technology clinicians are able to use a variety of learning environments. The educators need to ensure that are keeping up-to-date with developments in education.

In conclusion, we know have the technology to simulate stressful clinical situations. This ultimately could improve the surgical outcome. Educators need to embrace these new ways of teaching and trainees need to cease the opportunity.

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