This is the first issue of our newsletter for Clinical Simulation section. We hope this will be a forum where we can discuss, share ideas, post information about our programs, look for collaborators, and ask questions about various topics concerning preclinical education and teaching in simulation. We hope we can reach to you regularly in a form of this publication.

This inaugural issue will introduce our current officers, discuss our the annual meeting, and will seek your input for new topics, speakers and directions.

Please feel free to pass this along, electronically of course, to anyone you feel would have an interest. And… please contribute. If you have something to post or share with our members, please send us a note.

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MEMBERS FORUM –
Our meeting at the 2011 ADEA session will be:

Clinical Simulation
Members’ Forum
Sunday, March 13
4:00 – 5:00 p.m.
CC–2

This year we do not have a section program – it is important that each member attends so we can plan for 2012. Simulation is a key element in dental education – and where our students spend many hours. With the possibility of increased use of simulation for standardized testing we have much to discuss. Bring a colleague.

See you there....
THE PROJECT POOL: Do you need money for a project related to Clinical Simulation? The Project Pool may be able to help.

**Purpose** The ADEA House of Delegates established the ADEA Council of Sections Project Pool in 1995. Its purpose is to fund predominantly national research projects, studies, and reports that support the ADEA Mission, Core Values, and Strategic Direction and the ADEA Council of Sections' Strategic Directions and Goals beyond the normal resources of individual Sections, Special Interest Groups (SIGs), and members.

**WHO MAY APPLY?** ADEA Sections and SIGs may apply for funding. Other ADEA Councils and individual members may also apply, as long as they obtain co-sponsorship of a Section or SIG.

**WHAT MAKES AN APPLICATION COMPETITIVE?**

Although Section/SIG-specific activities may be funded, proposal that involve multiple sponsors will be more favorably considered. Sections /SIGs are required to contribute funds from their budgets to the project budget; a minimum of 10% of the Section/SIG budget up to 10% of the total project budget is recommended. For all proposals, the project’s Principal Investigator should obtain a letter specifying this support from the appropriate Section Councilors.

You can get more information on-line at

http://www.adea.org/about_adea/SectionsSIGs/Pages/ADEACouncilofSectionsProjectPool.aspx

**Please let the section officers know if you are considering a project.**

**For 2011, the Clinical Simulation Section is supporting an individual project related to a national survey of Case Based Education in the Simulation Lab.**
ADEA 2010 -

At the March 2010 meeting in Washington DC, the Clinical Simulation Section sponsored a program titled, “Teaching and Assessing Ergonomics in the Preclinical Laboratory.” This presentation was well received and outlined important it is for Ergonomics teaching to begin in the preclinical environment.

The presenters were all active members in the clinical simulation section.

- Mark Wolff – Professor and Associate Dean for Pre-Doctoral Clinical Education, New York University
  “Overview of what we want to accomplish; how to set up a simulation laboratory.”

- Gerald Klaczany – Clinical Associate Professor, New York University
  “What we teach and how we teach it.”

- Lance Rucker – Professor and Chair, General Dentistry Division, The University of British Columbia

- Kenneth Allen – Clinical Associate Professor, New York University

- Alice Urbankova – Assistant Professor, Division Director Operative Dentistry, Stony Brook University
  Assessment: how, when, results….
What is Simulation in preclinical dental education?

**Simulation** in preclinical education is the imitation of real patient dental procedure on the manikin.

How many types of simulation laboratory exist?

**Contemporary Simulation Laboratory:**
A-dec or KaVo patient manikin simulator with ergonomic features and water supply. The computer monitor serves as a monitor only for demonstrations and all teaching, instruction and student feedback is dependent on faculty man-power and availability. Some schools have monitor connected to individual computer at each station so students can review lectures and demonstrations on their own time during extracurricular practice.
Classic Traditional Preclinical Laboratory - bench top, “head on the stick”:

Patient manikin head mounted onto the pole with limited ergonomic features and no water supply. Instruction and student feedback is dependent on faculty man-power and availability. Inadequate lighting can be resolved with surgical illumination and magnification that allows for teaching in correct ergonomic position.
DentSim - Virtual Simulation

The DentSim® computer assisted simulator, manufactured by Image Navigations of Israel, is a clinical simulator providing real-time tactile feedback with use of 3D graphics and real time image processing. The DentSim® unit combines a patient mannequin, such as A-dec or KaVo simulator, and rotary dental instruments. In addition, it is equipped with infrared light emitting diodes and an overhead infrared camera feeding to two computers and a monitor to interpret the spatial orientation of the mannequin and to produce a three-dimensional image of the patient’s mouth. The operator can view any cut made in a tooth from any angle on the monitor. The software provides detailed feedback comparing the operator’s performance with a preprogrammed acceptable “ideal” cavity preparation in its database at any point of the procedure. Feedback consists of detailed diagrams with quantitative analysis in various cross sections. Using the feedback during the procedure serves as a guidance tool. The entire procedure is saved and stored in individual student files that can be reviewed later in movie format with a final evaluation and a list of error messages, allowing students to actually watch how each mistake was made. Errors are also audio signaled in a real time while students are working and they can be viewed immediately. This allows students to know the results of their errors when they are made, rather than after the preparation has been completed (as in traditional preclinical instruction). They can thus develop the skill to make mid-course adjustments that increase both the quality of the final product and the efficiency of the skill development itself.
Simulation of caries:

Teeth:

Can we teach caries removal using typodont teeth?

Look at these examples from Columbia Dentoform and Kilgore. What do you think?

Compared to…

PLEASE SHARE WITH US YOUR EXPERIENCE:
Ergonomics –

This section of our Newsletter will be a place for us to share materials related to Clinical Simulation. Please e-mail any of the officers your contribution.

The 2010 Simulation Section focused on teaching and assessing ergonomics in the simulation environment. This form is used at NYU; in addition to grading it provides the student with valuable feedback.

<table>
<thead>
<tr>
<th>Student Name</th>
<th>1 = excellent chair position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Number</td>
<td>2 = adequate chair position/needs improvement</td>
</tr>
<tr>
<td>Faculty Name</td>
<td>3 = inadequate chair position/needs significant improvement</td>
</tr>
<tr>
<td>Loops ? Yes ____ No ____</td>
<td>4 = poor chair position</td>
</tr>
</tbody>
</table>

Please circle the number on the right that best represents the students chair position.