VII. STANDING COMMITTEES

B. Finance and Asset Management Committee

Efficiency Report: Process Improvement and e-tools for Academics in the UW School of Dentistry

This item is for information only.

BACKGROUND

Threats to our sustainability.

The University of Washington School of Dentistry has historically been among the world's finest dental schools, regarded highly for its clinical training excellence, research, and quality faculty. Yet, the excellence of our school faces threats: financial challenges, changing curricular standards, changes in funding for research, and changes in the nature of dental practice itself. These threats demand that we adapt and optimize our resources to ensure that our school remains a leader in dental education.

Process improvement.

When Joel Berg became Dean of the School of Dentistry in August of 2013, he brought concepts and operating principles from the corporate environment, where he spent several years. Among those concepts was process improvement. In November of 2013, Joel gathered a group of more than 25 faculty, staff, and students at the UW HUB to 'value stream map' our patient intake process. This critical but complex process was no longer working optimally for the School. As value stream mapping was foreign to most in the room, Joel secured the donated services of Danaher Business Systems through his corporate connections to lead the session. For 2 days, we all watched while the leaders from Danaher positioned over 100 Post-it® notes in a 30-foot row on a large white board to map patient intake. At the conclusion of our retreat, we learned two things: (1) our intake process had several major flaws that were impeding its function and (2) this method of mapping was not suitable for our School to analyze or design the many processes we needed to successfully negotiate the threats we face.

'The Post-it® method' that Danaher used, although an accepted method in lean and process improvement circles, simply was not workable for us. Participants could not see the Post-its® or and therefore could not easily participate during the session. It was awkward to capture the results after the session, and it was nearly impossible to modify or disseminate the document. And not every Post-it® stayed where we put it! Furthermore, we needed tools to help us not only with a linear processes like value streams, but other problems as well-- of organization,
or coordination, of timing, or of creating vision. We needed something better to apply the principles of process improvement in our academic environment.

Digital templates (e-Tools) for process improvement.

Over the past 15 months, we have developed a series of 7 digital templates, or e-Tools, that can be used to analyze, organize, and document processes, ideas, or information. The use of a digital medium allows us to project images so that the documents can be fabricated in real time with better visual access and participation by all—whether they are in the same room or linked through a video camera. This format can be easily modified at a later date, can be secured by password, emailed, placed on a website, backed up, or adapted. Using these templates has allowed our school to analyze dozens of major processes that are now guiding us through the many simultaneous changes we need to make. Several examples are attached to this document.

The different e-Tools have been designed to address the types of situations we have encountered, addressing needs for organization, decision making, prioritization, and scheduling. The tools are useful in any situation where a group needs to capture, analyze, define, or organize ideas or information. The templates are easy to use, based around inexpensive, off-the-shelf software, and are adaptable. We are now training a group (the Process Improvement Group, 'PIG') to apply these tools to help others toward process improvement. The PIG has been active for about 15 months at the School of Dentistry. In practicing with the digital templates, the group has made many refinements. We keep the current tool versions on our PIG website, which serves as a hub for the process improvement activities of the group.

Using e-Tools in the future.

We plan to refine these tools and teach faculty and staff to use them effectively. We want the PIG to be the manager and caretaker of a culture of process improvement so that we can address problems systematically and adapt to threats that inevitably come over time. We know that this graphical, digital approach is not for every situation or every individual, but it has allowed us to manage many complex interacting processes as we adapt our school to provide our state with the ‘Dentist of the Future’.

Attachment
Digital Tools (e-Tools) for Process Improvement
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(vision tool, used for exploring & communicating concepts, setting goals)

Digital e-Tools for process improvement have a number of advantages for any analysis, organization, or categorization of ideas or information. The 7 templates listed below can be applied to the goal at hand in real time. The digital format offers a number of advantages over traditional process improvement techniques.

Note: the vision e-Tool template was used to make this document.

Current Template List (e-Tools)
* Vision Tool
* Organization Tool
* Brainstorming/SWOT Tool
* Time Schedule Tool
* Decision Analysis Tool
* Information Flow Tool
* Value Stream Tool

Digital Format Allows:
- Access
- Participation
- Focus
- Clear Communication
- Modification
- Security
- Dissemination
- Reproduction

Start: Problem/Question

Creation of Digital Analysis Document in Real Time

End: Analysis/Solution

SOD Process Improvement Group (PIG)
Brainstorming Tool
(analyses of ideas, SWOT, decisions, exploration of problems)

2-11 - 2-12: dependence on SOM for biomedical education (several courses only; see also threats)

2-11 and 2-12: dependence on SOM for biomedical education; will be true for the new curriculum.

2-11 - 2-12: dependence on SOM for biomedical education (several courses only; see also threats)

2-11: inadequate number of faculty for teaching in biomedical sciences, with new curriculum too.

2-8: new clerkship model will require more patients

2-9: uneven ability of faculty to assess critical thinking themselves, threat to teach this skill

2-8: new clerkship model will require more patients

2-25: funding for student service opportunities is not always available

2-5 & 2-9: no OSCE exams in the curriculum (or few)

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2-8: patient pool to support student clinical experiences—often not enough (working on new admissions process to correct)

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2-14 - 2-24: uneven in assessing summative competency for clinical competence. OK in some areas, but not others.

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2-10: self assessment (uneven across the curriculum; occurring in some areas but not others)

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2-5.4: calibration of clinical and pre-clinical faculty is not ideal; leads to problems and missed opportunities for education.

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Educational Program Standard 2

Strengths

Opportunities

Note: Document not complete, edited to fit.

The brainstorming e-Tool template used at the SOD Executive Committee Meeting in Nov 2014 for SWOT analysis in preparation for the School’s accreditation.
The organizational e-Tool template was used by our Core Planning Group and Curriculum Task Force to organize our new curriculum into themes (threads) around competencies (strands) required by our accrediting body. The thread themes are now the basis for the structure and organization of our Curriculum Committee and a Student Dashboard to measure student performance. The organizational tool was used to design the new Curriculum Committee; the vision tool was used to conceptualize the Student Dashboard. Both are now being implemented.

Note: Document not complete, edited to fit.
The value stream e-Tool was used to map our former patient intake process after our session with Post-its® and Danaher. The tool uses the classic analysis, but it is constructed in digital form, using the template, in real time. This document was the basis for designing, using the same tool, our current patient intake process. The new value stream map is the basis for our new Dental Admissions Clinic, which opens this month.

Note: Document not complete, edited to fit.