

Subj: A PROMISE KEPT - TEACHING METRIC DATA

College of Medicine Faculty:

Recall that during academic year 2011-2012, UTHSC administration informed the faculty that an “Educational Reporting Tool” was to be implemented in all UTHSC colleges and that a “Simplified Tool” was created to achieve this directive. The “Simplified Tool” was reviewed and rejected by the College of Medicine’s Dean’s Faculty Advisory Committee (DFAC) in January, 2013 on grounds that it inaccurately accounted for the teaching activities of COM faculty. The Dean’s Faculty Advisory Council/DFAC, with permission from UTHSC administration, appointed a subcommittee to develop an alternative teaching metric to more accurately account for the various teaching venues and hours of the COM faculty.

As representatives of this latter subcommittee, we attended each of your department/division meetings during the past four months and asked you to help us to define your teaching venues and to determine the average time that you spend on a variety of educational activities. First, we thank you for your help in providing this information. We promised during those meetings that we would share with you the data obtained from this survey. This document and attachments fulfill that commitment. It consists of four parts:

- Bullet summary of observations that emanating from teaching metric data you provided
- Detailed descriptions to accompany the summary
- Actual metric with all survey data obtained from 106 faculty and a statistical analysis of it
- Histograms of representative statistical results

An excel file containing all of the raw teaching metric data will be available shortly at <http://www.uthsc.edu/Medicine/DFAC/meetings.php>

or by contacting the Chairperson of the Teaching Metric Subcommittee, Dr. Haavi Morreim at [hморreim@uthsc.edu](mailto:hmorreim@uthsc.edu).

This teaching metric and the survey data you provided were reviewed at the February DFAC meeting and forwarded to the Administration for their consideration. DFAC also approved sharing these data with you.

We much appreciate your help in generating this information, and hope that it will serve to provide a more complete and accurate description of the faculty’s effort in teaching our students.

With best wishes,

On behalf of the DFAC Teaching Metric Subcommittee, Terry Cooper and Bill Pulsinelli

General observations derived from beta-testing a CoM teaching metric

Summary

- High level participation (106 submissions)
- Metric designed in sections, permitting faculty to ignore large portions of it
- Metric successfully provided detailed description of activities
- High standard deviations -- data often bi-phasic & highly skewed
- No evidence of widespread over-estimation of effort
- 75th percentile values required to avoid under-reporting faculty effort
- Administration question – Tolerable level of effort under-reporting
- Method of rollout critical to success
- A UTHSC-wide one-size-fits-all metric likely to be perceived as inaccurate & unfair

Faculty Participation:

(1) 106 CoM faculty members voluntarily completed the 6 page teaching metric. The fact that submission was anonymous, i.e., no penalty for non-participation, argues metric length was not a significant deterrent to active participation. This was probably due in part to dividing the metric such that significant portions of it could be ignored.

Metric Structure:

(2) Related activities situated in sections surrounded by Heavy black boxes with color coded titles (16 font, red for Section and 14 font, blue for Subsection titles). This structure permitted faculty to ignore entire sections of activities, e.g., clinical didactic or laboratory activities, they did not perform (red titles), and subsections that were not pertinent to them, thereby effectively shortening the metric. Large, bright lettering required to diminish possibility that faculty will overlook it, read the entire metric generating negative consequences for acceptance. Keep sections to eight or fewer subsections.

Metric Data Characteristics:

(3) The metric successfully captured a detailed description of the UTHSC CoM educational enterprise.

(4) The data set did not appear to suffer from excessive over-reporting of effort as internal consistencies were observed, for example, ratio of "new" to "major revision" to "repeat" activities was relatively constant across categories.

(5) High standard deviations in the data set demonstrate broad differences in didactic activities conducted in pursuit of different objectives, in different courses, settings, and departments.

(6) In most cases the data are either highly bi-phasic and/or heavily skewed. Therefore, using means and/or medians is not representative of the whole as it misreports significant fractions of faculty efforts (see graphic examples below).

(7) The 75 percentile value, which accounts for 75% of the faculty efforts reported, is more representative than the mean or median of the values submitted due to the bi-phasic and skewed nature of the data (see graphic examples below).

(8) A critical question to be addressed is what percentile of the faculty effort estimates can be ignored before the metric would be objectively considered an inaccurate evaluation.

Future Expectations and Lessons:

(9) The clinical section of the teaching metric (Section 8) is still in need of further refinement before it adequately and unambiguously describes clinical didactic activities. As such, it is not ready for college-wide testing in its present form.

(10) Ultimate potential is seldom realized in the first iteration of a metric. Cumulative data in future years can be expected to increase the metric's accuracy in accounting for faculty effort.

(11) Method of rollout was critical to success in gathering these data. Personal meetings with each department provided opportunity to turn skepticism into demonstrated interest and then support for the effort. An impersonal email directive may achieve compliance, but not acceptance. Accountability is not optional, but time and effort spent in explaining the need for and methods to be used in achieving that accountability at the individual departmental levels will not be wasted.

(12) The enormous variability observed in this single college beta-test of a metric directly speaks to the issue of University-wide metrics and the potential for failure in attempting to adopt a one-size-fits-all approach that accurately, credibly and equitably accounts for faculty effort.

Key to metric data below

N = number of observations submitted for analysis of the individual question

Mean or Average of the submitted values

Std. Dev. = Standard Deviation

Median = Calculated value that accounts for the 50th percentile of the values submitted

Min. = Minimum value submitted for the individual question

Max. = Maximum value submitted for the individual question

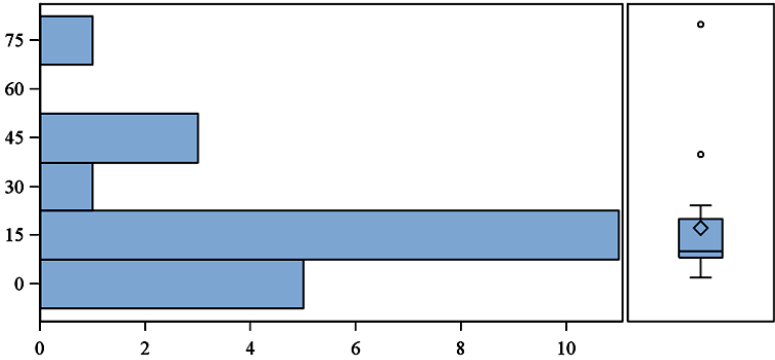
25% Pctl = Calculated value that accounts for bottom 25th percentile of the values submitted

75% Pctl = Calculated value that accounts for 75th percentile of the values submitted

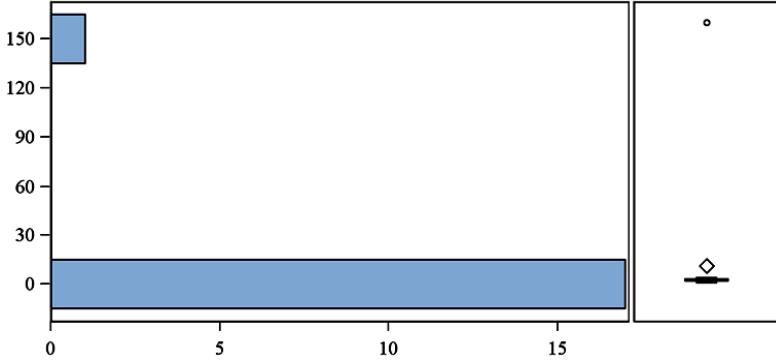
Distribution and Probability Plot

VALUE OBSERVED

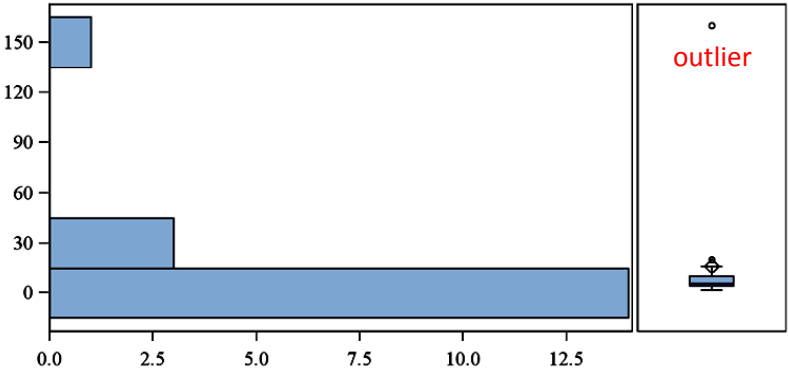
LT-a1 Newly Developed Laboratory Module



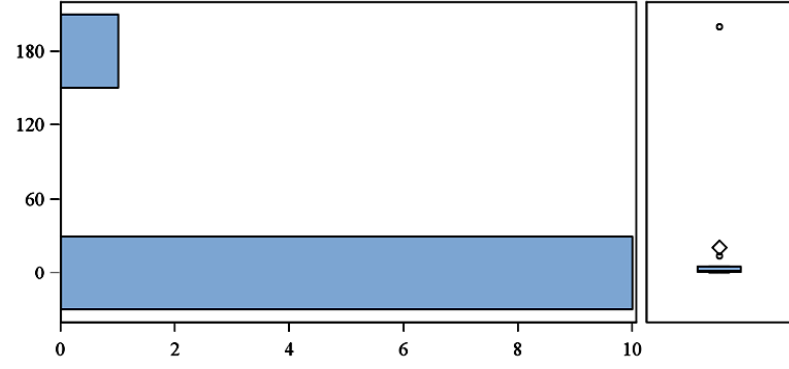
LT-a3 Repeat Laboratory Module



LT-a2 Major Revised Laboratory Module



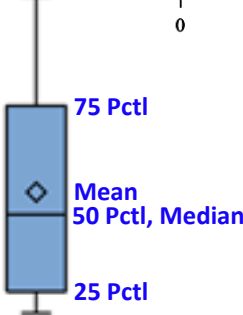
LT-a5 Practical Laboratory Setup



COUNT

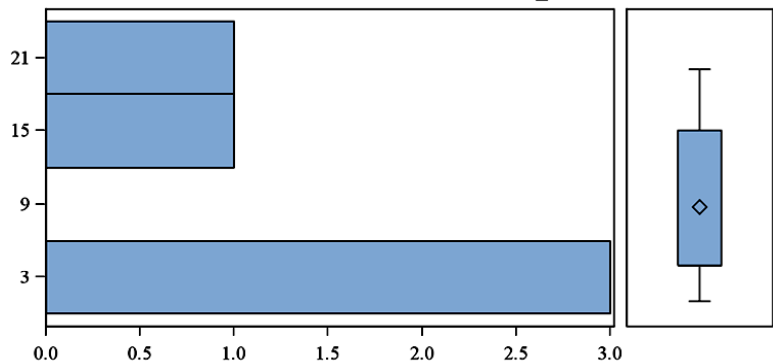
COUNT

Key

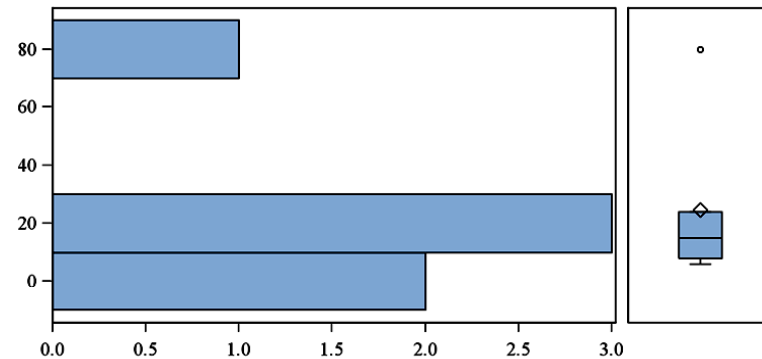


Distribution and Probability Plot

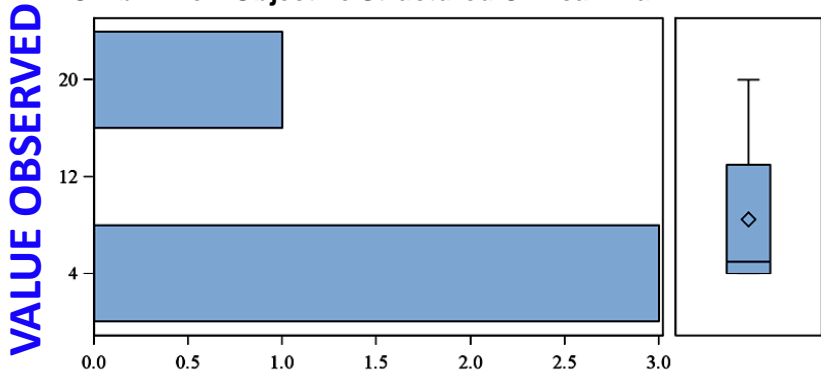
CD-a1 New Standardized Patient Encounter & Documentation



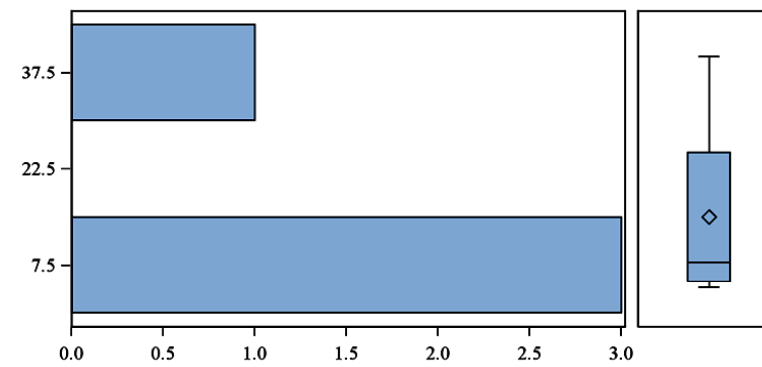
CD-f1 New Clinical Pathologic Conference



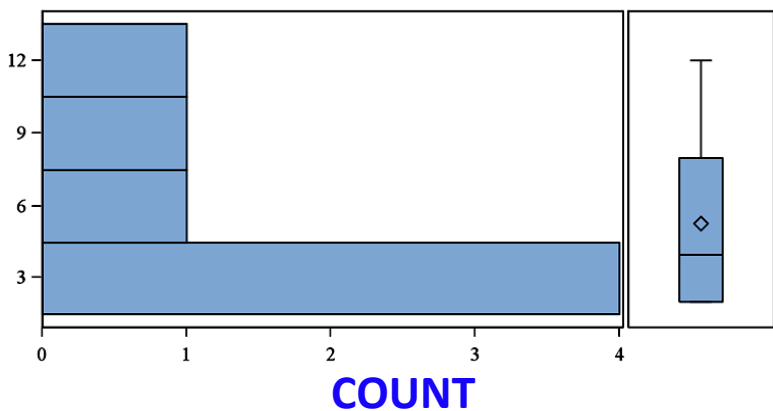
CD-b1 New Objective Structured Clinical Exam



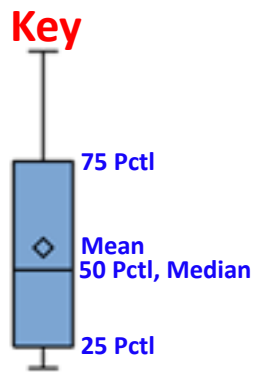
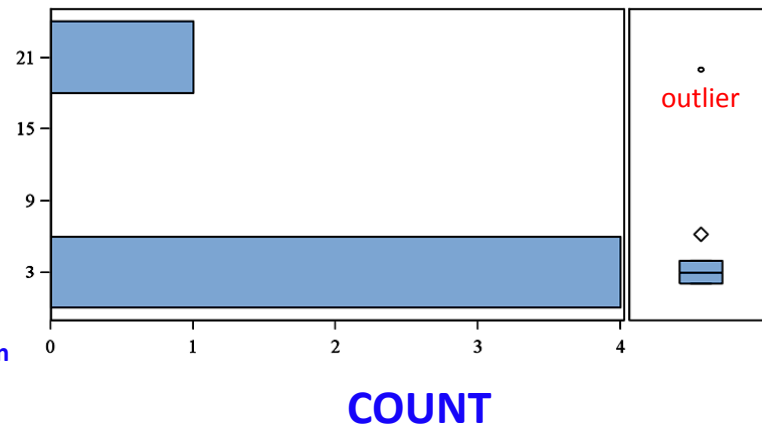
CD-f2 Major Revised Clinical Pathologic Conference



CD-N2 Major revised board review teaching



CD-f3 Repeat Clinical Pathologic Conference



VALUE OBSERVED

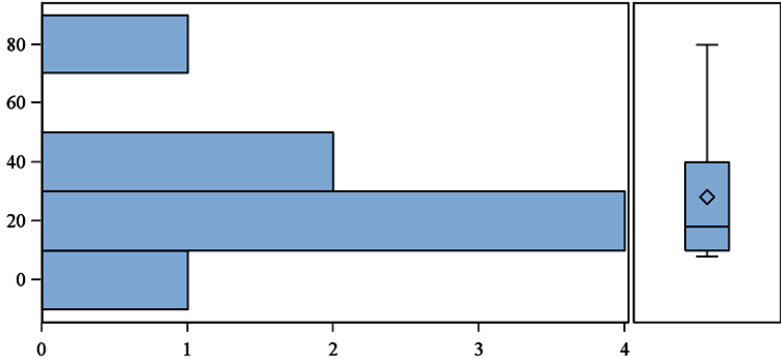
COUNT

COUNT

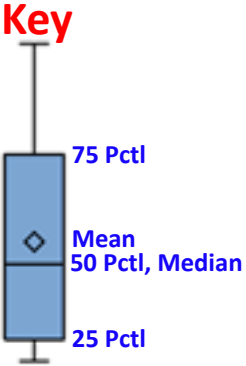
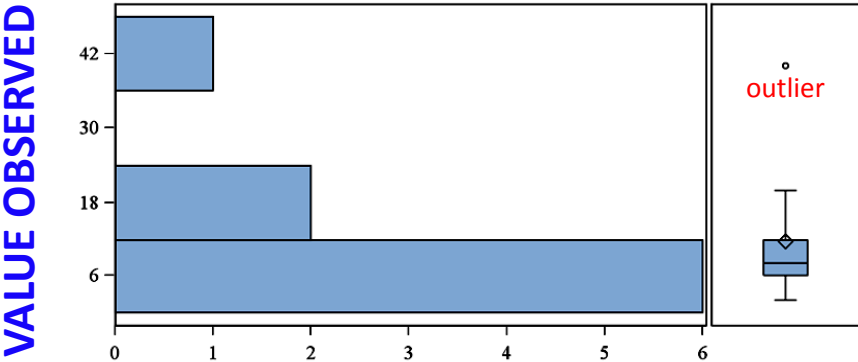
outlier

Distribution and Probability Plot

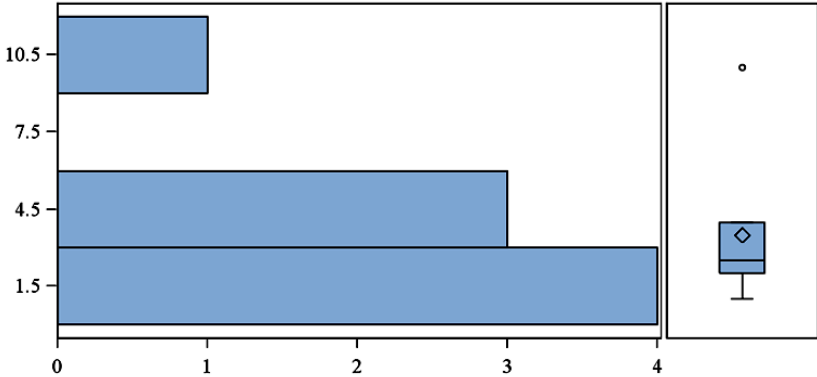
CD-g1 Newly Developed Clinical Basic Science Conference



CD-g2 Major Revised Clinical Basic Science Conference



CD-g3 Repeat Clinical Basic Science Conference



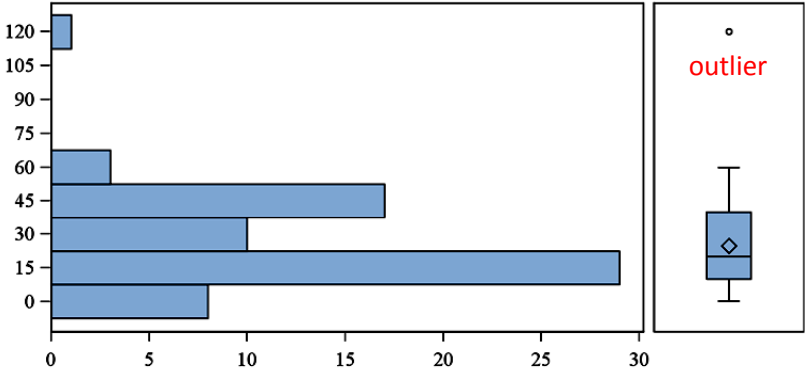
COUNT

VALUE OBSERVED

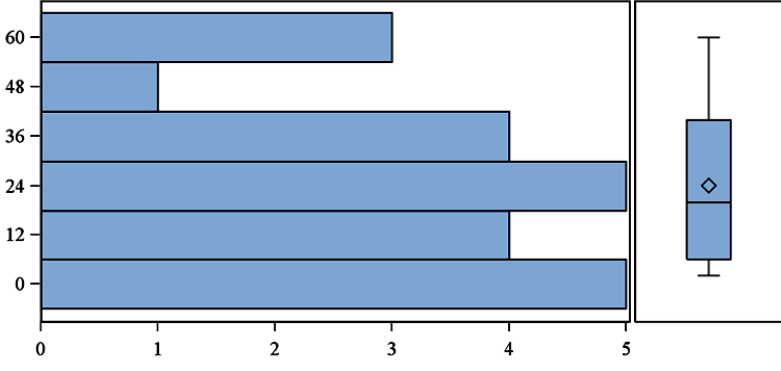
Distribution and Probability Plot

VALUE OBSERVED

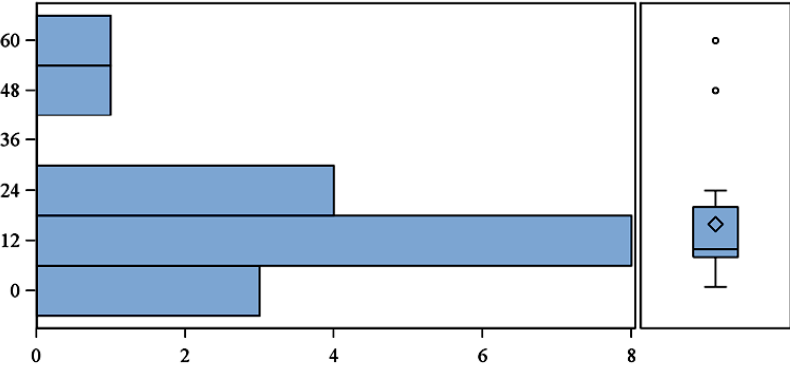
BS-a2 Newly Developed Formal Lecture



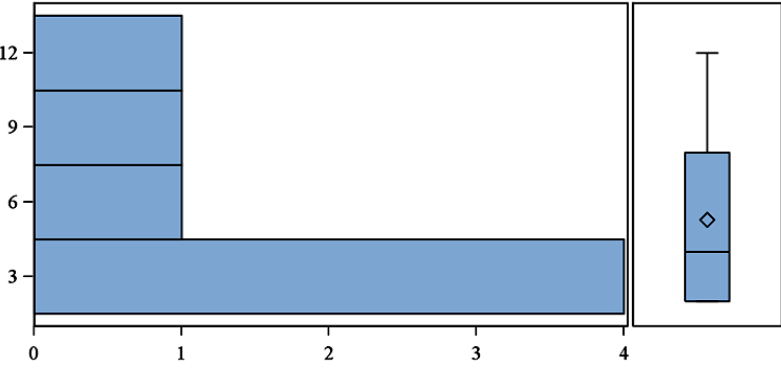
BS-c1 Newly Developed Team Based Learning module



CD-N2 Major revised board review teaching



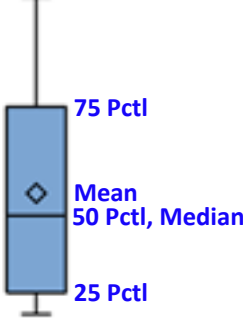
BS-d1 Newly Developed Small Group Teaching Module



COUNT

COUNT

Key



College of Medicine Teaching Metric

DIRECTIONS:

1. Read the **RED Heading**. If you don't perform these functions, **SKIP** the section.
2. Read the Blue Sub-Setion Headings. If you don't perform these functions, Skip the sub-section.

1. Lectures and Classroom Teaching

	*N	Mean	Std. Dev.	Median	Min.	Max.	25% Pctl	75% Pctl
a. Lectures (in class or online/pre-recorded)								
Number of lectures	18	17	17	14	1	68	4	30
Ave. hrs per newly developed lecture	68	25	19	20	0	120	10	40
Ave. hrs per majorly revised lecture	66	12	12	8	2	80	5	15
Ave. hrs per repeat lecture	70	4	4	3	1	30	2	4
b. Lectures Attended to Promote Integration or for Evaluation								
	9	8	6	5	1	18	2	12
c. Team Based Learning Module (enter number of Modules taught)								
Ave hrs per newly developed module	22	24	20	20	2	60	6	40
Ave hrs per majorly revised module	19	13	11	8	1	40	4	20
Ave hrs per repeat module	20	5	4	4	1	15	2	8
In class contact hours								
d. Small Group Teaching Modules								
Ave hrs per newly developed module	17	16	16	10	1	60	8	20
Ave hrs per majorly revised module	17	9	8	5	1	30	3	10
Ave hrs per repeat module	18	7	9	4	1	36	2	8
In class contact hours	18	14	42	2	1	180	2	9
e. Non-Lecture contact hours (miscellaneous)								
Ave hrs per *review or tutorial session	39	4	6	2	1	20	1	3
Ave hrs per *Q and A sessions before/after class	36	1	2	1	0	10	1	1
Ave hrs per *email/blackboard questions and answers	44	2	2	1	0	10	1	2
f. ***Other time spent in hrs, e.g., first time lecturers (must provide documentation to dept. chair)								
	3	6	3	5	3	9	3	9

***When N is less than 3, the statistical analysis is meaningless**

2. Laboratory Teaching

	N	Mean	Std. Dev.	Median	Min.	Max.	25% Pctl	75% Pctl
a. Laboratory Teaching								
Ave hrs per newly developed laboratory session	21	17	19	10	2	80	8	20
Ave hrs per majorly revised laboratory session	18	16	36	6	2	160	4	10
Ave hrs per repeat laboratory session	18	11	37	2	1	160	2	3
In class contact hours	15	7	9	2	1	29	2	10
*Practical laboratory setup (actual time spent)	11	21	59	2	0	200	1	6
b. Other time spent in hrs, e.g., first time lecturers (must provide documentation to dept. chair)								
	1	20	.	20	20	20	20	20

3. Exam Preparation, Proctoring & Grading

	N	Mean	Std. Dev.	Median	Min.	Max.	25% Pctl	75% Pctl
a. Classroom Exam Preparation & Grading								
*Exam Question Writing (actual time spent)	51	9	11	4	0	42	2	10
*Exam proctoring (actual time spent)	22	2	2	2	0	12	1	3
*Grading (actual time spent)	38	6	8	4	0	40	2	8
*Post-exam feedback	35	2	3	2	0	12	1	3
b. Laboratory Exam Preparation, Proctoring & Grading								
Ave hrs per *exam Setup	14	4	5	2	0	20	2	3
Ave hrs per *exam proctoring	13	4	5	3	0	20	2	4
Ave hrs per *exam Grading	18	4	4	3	0	15	2	3
Ave hrs per *post-exam feedback	8	4	7	2	1	20	1	2
c. ***Other time spent in hrs (must justify to Dept. Chair)								

4. Remedial and Pre-Course Teaching

	N	Mean	Std. Dev.	Median	Min.	Max.	25% Pctl	75% Pctl
a. Creating learning objectives (actual time spent)								
Ave hrs per newly created objective	3	7	4	8	2	10	2	10
Ave hrs per majorly revised objective	17	3	5	1	0	20	1	2
Ave hrs per repeat objective	11	2	3	1	0	10	1	3
Number of objectives	3	69	114	5	1	200	1	200
b. Total Feedback Burden (20 minutes/ feedback item); calculated from B58*B59								
	1	1	.	1	1	1	1	1
c. Exam Item Preparation Time (actual time spent)								
d. Other time spent in hrs, e.g., first time lecturers (must provide documentation to dept. chair)								

5. Faculty Teaching Development Activities

	N	Mean	Std. Dev.	Median	Min.	Max.	25% Pctl	75% Pctl
a. Workshops & Classes Attended (for teaching & presentation development)	25	7	7	5	1	30	3	8

5. Student Mentoring

	N	Mean	Std. Dev.	Median	Min.	Max.	25% Pctl	75% Pctl
a. Research Mentor for Graduate Student (enter number of students)	15	4	3	3	1	12	2	5
Committee meetings attended	44	6	4	5	1	14	2	9
Committee meetings chaired	26	5	11	2	1	60	2	4
Qualifying exam meetings attended	35	3	7	2	1	40	1	3
Thesis/Dissertation defenses (as com. member)	41	4	4	2	1	25	2	4
b. Student Research Seminars/Journal Clubs Attended	13	15	23	5	1	80	2	20
Ave hr per seminar/journal club	40	4	7	2	0	40	1	4
c. Thesis / Dissertation Defenses (reading, editing, conferences)	2	3	1	3	2	4	2	4
Ave hr per thesis/research report reading	45	12	11	8	2	60	5	16
Ave hr per conference attended	33	4	7	2	1	40	2	3
Number of thesis committees	8	3	1	2	1	4	2	4
d. Scientific Meeting Preparation Development	2	2	0	2	2	2	2	2
Ave hrs per abstract	54	7	7	4	1	40	2	8
Number of abstracts	10	8	12	4	1	40	2	8
Ave hrs per oral presentation	45	9	8	5	2	40	4	12
Number of oral presentations	5	2	1	2	1	4	1	2
e. Manuscript / Thesis Reading / Writing / Editing	6	5	4	4	2	13	3	8
Ave hrs per version reviewed/edited	47	18	22	10	2	100	4	24
Number of versions reviewed/edited	7	5	4	5	2	10	2	10
f. Summer / Undergraduate / Other Student Mentoring	1	2	.	2	2	2	2	2
Ave hrs per week per student	33	7	6	5	0	25	3	10
Number of students	6	2	1	2	1	5	2	2
g. Clinical Career Development Counseling								
Ave hrs per week per student	13	1	1	1	1	4	1	1
Number of students	4	4	3	3	0	8	2	6
h. Other time spent in hrs, e.g., first time lecturers (must provide documentation to dept. chair)	3	12	11	8	4	24	4	24

Ave hrs per newly developed conference	6	25	28	15	6	80	8	24
Ave hrs per majorly revised conference	4	15	17	8	4	40	5	25
Ave hrs per repeat conference	5	6	8	3	2	20	2	4
In conference contact hours	5	2	0	2	2	2	2	2
h. Clinical Basic Science Conferences (CBC)								
Ave hrs per newly developed conference	8	28	25	18	8	80	10	40
Ave hrs per majorly revised conference	9	12	12	8	2	40	6	12
Ave hrs per repeat conference	8	4	3	3	1	10	2	4
i. Average Contact Hrs Spent in CBC or CPC								
	8	3	2	2	1	6	2	5
j. One on One Teacher-Student Tutorials (content oriented)								
Ave hrs per newly developed tutorial	4	8	8	5	2	20	3	13
Ave hrs per majorly revised tutorial	2	4	3	4	2	6	2	6
Ave hrs per repeat tutorial	3	2	2	1	1	4	1	4
In tutorial contact hours	4	3	2	3	1	4	1	4
k. Development of Problem-Based Learning Modules (PBL)								
Ave hrs per newly developed PBL	4	7	4	7	2	10	3	10
Ave hrs per majorly revised PBL	5	3	3	2	1	8	1	2
Ave hrs per repeat PBL	4	2	2	1	1	4	1	3
l. Average Contact Hrs Spent in PBL Session								
	5	2	1	1	0	4	1	2
m. Training Subjects for Clinical Skills/Standardized Patients								
		5						
n. Reviewing Preceptor Evaluations & Personal Reflections								
Ave hrs per evaluation	6	1	1	1	1	3	1	2
o. Development of Patient Simulations								
Ave hrs per newly developed simulation	2	4	3	4	2	6	2	6
Ave hrs per majorly revised simulation	2	3	2	3	1	4	1	4
Ave hrs per repeat simulation	2	1	0	1	1	1	1	1
In simulation contact hours	2	3	2	3	1	4	1	4
p. Development of Virtual Patient Case								
Ave hrs per newly developed case	3	4	3	2	2	8	2	8
Ave hrs per majorly revised case	3	3	3	1	1	6	1	6
Ave hrs per repeat case	3	2	2	1	1	4	1	4
In case contact hours	3	5	6	2	1	12	1	12
q. Optional Skill Development (Optional Sessions)								
	1	2	.	2	2	2	2	2
r. Board Review Teaching								
Ave hrs per newly developed session	8	15	7	15	10	20	10	20
Ave hrs per majorly revised session	7	24	33	10	2	100	8	28
Ave hrs per repeat session	7	5	4	4	2	12	2	8
In session contact hours	8	2	1	2	1	4	2	3
	6	5	4	4	2	12	2	5
s. Other time spent in hrs, e.g., first time lecturers (must provide documentation to dept. chair)								
	1	100	.	100	100	100	100	100

*The clinical section was revised slightly, in consultation with clinical faculty members, subsequent to the time when the statistical analyses of submitted data were performed. As a result only the average data provided by those clinical faculty members appear in the newly added sections.