Google, meet Microsoft: Joining technologies to track conference attendance and obtain feedback...a “How-to” Guide

For our example we will utilize the following conference schedule:

8:00-9:00am: Resident/Attending Core: Gestational HTN/Preeclampsia/Eclampsia: Drs. Powers and South
9:00-10:00am: Split Sessions Board Review
PGY1/Students: Dr. Scott (JP Conference Room)
PGY2: Dr. Abbuhl (EDILL)
PGY3/4: Dr. Agarwal (Resident Room)
***10:00-11:00am: Consultant Lecture Series: Neurology-Dizziness: Dr. Price
***11:00-12:00pm: Grand Rounds: “Economics of Emergency Medicine” Dr. Lin

***Denotes CME Available

Creating the Google Form:

1. Title, primer, and demographics:

Section 1 of each conference form contains the same information. Notice the title of the form includes the date of the conference for organizing purposes. We also include a primer as to the purpose of the form and when the form closes. Finally, we collect names for attendance tracking and set up the form so that each respondent is sent a copy of their answers. This allows respondents to keep track in case of a discrepancy.

2. Conference Session Attendance and Feedback
For each session we ask respondents if they were present or not or if they were presenting. This question will be referred to as the “attendance attestation”. You’ll notice in the screenshot below that each option brings the respondent to a different portion of the form based on their answer. For example, those that did not attend a session or those that presented do not complete the feedback section for that particular session. Instead, they are brought to the attendance attestation for the next session of that week’s conference.

The “feedback section” for each session asks for a rating of the session and for written comments (see below).

We ask for the same information for each session included in the schedule... an attendance attestation and a feedback section for those that were present and not a presenter.
3. **Split Sessions**

Our conferences incorporate several “split sessions” where we divide learners by their PGY level. In these instances, we start with the standard attendance attestation. For those that attended, but did not present, we then ask to choose the session they attended from a drop-down menu. This allows for the respondent to be directed to the corresponding feedback section for that session (see below).
You’ll notice that after completing the feedback portion, the form is set-up to bring the respondent to the next session scheduled for that conference day (above underlined in red). This prevents the user from completing feedback for the other split sessions.

4. CME Sessions

As noted above in the example conference schedule, CME is available for some sessions. When CME is available, we include the text codes in the Google Form. Below, you’ll notice we create the same attendance attestation. Presenters are brought directly to a section that provides them with the CME code for the session. Attendees are asked to provide feedback and are then brought to the same CME code section (see below).

5. Finishing out the Form

For the last conference session, the attendance attestation is formatted so that those that do not attend the last session, submit the form. Presenters will either submit the form or be shown a CME code prior to submitting. Attendees will complete the feedback section and then submit or be shown a CME code prior to submission.
**Linking the Form with Microsoft Outlook**

Microsoft Outlook is the primary work email for Penn. In order to distribute conference schedules and the Google Form, we utilize a calendar invite that gets sent to all residents, faculty, nursing, APPs, and fellows.

A hyperlink is included (highlighted above) that directs the user to the Google Form. This is easily accessed via mobile device or computer.
Calculating and Extracting Conference Hours

Weekly Evaluation/Attestation Google Form Creation (to be completed by residency leadership)
- Each week, residency leadership creates a Google Form for that week’s conference and sends it out via a calendar invite. This allows the residency leadership to alter the form real-time in case of last-minute changes to the schedule. That form is saved in a “conference attendance and feedback” folder in the corresponding month.

Closing Forms to Responses
- We close forms to responses no sooner than one week after the corresponding conference date.

1. Opening and closing a form for responses:

   Click on “responses” (circled above in red)

   Click “accepting responses” to open or close a form
Step-by Step Guide for Extracting Data for Conference Attendance

1. Create Google Sheet containing Response Data
   a. Open desired week’s form

   ![Click to open form](image)

   ![Click on “responses” (circled above in red)](image)

   ![Click on Google Sheet Icon](image)

   ![Click “Create”](image)

This will automatically create and open a Google Sheet with the same title as the form and all responses will be recorded in this sheet. It will also be automatically saved to the Google Folder. Once a sheet has been created for a form, clicking the icon will open the corresponding sheet. You can also access by opening via the folder (example below).
Once you click create, the sheet will open:
2. **Gathering Attendance Data from the Google Sheet**

Respondents click one of the following radio buttons for each conference session:

![Image of Google Sheet](image)

Their response is recorded as such in the sheet:

We format the sheet to count the number of times a respondent answers “yes” or “I was the presenter”.

a. **Formatting the Sheet**

i. While in the sheet, scroll all the way to the right to find the end of the response section. In this example, column “U” is the first column without response data and is where we will begin entering our formulas.

ii. For this example, I have titled column U “number yes”, column V “number I was the presenter”, and column W “total” (see below)

iii. For column U above (number “yes”) we will enter the following formula, which will calculate the number of times a respondent answered “yes”.
Starting by typing the following: `=countif(`

In this example, the range that should be counted is E2:T2. Columns A-D are excluded as this is categorizing data. You can easily select the range by highlighting each of the boxes you want to include (click, hold, and drag).

After dragging, release the mouse (do not press “enter” as this will enter a faulty formula) and type the following remaining components of the formula (red text):

```excel
=COUNTIF(E2:T2,"yes")
```

Then press enter and this will calculate the number of “yes” responses (4 in this case).
Next, click and drag the blue square at the lower right-hand corner of the box through each row with a response. This will apply the formula to each row and calculate the "yes" responses for each individual.

<table>
<thead>
<tr>
<th>number</th>
<th>yes</th>
<th>numbe</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

iv. Repeat the same steps for the “number ‘I was the presenter’” column. For this example, the formula is the following:

```
=COUNTIF(E2:T2,"I was the presenter")
```
v. Calculate the total hours for each respondent

In the column title total, we will insert a formula to add together the total “yes” responses and “I was the presenter” responses.

For this example, insert the following in the 1st row of column W:

=SUM('range')

The range in this example is U2:V2, which is selected by dragging just as done previously.
Complete the calculation by pressing enter and drag through the remaining columns.

<table>
<thead>
<tr>
<th>U</th>
<th>V</th>
<th>W</th>
</tr>
</thead>
<tbody>
<tr>
<td>number yes</td>
<td>number &quot;i was the presenter&quot;</td>
<td>Total (Max hours 4 for faculty and core)</td>
</tr>
<tr>
<td>4</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>4</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>6</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>6</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>6</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>4</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>6</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>6</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>5</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>2</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>6</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>6</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>6</td>
<td>0</td>
<td>6</td>
</tr>
</tbody>
</table>
b. Formatting the Sheet for Easier Recording

I find it easiest to record the hours by sorting the sheet by type of respondent and then by freezing the column with the names prior to scrolling over to the total hours.

Sort the Sheet by respondent by right clicking the column you desire to sort and choosing “Sort sheet A→Z”

Freeze name column by selecting the column with the names of respondents, then select “view” → “Freeze” → “Up to current column”. You will now be able to scroll to the “Total” column while still being able to see the names of the respondents.
As you may have noticed, there is sometimes a disconnect between the number of maximum hours available and the total recorded in column W. This is the result of the sessions varying in length of time.

We clarify how to record the hours in the title of the total column. For example, for this sheet, any faculty or resident whose sum is 4, 5, or 6 will receive 4 hours. Everyone else would receive the total number recorded (i.e. 1, 2, or 3).

3. Special Considerations and Alterations to the Above Process
   a. M&M
      Occasionally we have sessions that are longer than one hour. For example, 2-hour credit is given for M&M as it typically runs between 1.5-2 hours. In the case of M&M weeks, I add another column that gives an additional hour for those that attended M&M.

Above you will notice the formula entered was, =countif(O2,"yes"). "O2" was the column that recorded attendance specifically for M&M.
I then increase the range on the “Total” column to also include the newly added column above (range is now U2:W2). Formula entered is =sum(U2:W2). This will give an additional hour for M&M.

Complete the calculation for each respondent by dragging the box just as above. The following is a completed sheet.

***This entire process typically only takes about 3 minutes once it has been done a few times.***

***The same process can be used to extract resident attendance data.***
Extracting Feedback Data

We provide each speaker with the data obtained regarding their session. Below is an example. Graphical data and comments are pulled from the Google Form response data.

Each presenter is sent an email with the above letter attached in PDF form.