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Coverage Examples Cost Sharing Calculator Information Packet

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Prepared for:
Centers for Medicare & Medicaid Services (CMS)
Center for Consumer Information & Insurance Oversight

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Revision History

Revision	Date	Revisions
02.04.XX.02	2/9/2016	Changed references to “beneficiary” to “subscriber”
02.05.XX.01	2/19/2016	Changed revision number to conform to version 02.05 of the calculator Updated figure in §3.4 to reflect relabeling of buttons in tool
2.07.02	3/29/2016	Added material to §
3.0	2/21/2019	Added benefit categories for “Prescription Drugs: Insulin” and “Professional Services: Inpatient” Revised the calculation phases Added special cost sharing options Added guidance for rounding and the out-of-pocket limit
3.01	12/13/2019	Updated calculation phases Updated guidance for rounding and the out-of-pocket limit

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1.0 Purpose and Construction

The Coverage Examples Cost Sharing Calculator (CECSC) is a tool that can be used by health plans to estimate the out-of-pocket expenditure under a benefit package for treatment of three stylized examples: management of stable type 2 diabetes; an uncomplicated pregnancy with a vaginal birth; and a simple foot fracture.

This coverage example calculator makes several assumptions which may not be valid for all plan designs.

The coverage example calculator makes the following assumptions:

- The benefit package covers maternity care, diabetes care, and simple fracture care. If the plan does not cover these conditions, the coverage example calculator cannot be used for the non-covered condition;
- Consumer out-of-pocket costs do not include premiums.
- The condition was not excluded as a pre-existing condition.
- The only medical expense incurred by the subscriber was for treatment of the specified condition. There are no medical expenses for any member covered under the plan or policy other than those listed.
- The calculator treats each condition independently of the others. (For example, the calculator does not calculate the subscriber's out-of-pocket cost if she is both diabetic and experiences an uncomplicated fracture.)
- All care is in-network and considered first tier (or the tier associated with the lowest level of cost sharing), for those products that incorporate tiered provider networks.
- All services occur in same policy period.
- All prior authorizations are obtained.
- All services are deemed medically necessary.
- All costs (allowed amount, sample care costs, member costs) greater than $100 are rounded to the nearest hundred dollars.
- All costs (allowed amount, sample care costs, member costs) less than $100 are rounded to the nearest ten dollars.
- If applying the rounding rules causes the cost sharing amount displayed to exceed the actual out-of-pocket limit (for self-only coverage), then the cost sharing amount must be capped and the amount of the actual out-of-pocket limit must be used. For example, if the out-of-pocket limit is $5,000 but applying the rounding rules makes the sum of the deductible, copayment and coinsurance equal to $5,100, the plan or issuer must use the out-of-pocket limit of "$5,000" and not "$5,100." This amount (the $5,000 out-of-pocket limit) must then be added to the monetary amount in the exclusions and limits to determine the total *Patient pays* amount.
- All medications are covered as generic equivalents if available.
- If the plan has a wellness program that varies the deductibles, copayments, coinsurance, or coverage for any of the services listed in a treatment scenario, the benefit design that is applied reflects the cost-sharing required assuming that the patient does NOT participate in the wellness program.

If your plan design differs significantly from these assumptions, the estimated consumer out-of-pocket cost may be inaccurate. In such a case, the user can alter the coverage calculator to make it more accurate. For example, if your plan covers diabetes supplies under the prescription drug benefit, a user

can modify the calculator to apply prescription drug cost sharing to those items. Alternatively, the plan can use a coverage calculator that it develops using as inputs the schedules of services provided and the schedule of allowed amounts that are included in the cost sharing calculator.

The CECSC is a macro-enabled Excel™ workbook. The user must enable macros.

2.0 Using the Coverage Examples Cost Sharing Calculator

The CECSC can be used in two different modes. When the workbook is first opened, the WELCOME worksheet is displayed and Mode is selected.

In the **Single Plan Mode** a user enters the characteristics of a single plan, and then runs the results of the calculator. In Single Plan Mode a user can also add plans one at a time and then export an output file for all of the plans that the user has entered.

In the **Multi-Plan Mode** a user imports (or copies) data from an external file for a set of plans and then runs the calculator to produce an output file. In Multi-Plan Mode a user can also browse and review the results for each plan before creating the output file.

3.0 Technical Overview

The CECSC has 4 core worksheets that the user interacts with:

- The WELCOME worksheet in which the user chooses either the **Single Plan** or **Multi-Plan** mode.
- The MULTIPLE_PLAN_MODE worksheet in which the user chooses the method that will be used to enter data for multiple plans.
- The BENEFIT_DESIGN worksheet in which the user enters the benefit design parameters (i.e., type of cost sharing, deductible amounts, coinsurance rates, copayment amounts, coverage limits, etc.)
- The RESULTS_SUMMARY worksheet which displays the estimated cost-sharing under the specified benefit design for each of the standardized coverage examples.

From the RESULTS_SUMMARY worksheet, the user can navigate to a set of three worksheets for each of the coverage examples. Specifically, from the Maternity Example section of the RESULTS_SUMMARY worksheet the user can navigate to:

- The MATERNITY_SUMMARY worksheet which shows the allowed amount, the amount of the plan payment, and the amount of the subscriber payment for the maternity coverage example.
- The MATERNITY_TIMELINE worksheet which shows the claim-by-claim development of the consumer cost sharing amount.
- The MATERNITY_LINE_ITEM worksheet which shows the allowed amount for each of the items and services that are included in the coverage example.

From the Diabetes Type 2 section of the RESULTS_SUMMARY worksheet the user can navigate to:

- The DIABETES_SUMMARY worksheet which shows the allowed amount, the amount of the plan payment, and the amount of the subscriber payment for the Type 2 Diabetes coverage example.

- The DIABETES_TIMELINE worksheet which shows the claim-by-claim development of the consumer cost sharing amount.
- The DIABETES_LINE_ITEM worksheet which shows the allowed amount for each of the items and services that are included in the coverage example.

From the Foot Fracture Example section of the RESULTS_SUMMARY worksheet the user can navigate to:

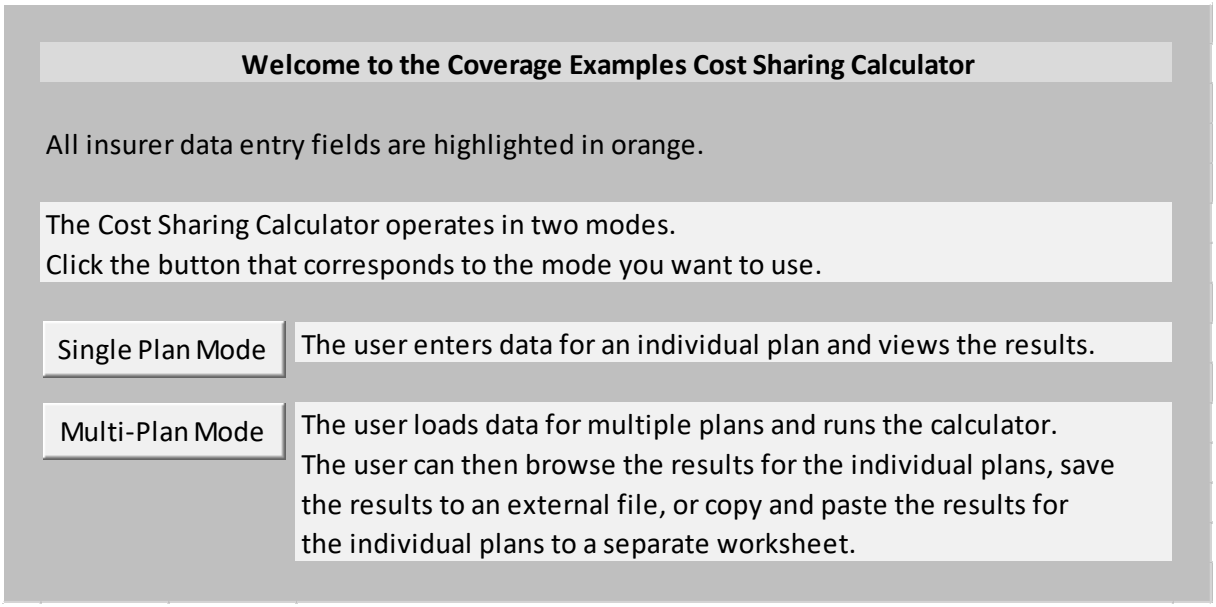
- The FRACTURE_SUMMARY worksheet shows the allowed amount, the amount of the plan payment, and the amount of the subscriber payment for the foot fracture coverage example.
- The FRACTURE_TIMELINE worksheet which shows the claim-by-claim development of the consumer cost sharing amount.
- The FRACTURE_LINE_ITEM worksheet which shows the allowed amount for each of the items and services that are included in the coverage example.

In addition to these worksheets, the CECSC has two worksheets that are used to store the input and output data when the tool is being used in multi-plan mode.

- The PLAN_INPUT_DATA worksheet which holds the benefit design parameters for each of the plans that have been entered.
- The PLAN_OUTPUT_DATA worksheet which holds the output data for each of the plans that have been entered.

Each of these worksheets is described in the following sections.

3.1 The WELCOME worksheet

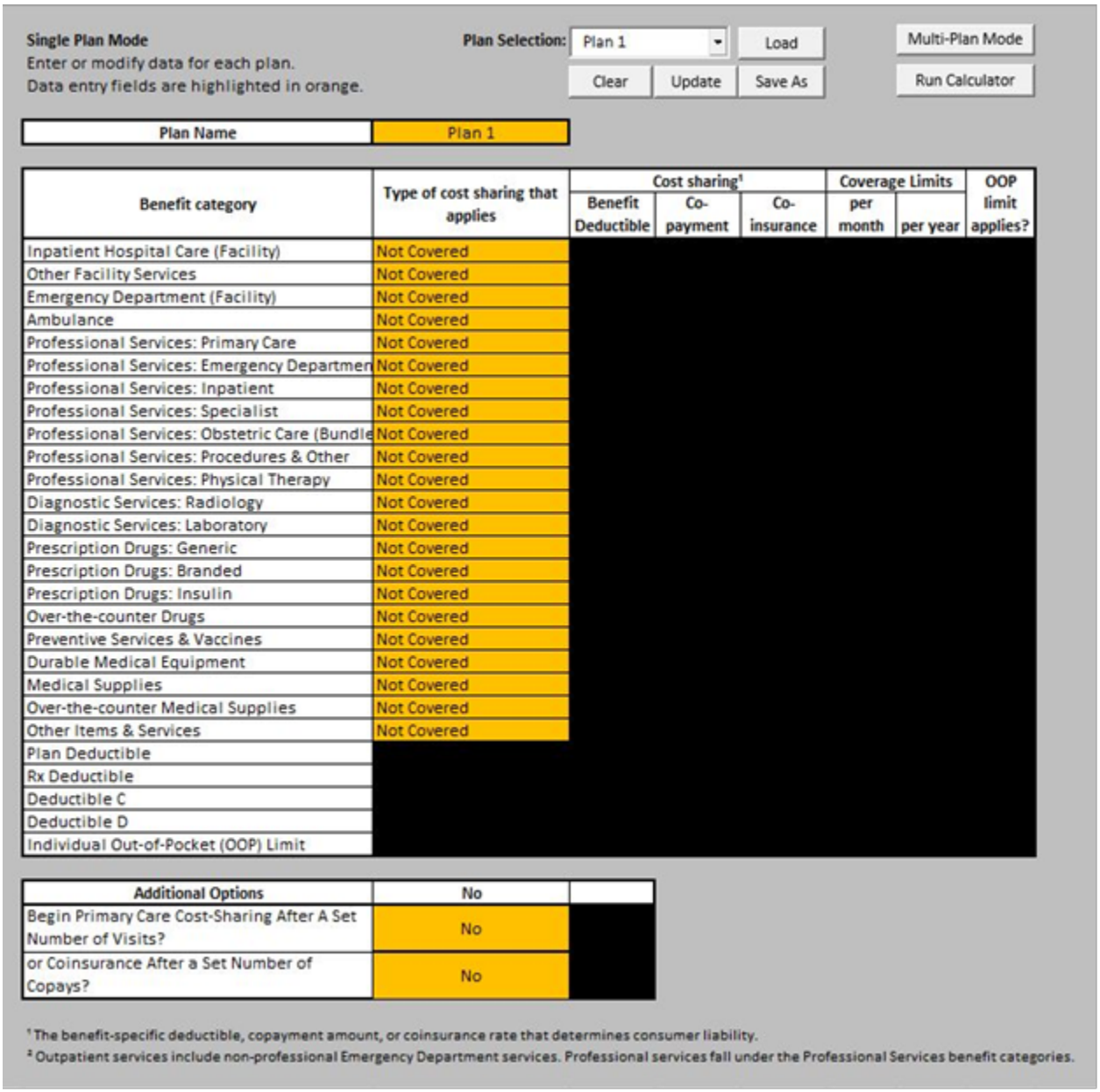


On the WELCOME worksheet, which displays when the tool is opened, the user will select either the **Single Plan Mode** or the **Multi-Plan Mode**.

To select the Single Plan Mode, click the **Single Plan Mode** button. The BENEFIT_DESIGN worksheet will then be displayed, allowing the user to enter the parameters for a single plan or multiple plans one at a time.

To select the Multi-Plan Mode, click the **Multi-Plan Mode** button. The MULTIPLE_PLAN_MODE worksheet will then be displayed, allowing the user to select the method that will be used to load data for multiple plans.

3.2 The MANUAL_INPUT Worksheet



Single Plan Mode
Enter or modify data for each plan.
Data entry fields are highlighted in orange.

Plan Selection: Plan 1 | Load | Clear | Update | Save As | Multi-Plan Mode | Run Calculator

Plan Name	Plan 1

Benefit category	Type of cost sharing that applies	Cost sharing[1]			Coverage Limits		OOP limit applies?
		Benefit Deductible	Co-payment	Co-insurance	per month	per year	
Inpatient Hospital Care (Facility)	Not Covered						
Other Facility Services	Not Covered						
Emergency Department (Facility)	Not Covered						
Ambulance	Not Covered						
Professional Services: Primary Care	Not Covered						
Professional Services: Emergency Departmen	Not Covered						
Professional Services: Inpatient	Not Covered						
Professional Services: Specialist	Not Covered						
Professional Services: Obstetric Care (Bundle	Not Covered						
Professional Services: Procedures & Other	Not Covered						
Professional Services: Physical Therapy	Not Covered						
Diagnostic Services: Radiology	Not Covered						
Diagnostic Services: Laboratory	Not Covered						
Prescription Drugs: Generic	Not Covered						
Prescription Drugs: Branded	Not Covered						
Prescription Drugs: Insulin	Not Covered						
Over-the-counter Drugs	Not Covered						
Preventive Services & Vaccines	Not Covered						
Durable Medical Equipment	Not Covered						
Medical Supplies	Not Covered						
Over-the-counter Medical Supplies	Not Covered						
Other Items & Services	Not Covered						
Plan Deductible							
Rx Deductible							
Deductible C							
Deductible D							
Individual Out-of-Pocket (OOP) Limit							

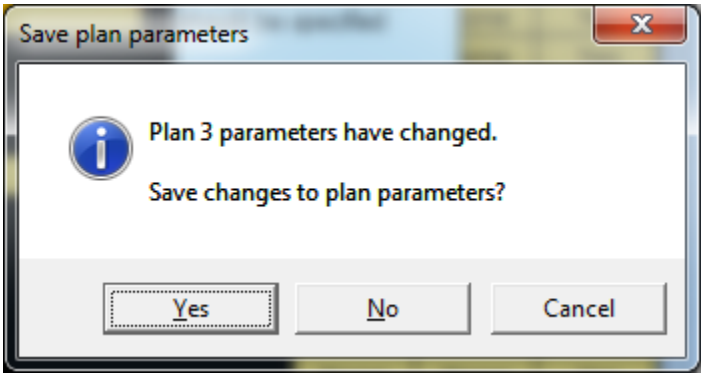
Additional Options	No	
Begin Primary Care Cost-Sharing After A Set Number of Visits?	No	
or Coinsurance After a Set Number of Copays?	No	

[1] The benefit-specific deductible, copayment amount, or coinsurance rate that determines consumer liability.
[2] Outpatient services include non-professional Emergency Department services. Professional services fall under the Professional Services benefit categories.

The BENEFIT_DESIGN worksheet is used to enter the benefit design parameters for a plan.

At the top of the worksheet are several navigation buttons that allow a user to navigate between plans (if more than one plan has been created and saved), to clear or reset the benefit parameters for the displayed plan, to update the benefit parameters for the displayed plan, or to save the displayed plan as a new plan.

The **Prev Plan** and **Next Plan** buttons allow a user to navigate between plans (if more than one plan has been created and saved). If any changes were made to the parameters of the plan after it was loaded into the BENEFIT_DESIGN worksheet, a dialog box will prompt the user to save the changed parameters:



Clicking the **Yes** button will save the updated parameters for the plan. Clicking the **No** button will discard the changes to the parameters to the current plan and load the parameters for the next plan into the BENEFIT_DESIGN worksheet. Clicking the **Cancel** button will allow the user to continue reviewing or editing the updated parameters for the current plan before deciding to load a different plan.

Clicking the **Clear** button will reset the parameters for the plan that is currently loaded into the BENEFIT_DESIGN worksheet to the default parameters.

Clicking the **Update** button will save the parameters for the plan that is currently loaded into the BENEFIT_DESIGN worksheet.

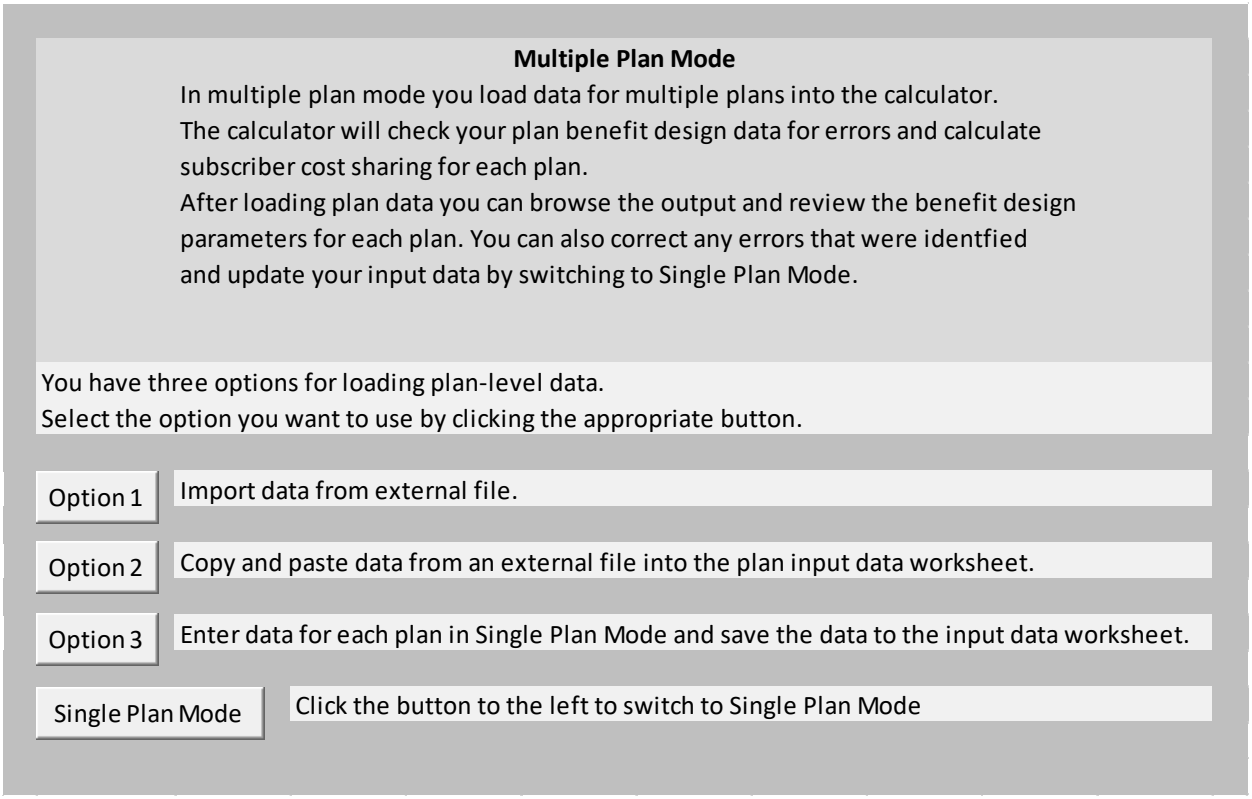
Clicking the **Save As** button will save the parameters for the plan that is currently loaded into the BENEFIT_DESIGN worksheet as a new plan, increment the number of plans that are available, and load the parameters for the newly created plan.

Clicking the **Run Calculator** button will display the RESULTS_SUMMARY worksheet.

The Multi-Plan Mode button in the upper right corner of the worksheet allows a user to switch to **Multi-Plan Mode**.

Section 4.0 discusses the entry of plan parameter data into the BENEFIT_DESIGN worksheet.

3.3 The MULTIPLE_PLAN_MODE worksheet



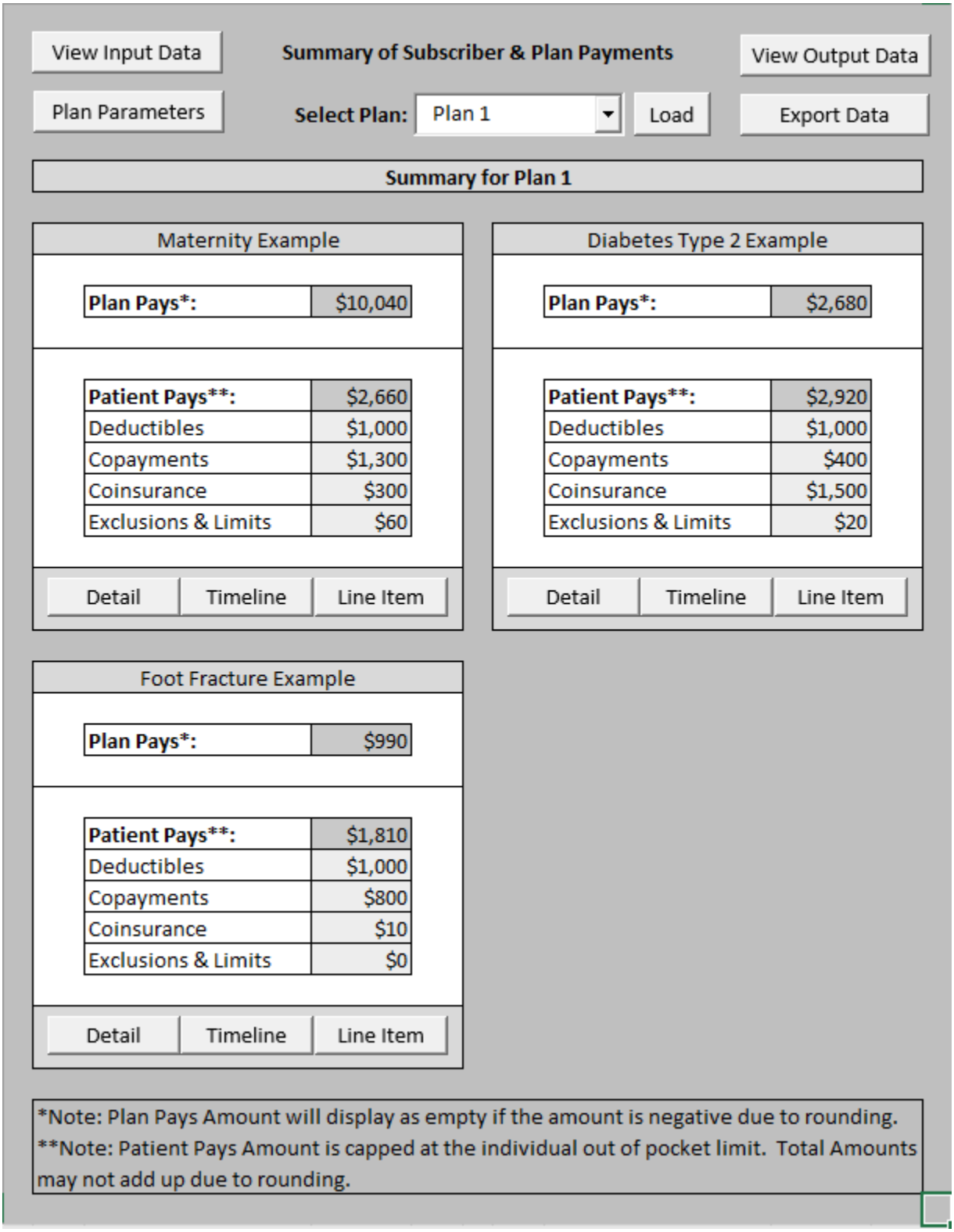
Multi-Plan Mode allows a user to load data for multiple plans into the calculator, run the calculator for all loaded plans, and generate an output file that contains the calculated cost sharing for each of the scenarios for each of the plans.

The MULTIPLE_PLAN_MODE worksheet allows the user to select the method that will be used to load data for multiple plans. The three options are:

1. To import data from an external file to be used in the calculator. This data must be of a form readable to the program. Text files (.txt) should be delimited by tabs in order to be read into the program.
2. To copy and paste data from an external data file (such as an Excel worksheet) into the PLAN_INPUT_DATA worksheet.
3. To enter data for each plan, one at a time, in Single Plan Mode and save the data to the input data worksheet.

The **Single Plan Mode** button in the lower left corner of the worksheet allows a user to switch to **Single Plan Mode**. (This will also occur if the user clicks the **Option 3** button.)

3.4 The RESULTS_SUMMARY worksheet



The RESULTS_SUMMARY worksheet displays the estimated cost sharing for a plan that is calculated by the CECSC.

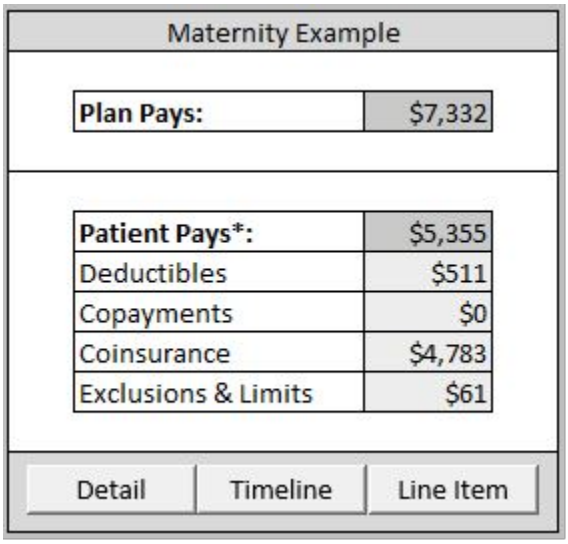
Several navigation buttons are provided at the top of the worksheet. The **View Input Data** button will display the PLAN_INPUT_DATA worksheet, which lists the benefit parameters for each of the plans that has been loaded into to CECSC. The **View Output Data** button will display the PLAN_OUTPUT_DATA worksheet.

The **Plan Parameters** button will navigate to the BENEFIT_DESIGN worksheet which will display the benefit design parameters for the plan shown on the RESULTS_SUMMARY worksheet.

The **Prev Plan** and **Next Plan** buttons allow a user to navigate between plans (if more than one plan has been created and saved).

The **Export Data** button will run the calculator and export the output data for all loaded plans to an external file.

Within the section of the RESULTS_SUMMARY worksheet for each of the coverage examples, there are three buttons.



The **Detail** button will display more detailed data on the calculated cost sharing amounts. For example, in the Maternity Example:

- Clicking the **Detail** button will display the MATERNITY_SUMMARY worksheet.
- Clicking the **Time Line** button will display the MATERNITY_TIMELINE worksheet which shows the claim-by-claim development of the consumer cost sharing amount.
- Clicking the **Line Item** button will display the MATERNITY_LINE_ITEM worksheet which shows the allowed amount for each of the items and services that are included in the coverage example.

Each of the buttons in the other examples works in a similar way.

If the RESULTS_SUMMARY worksheet displays "ERROR" in the calculated cost sharing amounts, it means that there is an uncorrected error in the BENEFIT_DESIGN. To identify the error click the **Plan Parameters** button, which will navigate to the BENEFIT_DESIGN worksheet. The benefit category or other parameter containing the error will be identified on that worksheet.

3.5 The MATERNITY_SUMMARY, DIABETES_SUMMARY and FRACTURE_SUMMARY worksheets

Maternity Example: Summary of Subscriber and Plan Payments

Plan 1			Subscriber pays:				
Benefit category	Allowed Amount	Plan Payment	Total subscriber payment	Subscriber-paid deductible	Subscriber-paid copayment	Subscriber-paid coinsurance	Non-covered and exclusions
Inpatient Hospital Care (Facility)	$7,061	$4,589	$2,471	-	-	$2,471	-
Other Facility Services	-	-	-	-	-	-	-
Emergency Department (Facility)	-	-	-	-	-	-	-
Ambulance	-	-	-	-	-	-	-
Professional Services: Primary Care	-	-	-	-	-	-	-
Professional Services: Emergency Department	-	-	-	-	-	-	-
Professional Services: Inpatient	$1,399	$350	$1,050	-	-	$1,050	-
Professional Services: Specialist	-	-	-	-	-	-	-
Professional Services: Obstetric Care (Bundled)	$2,610	$1,531	$1,079	$255	-	$824	-
Professional Services: Procedures & Other	-	-	-	-	-	-	-
Professional Services: Physical Therapy	-	-	-	-	-	-	-
Diagnostic Services: Radiology	$343	$223	$120	-	-	$120	-
Diagnostic Services: Laboratory	$1,153	$590	$563	$245	-	$318	-
Prescription Drugs: Generic	$11	-	$11	$11	-	-	-
Prescription Drugs: Branded	-	-	-	-	-	-	-
Prescription Drugs: Insulin	-	-	-	-	-	-	-
Over-the-counter Drugs	$61	-	$61	-	-	-	$61
Preventive Services & Vaccines	$49	$49	-	-	-	-	-
Durable Medical Equipment	-	-	-	-	-	-	-
Medical Supplies	-	-	-	-	-	-	-
Over-the-counter Medical Supplies	-	-	-	-	-	-	-
Other Items & Services	-	-	-	-	-	-	-
Total (unrounded)	**$12,687**	**$7,332**	**$5,355**	**$511**	**$0**	**$4,783**	**$61**
Total (rounded)	**$12,700**	**$7,340**	**$5,360**	**$500**	**$0**	**$4,800**	**$60**

The summary worksheets for each of the coverage examples (MATERNITY_SUMMARY worksheet, DIABETES_SUMMARY worksheet and FRACTURE_SUMMARY worksheet) display a summary of the calculated payment amounts including the allowed amounts. These data are informational.

The payment data are organized by the benefit category to which claims are assigned. (See Section 4 for additional information on benefit categories.)

3.6 The TIMELINE worksheets

							Phase 1: Determine Covered Amount		
Claim number	Date	Calendar Month	Item or Service Code	Description	Benefit Category	Cost-sharing type	Allowed amount	Service Not covered	Remaining Covered Amount
1	01/07/2016	1	8	Prenatal Vitamins (OTC - Bottle of 100)	Over-the-counter Drugs	Not Covered	$11.48	$11.48	-
2	04/01/2016	4	14	Obstetric Panel	Diagnostic Services: Laboratory	Plan Deductible + Coins	$56.04	-	$56.04
3	04/01/2016	4	30	Detect agnt mult dna ampli	Diagnostic Services: Laboratory	Plan Deductible + Coins	$119.67	-	$119.67
4	04/01/2016	4	31	Cytopath c/v auto fluid redo	Diagnostic Services: Laboratory	Plan Deductible + Coins	$36.94	-	$36.94
5	04/01/2016	4	28	HIV-1	Diagnostic Services: Laboratory	Plan Deductible + Coins	$17.37	-	$17.37
6	04/01/2016	4	12	Routine Venipuncture	Diagnostic Services: Laboratory	Plan Deductible + Coins	$5.30	-	$5.30
7	04/01/2016	4	35	Urine Pregnancy Test	Diagnostic Services: Laboratory	Plan Deductible + Coins	$9.86	-	$9.86

The MATERNITY_TIMELINE worksheet, DIABETES_TIMELINE worksheet and FRACTURE_TIMELINE worksheet are where the cost sharing amounts are calculated. The cost sharing amount is calculated in an 8-stage process that is described in Appendix A. Row 1 of this worksheet identifies the stage (described as a "phase") that is implemented by the column.

Columns A through G display the scenario's data on the items and services that were provided to the hypothetical subscriber. The remaining columns correspond to the 8 phases of the process that calculate the consumer cost sharing.

Table 3.6. Descriptive information for the line-item claim

Column	Column Heading	Description
A	Claim number	The claim number in chronological sequence of processing.
B	Date	The date the item or service was rendered.
C	Calendar Month	The calendar month in which the item or service was rendered (Used to apply monthly limits).
D	Item or Service Code	The code for the item or service. Corresponds to the codes for the item or service in column A of the corresponding LINE_ITEM worksheet.
E	Description	The description for the item or service from column F of the corresponding LINE_ITEM worksheet.
F	Benefit Category	The benefit category to which the item or service is assigned. This is given in column E of the corresponding LINE_ITEM worksheet where it can also be changed by the user by making use of the drop-down menu in the relevant cell.
G	Cost-sharing type	The cost sharing type that is assigned to the item or service based on its benefit category (column F) and the benefit parameters for that benefit category that are given in the BENEFIT_DESIGN worksheet.

Table 3.6.1. Phase 1. Determine Covered Amount

Column	Column Heading	Description
H	Allowed amount	The allowed amount for the item or service as given in column G of the corresponding LINE_ITEM worksheet. The allowed amounts cannot be modified by the user.
I	Service Not Covered	The amount of the consumer's liability (the allowed amount) if the item or service is not covered.
J	Remaining Covered Amount	The allowed amount, before application of coverage limitations, cost sharing requirements, or out-of-pocket limits if the item or service is covered. This is the starting point for the calculation of the plan liability and the consumer's out-of-pocket cost for a covered service.

Table 3.6.2. Phase 2. Apply Out-of-Pocket Limit

Column	Column Heading	Description
K	OPL Valid?	An indicator of whether the out-of-pocket limit applies to the benefit category to which the item or service is assigned (column F).
L	OPL Applies?	An indicator of whether the out-of-pocket limit applies to this benefit category based on the benefit category to which the item or service is assigned (column F) and the benefit parameters specified for that benefit category in the BENEFIT_DESIGN worksheet.
M	OPL	The out-of-pocket limit that applies to the benefit category to which the item or service is assigned (column F).
N	Remaining OPL after previous subscriber payments	The difference between the out-of-pocket limit and the amount paid out-of-pocket by the subscriber for items and services that are subject to the out-of-pocket limit.

Table 3.6.3. Phase 3a. Begin Primary Care Cost-Sharing After a Set Number of Visits?

Column	Column Heading	Description
O	Primary Care Visit?	An indicator of whether the item or service code has been assigned to the "Professional Services: Primary Care" benefit category (Column F).
P	Begin Primary Care Cost-Sharing After a Set Number of Visits?	An indicator of whether the benefit design specifies to begin primary care cost-sharing after a set number of visits in the BENEFIT_DESIGN worksheet (row 38).
Q	# Visits	The total number of services that have been assigned to the "Professional Services: Primary Care" benefit category up to the current service date.
R	Primary Care Prior Use	The number of services that were classified as Professional Services: Primary Care (column F) up until the current primary care service.
S	Visit Covered at 100% by plan	An indicator of whether the plan covers 100% of the cost of the service.
T	Remaining Covered Amount	The remaining covered amount of the service.

Table 3.6.4. Phase 3b. Begin Primary Care Cost-Sharing After a Set Number of Copays?

Column	Column Heading	Description
U	Primary Care Visit?	An indicator of whether the item or service code has been assigned to the "Professional Services: Primary Care" benefit category (Column F).
V	Begin Primary Care Cost-Sharing After a Set Number of Copays?	An indicator of whether the benefit design specifies to begin primary care cost-sharing after a set number of copays in the BENEFIT_DESIGN worksheet (row 39).
W	# Visits	The total number of services that have been assigned to the "Professional Services: Primary Care" benefit category up to the current service date.
X	Primary Care Prior Copay Paid	The number of primary care copays that were paid up until the current primary care service.
Y	Copay Value	The copayment amount that applies to the item or service based on the benefit category to which the item or service is assigned (column F) and the parameters for that benefit category specified in the BENEFIT_DESIGN worksheet.
Z	Copay Applied	An indicator of whether the copay value (column Y) was applied.
AA	Plan Paid	If the copay has been applied (column Z), it is the difference between the remaining amount covered (column T) and the copay value (column Y). Otherwise, the value is equal to 0.
AB	Remaining OPL	The difference between the out-of-pocket limit and the total amount paid out-of-pocket by the subscriber for items and services that are subject to the out-of-pocket limit.
AC	Remaining Covered Amount	The remaining covered amount for the service.

Table 3.6.5. Phase 4. Apply the monthly and annual coverage limits

Column	Column Heading	Description
AD	Monthly Limit Valid?	An indicator of whether the benefit design specifies a monthly limit for the benefit category to which the item or service has been assigned in the BENEFIT_DESIGN worksheet.
AE	Monthly limit	The limit on the number of claims for the specified item or service that the plan will cover if received in a single calendar month. "None" if the plan does not have monthly coverage limits that apply to the item or service.[1] The monthly limit is determined by the benefit category to which the item or service is assigned (column F) and the parameters for that benefit category specified in the BENEFIT_DESIGN worksheet.
AF	Prior use (month)	The number of claims for the specified item or service that have already been submitted and covered by the plan for the month in which the line-item was received.
AG	Not covered because monthly limit exceeded	An indicator of whether the item or service is not covered because the number of claims has exceed the monthly limit.
AH	Annual limit Valid?	An indicator of whether the benefit design specifies a monthly limit for the benefit category to which the item or service has been assigned in the BENEFIT_DESIGN worksheet (column H).
AI	Annual Limit	The limit on the number of claims for the specified item or service that the plan will cover if received in a calendar year. "None" if the plan does not have annual coverage limits that apply to the item or service. The annual limit is determined by the benefit category to which the item or service is assigned (column F) and the parameters for that benefit category specified in the BENEFIT_DESIGN worksheet.
AJ	Prior use (annual)	The number of claims for the specified item or service that have already been submitted and covered by the plan for the year which the line-item was received.[1]
AK	Not covered because use limit exceeded	An indicator of whether the item or service is not covered because the number of claims has exceed the annual limit.
AL	Total not covered because use limit exceeded	The value of the amount for the item or service that is not covered because the number of claims has exceed the use limit.
AM	Covered amount	The difference between the covered amount (column AC) and not covered amount for the item or service (column AL).

[1] Note that coverage limits are applied as if the only services that a consumer has received are the services listed in each coverage example.

Table 3.6.6. Phase 5. Apply the required deductible

Column	Column Heading	Description
AN	Uses plan deductible?	Indicator of whether the plan-level deductible applies to the item or service based on its benefit category (column F) and the cost sharing parameters for that benefit category from the BENEFIT_DESIGN worksheet.
AO	Plan deductible	The value of the plan deductible that applies to the item or service based on its benefit category (column F) and the cost sharing parameters for that benefit category from the BENEFIT _DESIGN worksheet.
AP	Remaining plan deductible after previous subscriber payments	The amount of the plan deductible that remains after all previous charges against the plan deductible have been taken.
AQ	Subscriber pays toward plan deductible	If the plan deductible applies to the service, it is the lesser of 2 values: the remaining plan deductible (column AP) and the covered amount (column AM).
AR	Uses Rx deductible?	Indicator of whether the Rx deductible applies to the item or service based on its benefit category (column F) and the cost sharing parameters for that benefit category from the BENEFIT_DESIGN worksheet.
AS	Rx deductible?	The value of the Rx deductible that applies to the item or service based on its benefit category (column F) and the cost sharing parameters for that benefit category from the BENEFIT _DESIGN worksheet.
AT	Remaining Rx deductible after previous subscriber payments?	The amount of the Rx deductible that remains after all previous charges against the plan deductible have been taken.
AU	Subscriber pays toward Rx deductible	If the Rx deductible applies to the service, it is the lesser of 2 values: the remaining Rx deductible (column AM) and the covered amount (column AT).
AV	Uses deductible C?	Indicator of whether Deductible C applies to the item or service based on its benefit category (column F) and the cost sharing parameters for that benefit category from the BENEFIT_DESIGN worksheet.
AW	Deductible C	The value of deductible C that applies to the item or service based on its benefit category (column F) and the cost sharing parameters for that benefit category from the BENEFIT _DESIGN worksheet.
AX	Remaining deductible C after previous subscriber payments	The amount of Deductible C that remains after all previous charges against the plan deductible have been taken.
AY	Subscriber pays toward deductible C	If deductible C applies to the item or service, it is the lesser of 2 values: the remaining Deductible C (column AX) and the covered amount (column AM).

Column	Column Heading	Description
AZ	Uses deductible D?	Indicator of whether Deductible D applies to the item or service based on its benefit category (column F) and the cost sharing parameters for that benefit category from the BENEFIT_DESIGN worksheet.
BA	Deductible D	The value of deductible D that applies to the item or service based on its benefit category (column F) and the cost sharing parameters for that benefit category from the BENEFIT _DESIGN worksheet.
BB	Remaining Deductible D after previous subscriber payments	The amount of Deductible D that remains after all previous charges against the plan deductible have been taken.
BC	Subscriber pays toward deductible D	The value the subscriber pays towards deductible D for an item or service.
BD	Uses benefit deductible?	Indicator of whether a benefit-category deductible applies to the item or service based on its benefit category (column F) and the cost sharing parameters for that benefit category from the BENEFIT_DESIGN worksheet.
BE	Benefit deductible	The amount of the benefit deductible that applies to the item or service based on its benefit category (Column F) in the cost sharing parameters for that benefit category from the BENEFIT_DESIGN worksheet.
BF	Remaining benefit deductible after previous subscriber payments	The amount of any benefit-category deductible that remains after all previous charges against the plan deductible have been taken.
BG	Subscriber pays toward benefit deductible	The value the subscriber pays towards the deductible for an item or service.
BH	Subscriber pays toward any deductible	The amount of the consumer liability under any deductible. Equal to the sum of the amount paid toward the plan deductible, the Rx deductible, deductible C, deductible D, or specific benefit-category deductibles.
BI	Subscriber-paid deductible after applying OPL	The amount of the consumer liability under any deductible. Equal to the sum of the amount paid toward the plan deductible, the Rx deductible, deductible C, deductible D, or specific benefit-category deductibles and is capped at the out-of-pocket limit.

Table 3.6.7. Phase 6. Apply the Copay and Coinsurance

Column	Column Heading	Description
BJ	Remaining OPL	The amount of OPL that remains after all previous charges against the OPL have been taken.
BK	Covered Amount remaining after deductibles	The amount that remains after the deductibles.
BL	Uses Copay?	An indicator of whether a copay applies to this benefit category based on the benefit category to which the item or service is assigned (column F) and the benefit parameters specified for that benefit category in the BENEFIT_DESIGN worksheet
BM	Copay Value	The copayment amount that applies to the item or service based on the benefit category to which the item or service is assigned (column F) and the parameters for that benefit category specified in the BENEFIT_DESIGN worksheet.
BN	Copay paid	The amount of copay paid by the subscriber.
BO	Uses coinsurance?	Indicator of whether the plan design entered uses a copay for the benefit category to which the service is part of.
BP	Coinsurance value	The value of the coinsurance for the benefit category to which the item or service is assigned in the BENEFIT_DESIGN worksheet.
BQ	Coinsurance paid	The amount of coinsurance paid by the subscriber.
BR	Subscriber-paid cost sharing after OPL	The value the subscriber pays after applying the out-of-pocket limit.

Table 3.6.8. Phase 7. Calculate the subscriber and the plan payment

Column	Column Heading	Description
BS	Remaining OPL	If the out-of-pocket limit applies to the item or service the lesser of the amount subject to OPL and the subscriber payment before application of the OPL.
BT	Allowed amount after copayment or coinsurance	Total remaining allowed amount after application of copayment or coinsurance, after applying deductible.
BU	Total subscriber payment after OPL	If the out-of-pocket limit applies to the item or service the lesser of the amount subject to OPL and the subscriber payment before application of the OPL.

Table 3.6.9. Phase 8. Summarize Payments by Payer and Phase Category

Column	Column Heading	Description
BV	Plan payment	The difference between the covered amount and the subscriber payment after application of the out-of-pocket limit.
BW	Service not covered	The amount of the allowed charge if the item or service is not covered.
BX	Exclusions	The amount of the allowed charge if the item or service was subject to coverage limitations.
BY	Subscriber-paid deductible	The subscriber-paid deductible after applying the out-of-pocket limit (column BI).
BZ	Subscriber-paid copayment	The sum of the copays paid by the subscriber (column Z and column BN).
CA	Subscriber-paid coinsurance	The subscriber-paid coinsurance (column BQ).
CB	Allowable charge chkSum	Checks that the sum of the plan and subscriber payments for each item or service is equal to the allowed amount for the service.

3.7 The LINE_ITEM worksheets

Item or Service Code	Diagnosis Code (ICD-9)	CPT©, HCPCS, or Other Billing Code	Provider Type	Category	Description	Allowed Amount
1		378710401	Pharmacy Retail	Prescription Drugs: Generic	Oxycodone/APAP 5mg/325mg (Rx) [1 pill Q6H PRN; 15 pills]	6.45
2		591346601	Pharmacy Retail	Prescription Drugs: Generic	Ibuprofen 800mg (Rx) [1 pill Q8H PRN; 60 pills]	11.69
3	650, V27.0	S9443	Inpatient Facility	Preventive Services & Vaccines	Lactation class	0.00
4	650, V27.0, Proc: 73.59	795	Inpatient Facility	Inpatient Hospital Care (Facility)	Normal newborn	1,756.00
5	650, V27.0, Proc: 73.59	1967	Anesthesiology	Professional Services: Procedures & Other	Anesth/analg vag delivery	1,008.00
6	650, V27.0, Proc: 73.59	59400	OBGYN	Professional Services: Obstetric Care (Bundled	Obstetrical Care	2,394.18
7		OTC	Pharmacy Retail	Over-the-counter Drugs	Docusate sodium (OTC) [1 pill QD]	11.20
8		OTC	Pharmacy Retail	Over-the-counter Drugs	Prenatal Vitamins (OTC - Bottle of 100) [1 pill daily; 30 pills/month]	12.21

The MATERNITY_LINE_ITEM worksheet, DIABETES_LINE_ITEM worksheet and FRACTURE_LINE_ITEM worksheet contain the list of items and services that appear in the TIMELINE worksheets for each coverage example. The LINE_ITEM worksheets describe each item and service, identify the benefit category (which can be modified by the user by making use of the drop-down menus in column E), and the allowed amount. Table 3.7 describes the columns in these worksheets.

Table 3.7. LINE_ITEM worksheet columns

Column	Column Heading	Description
A	Item or Service Code	The code for the item or service. Corresponds to the codes for the item or service in column D of the corresponding TIMELINE worksheet.
B	Diagnosis Code (ICD-10)	When applicable an ICD-10 diagnosis code related to the item or service. This is informational.
C	CPT©, HCPCS, or Other Billing Code	The “standard” procedure code for the item or service. This is informational.

Column	Column Heading	Description
D	Provider Type	The type of provider that typically provides the service. This is informational.
E	Benefit Category	The benefit category to which the item or service is assigned by default. The user can change the benefit category for individual items or services using the drop down menu that is provided in the cells in column E. Note that the user must select one of the 22 benefit categories used in the CECSC.
F	Description	A brief description of the item or service.
G	Allowed Amount	The allowed amount for the item or service.
H	Notes	Brief comments provided for information only.
I	Valid Benefit Category	An indicator that shows whether the benefit category assigned to the item or service in column E is one of the 22 allowed benefit categories. Provided as a check if the user changes the default benefit category assigned to an item or service.
J	Timeline Count	A count of the number of times the item or service (identified by Item or service code (column A) appears in the related TIMELINE worksheet.

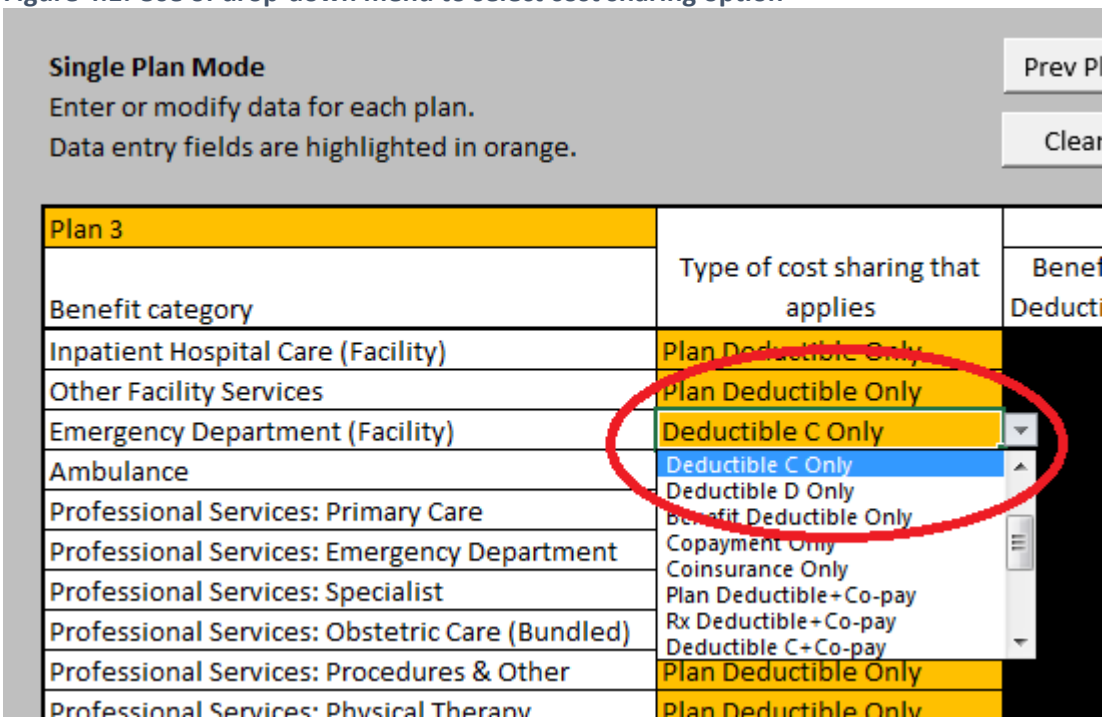
4.0 Plan Benefit Parameters and the BENEFIT_DESIGN worksheet

In the BENEFIT_DESIGN worksheet, the coverage parameters for each coverage category are specified. The coverage parameters include:

1. The type of cost sharing (cost sharing option) that applies to each benefit category. The CECSC defines 19 standard cost sharing options (see §4.2).
2. The benefit-level deductible when a coverage option requiring a benefit-deductible is selected.
3. The co-payment amount when a coverage option requiring a co-payment is selected.
4. The co-payment amount when a coverage option requiring a co-payment is selected.
5. The monthly and annual coverage limits that apply to the benefit category.
6. Whether the benefit category falls under the plan's out-of-pocket limit.
7. The plan-level deductibles that apply to the plan. Up to four plan-level deductibles may be specified.

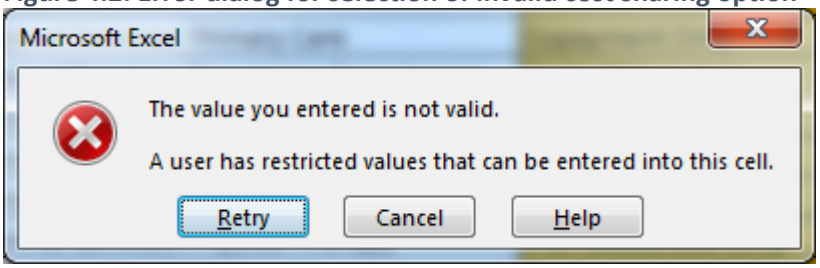
To select a cost sharing option for a benefit category, a user should make use of the drop-down menus that are available when the cell specifying the type of cost sharing that applies is selected for that benefit category. In **Single Plan Mode** only the allowed cost sharing options can be selected. (See Figure 4.1.)

Figure 4.1. Use of drop-down menu to select cost sharing option



Trying to enter a cost sharing option that is not one of the 19 allowed options will trigger an error dialog shown in Figure 4.2.

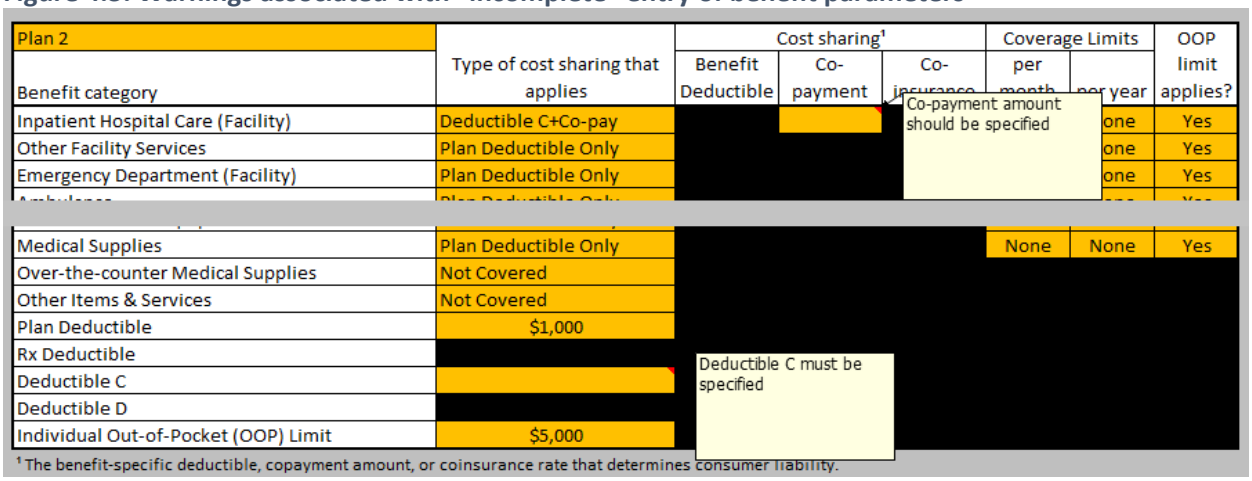
Figure 4.2. Error dialog for selection of invalid cost sharing option



Clicking the **Retry** button will let the user modify the data that have been entered. Clicking cancel will restore the value that existed before the user tried to enter new data.

Depending on the cost sharing option that is selected, certain parameters either must or must not be specified. Initially these parameters will not have been specified and the BENEFIT_DESIGN worksheet will identify the "warnings" that result. These warnings may include parameters that must be but have not been specified or parameters that have been but must not be specified. For example, Figure 4.3 shows the warnings that would appear if the cost sharing option for inpatient hospital care had been changed from *Plan Deductible Only* to *Deductible C plus Co-payment*.

Figure 4.3. Warnings associated with "incomplete" entry of benefit parameters



In this example, the user must specify a copayment amount for Inpatient Hospital Care and must specify an amount for Deductible C.

Depending on the cost sharing option that is selected, the other parameters that are required will be dark yellow. Parameters that are not permitted will be black and any data that has been entered will be in red type. When the required data are entered or the prohibited data are deleted the warnings will disappear.

4.1 Benefit Categories

The CECSC assigns claims to one of 22 benefit categories:

1. Inpatient Hospital Care (Facility)
2. Other Facility Services
3. Emergency Department (Facility)
4. Ambulance
5. Professional Services: Primary Care
6. Professional Services: Emergency Department
7. Professional Services: Inpatient
8. Professional Services: Specialist
9. Professional Services: Obstetric Care (Bundled)
10. Professional Services: Procedures & Other
11. Professional Services: Physical Therapy
12. Diagnostic Services: Radiology
13. Diagnostic Services: Laboratory
14. Prescription Drugs: Generic
15. Prescription Drugs: Branded
16. Prescription Drugs: Insulin
17. Over-the-counter Drugs
18. Preventive Services & Vaccines
19. Durable Medical Equipment
20. Medical Supplies

21. Over-the-counter Medical Supplies
22. Other Items & Services

Each line item or service code on the LINE_ITEM worksheets is assigned to one of these benefit categories (in column E). The benefit category determines whether a plan covers the item or service, the cost sharing requirements for the item or service under the plan, and what limits the plan applies to coverage for that item or service. A user can customize the benefit categories to which each item or service is assigned and can redefine the benefit categories that are used by the calculator as described in Section 4.5.

4.2 Cost Sharing Options

The CECSC uses 19 standard coverage options as described in Table 4.2.

Table 4.2. Standard coverage options

Cost sharing option	Description
Not Covered	The benefit category is not covered by the plan.
No Cost Sharing	The benefit category identifies items and services that are covered but that have no required cost sharing. An example would be preventive services.
Plan Deductible Only	The benefit category identifies items and services that are covered and that are subject to the plan-level deductible but no coinsurance or copayment.
Rx Deductible Only	The benefit category identifies items and services that are covered and that are subject to the prescription drug (Rx) deductible but no coinsurance or copayment.
Deductible C Only	The benefit category identifies items and services that are covered and that are subject to a third plan-level deductible that applies to multiple benefit categories but no coinsurance or copayment.
Deductible D Only	The benefit category identifies items and services that are covered and that are subject to a fourth plan-level deductible that applies to multiple benefit categories but no coinsurance or copayment.
Benefit Deductible Only	The benefit category identifies items and services that are covered and that are subject to a deductible that applies only to the benefit category with no coinsurance or copayment.
Copayment Only	The benefit category does not fall under any deductible but does have a copayment.
Coinsurance Only	The benefit category does not fall under any deductible but does require a coinsurance payment.
Plan Deductible+Co-pay	The benefit category identifies items and services that are covered and that are subject to the plan-level deductible and to a copayment.

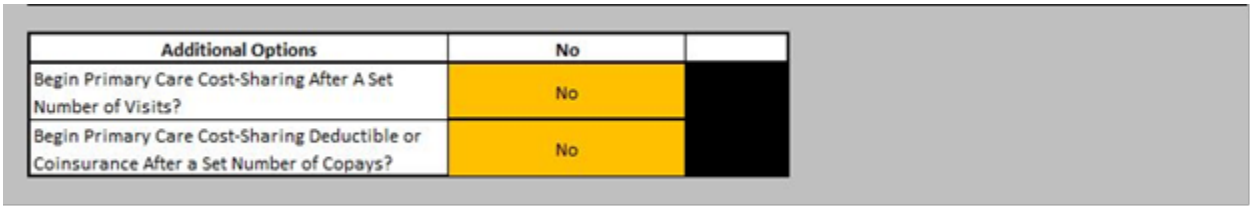
Cost sharing option	Description
Rx Deductible+Co-pay	The benefit category identifies items and services that are covered and that are subject to the prescription drug (Rx) deductible and to a copayment.
Deductible C+Co-pay	The benefit category identifies items and services that are covered and that are subject to a third plan-level deductible that applies to multiple benefit categories and to a copayment.
Deductible D+Co-pay	The benefit category identifies items and services that are covered and that are subject to a fourth plan-level deductible that applies to multiple benefit categories and to a copayment.
Benefit Deductible+Co-pay	The benefit category identifies items and services that are covered and that are subject to a deductible that applies only to the benefit category and to a copayment.
Plan Deductible+Co-ins	The benefit category identifies items and services that are covered and that are subject to the plan-level deductible and to a coinsurance payment.
Rx Deductible+Co-ins	The benefit category identifies items and services that are covered and that are subject to the prescription drug (Rx) deductible and to a coinsurance payment.
Deductible C+Co-ins	The benefit category identifies items and services that are covered and that are subject to a third plan-level deductible that applies to multiple benefit categories and to a coinsurance payment.
Deductible D+Co-ins	The benefit category identifies items and services that are covered and that are subject to a fourth plan-level deductible that applies to multiple benefit categories and to a coinsurance payment.
Benefit Deductible+Co-ins	The benefit category identifies items and services that are covered and that are subject to a deductible that applies only to the benefit category and to a coinsurance payment.

Deductible amounts (of any type) must be entered as dollars and cents. Copayment amounts must be entered as dollars and cents. Coinsurance amounts must be entered as values greater than zero and less than or equal to 1.00, i.e. 30% must be entered as 0.30 or 30%.

4.3 Additional Cost Sharing Options

In addition to the standard cost sharing options, the CECSC allows the user to input special cost sharing for the Professional services: Primary Care benefit category.

Figure 4.4 Special Cost-Sharing Options



Additional Options	No	
Begin Primary Care Cost-Sharing After A Set Number of Visits?	No	
Begin Primary Care Cost-Sharing Deductible or Coinsurance After a Set Number of Copays?	No	

Table 4.3 Special Cost-Sharing Options

Cost Sharing Option	Description
Begin Primary Care Cost-Sharing After A Set Number of Visits?	Cost sharing specified for the primary care benefit category is applied only after a certain number of primary care visits. Primary care visits prior to the number of visits indicated are 100% covered by the plan.
Begin Primary Care Cost-Sharing Deductible or Coinsurance After a Set Number of Copays?	Cost-sharing specified for the primary care benefit category is applied only after a certain number of copays.

4.3 Coverage limits

Data for coverage limits must be entered for all services that are covered. (Coverage limits cannot be entered for services that are not covered. Doing so will create a warning.)

If no coverage limit applies, “None” must be entered as the monthly and annual coverage limit.

If a monthly but not an annual coverage limit applies, an integer of 1 or greater must be entered in the “per month” coverage limit column and “None” must be entered in the “per year” coverage limit column.

If an annual but not a monthly coverage limit applies, an integer of 1 or greater must be entered in the “per year” coverage limit column and “None” must be entered in the “per month” coverage limit column.

If both monthly and annual coverage limits applies, an integer of 1 or greater must be entered in both the “per month” coverage limit column and the “per year” coverage limit column.

4.4 Out-of-pocket Limits

If a benefit category contributes to the out-of-pocket limit, then “Yes” must be entered in the column headed “OOP Limit applies?” If the benefit category does not contribute to the out-of-pocket limit, then “No” must be entered in that column.

If the benefit category is not covered, the out-of-pocket limit column must be left blank.

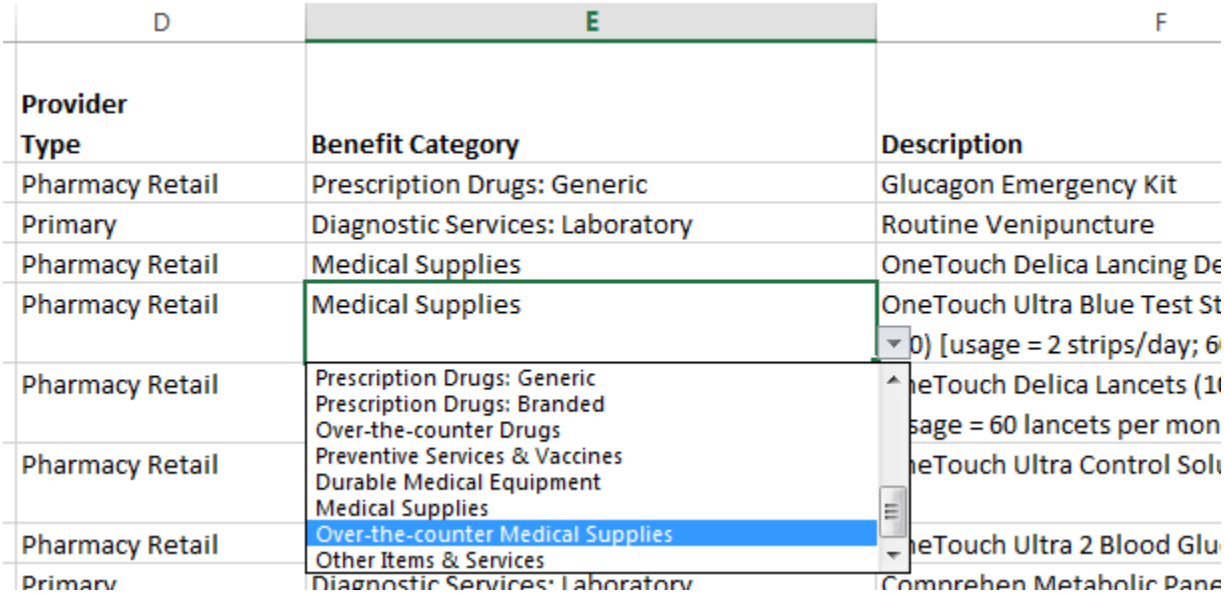
4.5 Customizing the Benefit Categories

A user may customize the cost calculator to better reflect the way a specific plan covers the items and services specified on the LINE_ITEM worksheets for the three coverage examples. A user can customize the benefit categories to which each item or service is assigned, and can redefine the benefit categories the calculator uses.

4.5.1 Reassigning the Benefit Category for an item or service

The calculator allows each item or service listed in the LINE_ITEM worksheets for the three coverage examples to be assigned to one of 22 benefit categories. A user can change the benefit category to which an item or service is assigned on the LINE_ITEM worksheet.

For example, by default the coverage calculate assigns diabetic test strips to the **Medical Supplies** benefit category. However, a user may change that category so that test trips are covered under the **Over-the-counter Medical Supplies** benefit category or under the **Other Items & Services benefit** category using the drop-down list of benefit categories:



Note, a user must select one of the 22 listed benefit categories. These are the benefit categories that are listed on the BENEFIT_DESIGN worksheet.

Note that the reassignment of an item or service to a benefit category using the LINE_ITEM worksheet will apply only to the item or service in the coverage example. For example, influenza vaccination is a line item in both the diabetes and maternity coverage examples. Changing the benefit category to which influenza vaccination is assigned in the DIABETES_TIME_LINE will not change the benefit category to which influenza vaccination is assigned in the MATERNITY_TIME_LINE.

4.5.2 Redefining the Benefit Categories

Any of the 22 benefit categories can be redefined in the calculator. The only limitation imposed by the calculator is that the number of benefit categories cannot exceed 22. However, if a plan needs to define a specific benefit category for **Diabetic Supplies** it can do so by following a two-step procedure.

Step one is to change the labels that are used to identify the benefit categories on the BENEFIT_DESIGN worksheet. For example, a user might want to use the **Other Items & Services** benefit category:

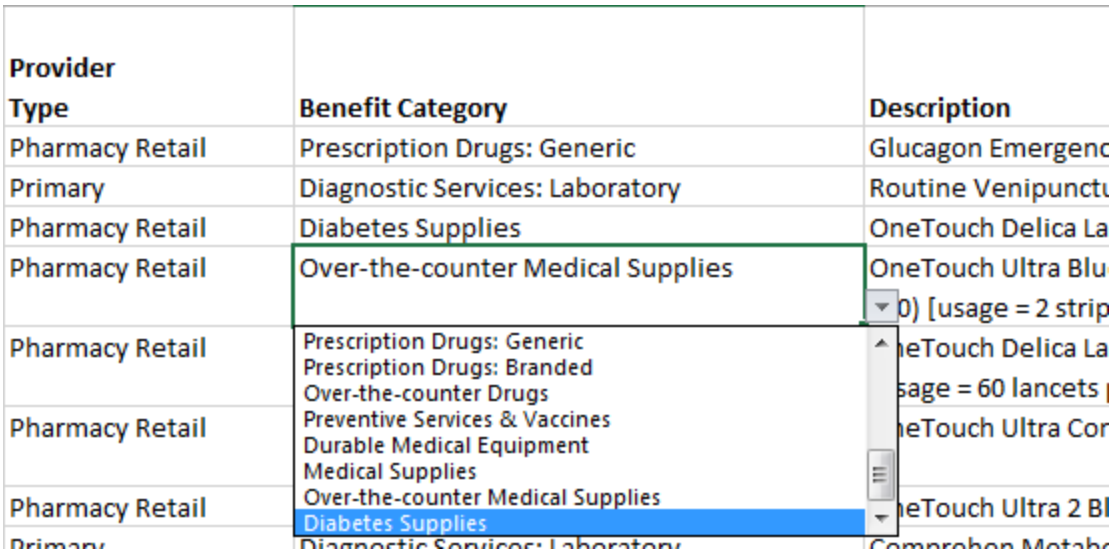
Medical Supplies	Plan Deductible Only
Over-the-counter Medical Supplies	Not Covered
Other Items & Services	Not Covered
Plan Deductible	$1,000

to identify **Diabetes Supplies**:

Medical Supplies	Plan Deductible Only
Over-the-counter Medical Supplies	Not Covered
Diabetes Supplies	Not Covered
Plan Deductible	$1,000

This changes makes the benefit category **Diabetes Supplies** available for use in the calculator. However, it also means that the benefit category **Other Items & Services** is no longer available and any item or service that is assigned to the **Other Items & Services** benefit category in a LINE_ITEM worksheet must be re-assigned either to **Diabetes Supplies** or to another of the benefit categories listed on the BENEFIT_DESIGN worksheet.

Step 2 is to change the benefit category for the items and services that are to be paid under the new **Diabetes Supplies** benefit category. In this example, the user will modify the benefit categories to which the items on the DIABETES_LINE_ITEM worksheet are assigned. These items and services may include lancing devices, test strips, lancets, control solutions, and syringes. The user must change the benefit category for each of those items to **Diabetes Supplies** using the drop-down menu.



The re-designated benefit category **Diabetes Supplies** will now be an available option in the drop-down list.

A user can, in fact, redefine all 22 of the benefit categories to better match the categories that the plan uses. However, in this case the user will need to make extensive revisions to the TIME_LINE worksheets so that every item or service is correctly mapped to one of the newly defined benefit categories.

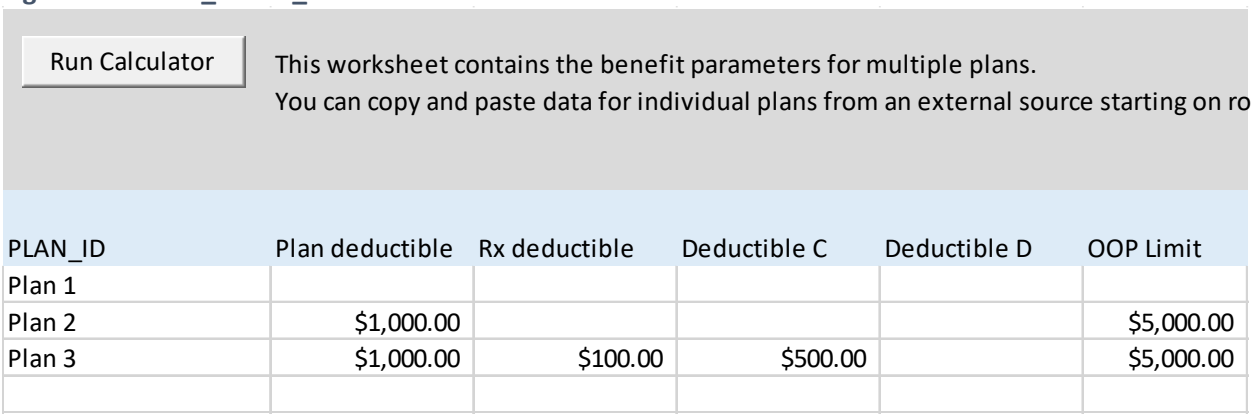
CAUTION: If a user changes the designation for a benefit category that is used by multiple coverage examples (for example, both the FRACTURE example and the DIABETES example), any item or service in any of the LINE_ITEM schedules that was assigned to the benefit category *as it was originally designated* will need to be reassigned either to the new category or to another available category.

5.0 Multi-Plan Mode

When used in **Multi-Plan Mode**, the CECSC allows a user to populate the PLAN_INPUT_DATA worksheet with benefit parameters for multiple plans.

This worksheet may be populated by importing a tab-separated text file containing the benefit parameter data (see Appendix B) or by directly entering data on the PLAN_INPUT_DATA worksheet. (Directly entering data into the PLAN_INPUT_DATA worksheet is not recommended as 146 variables or columns must be completed for each plan.)

Figure 5.0. PLAN_INPUT_DATA worksheet



PLAN_ID	Plan deductible	Rx deductible	Deductible C	Deductible D	OOP Limit
Plan 1					
Plan 2	$1,000.00				$5,000.00
Plan 3	$1,000.00	$100.00	$500.00		$5,000.00

The first 7 rows of the PLAN_INPUT_DATA worksheet contain a button that will run the calculator and generate output for the plans whose parameters are listed starting on row 8. Rows 6 and 7 are the "header" for the plan parameter data.

WARNING: Do NOT separate groups of plans by using a blank row. A blank row is interpreted by the CECSC as signaling the end of the entered data. Any data below a blank row will be ignored by the CECSC.

The plan parameter data are divided into 23 groups.

1. Plan-level parameters (Columns A through F): the plan identifier, the plan deductible, the Rx deductible, Deductible C, Deductible D, and the out-of-pocket limit (if any) that applies to the plan.
2. Inpatient hospital care coverage parameters (columns G through M):
    a. The cost sharing option or type (column G)
    b. Benefit deductible (if required by the cost sharing option) (column H)
    c. Copayment amount (if required by the cost sharing option) (column I)
    d. Coinsurance rate (if required by the cost sharing option) (column J)
    e. The monthly coverage limit (if required by the cost sharing option) (column K)
    f. The annual coverage limit (if required by the cost sharing option) (column L)
    g. Whether the out-of-pocket limit applies(column M)
3. Other Facility Services coverage parameters (columns N through T)
4. Emergency Department (Facility) (columns U through AA)
5. Ambulance (columns AB through AH)
6. Professional Services: Primary Care (columns AI through AO)
7. Professional Services: Emergency Department (columns AP through AV)
8. Professional Services: Inpatient
9. Professional Services: Specialist (columns AW through BC)
10. Professional Services: Obstetric Care (Bundled) (columns BD through BJ)
11. Professional Services: Procedures & Other (columns BK through BQ)
12. Professional Services: Physical Therapy (columns BR through BX)
13. Diagnostic Services: Radiology (columns BY through CE)
14. Diagnostic Services: Laboratory (columns CF through CL)
15. Prescription Drugs: Generic (columns CM through CS)

16. Prescription Drugs: Branded (columns CT through CZ)
17. Prescription Drugs: Insulin (columns (DA through DG)
18. Over-the-counter Drugs (columns DA through DG)
19. Preventive Services & Vaccines (columns GH through DN)
20. Durable Medical Equipment (columns DO through DU)
21. Medical Supplies (columns DV through EB)
22. Over-the-counter Medical Supplies (columns EC through EI)
23. Other Items & Services (columns EJ through EP)

An external data file that will be imported using **Multi-Plan Mode Option 1** must be a tab-separated value file consisting of 146 “fields” or “variables” corresponding to the above.

5.1 Browsing and reviewing Multi-Plan Mode input data

Once the plan parameter data for multiple plans have been loaded into the PLAN_INPUT_DATA worksheet, the BENEFIT_DESIGN worksheet can be used to browse and review the plan input data. As each plan is loaded, error checking will be performed and any errors will be identified by “warning” notices in the BENEFIT_DESIGN worksheet.

If errors exist in the input data for a plan, the output data will simply indicate ERROR.

5.2 Generating output in Multi-Plan Mode

To generate output in Multi-Plan Mode the user will click the **Run Calculator** button that is found on the PLAN_INPUT_DATA worksheet or the PLAN_OUTPUT_DATA worksheet, or the user can click the **View Output Data** button or the **Export Data** button on the RESULTS_SUMMARY worksheet.

Appendix A: Overview of the Coverage Examples Calculator Logic

The Coverage Examples Cost Sharing Calculator (the Calculator) calculates the subscriber and plan payment for a claim (i.e., the claim for a service provided on a specified date) for a subscriber with self-only coverage in eight phases:

1. Determine the covered amount.
2. Apply the out-of-pocket limit.
3. Apply special cost-sharing
    a. Begin primary cost-sharing after a set number of visits?
    b. Begin primary cost-sharing after a set number of copays?
4. Apply the monthly and annual coverage limits.
5. Apply the required deductible.
6. Apply the required co-payment or co-insurance.
7. Calculate the subscriber and the plan payment.
8. Summarize payments by payer and phase category.

The following sections describe the Calculator logic for each phase.

Phase 1: Determine the covered amount

For the line item, the Calculator looks up the benefit category (broadly speaking, the benefit that the line item falls under) that applies to the **Item or Service Code** in the associated "line item" charge schedule. It then looks up the coverage that applies to the benefit category. The calculator determines the amount that is covered for each item or service.

Phase 2: Apply the out-of-pocket limit

The Calculator determines, based on the benefit category that applies to the line item, whether the claim is subject to the out-of-pocket limit. For each line item the out-of-pocket limit applies to, the calculator determines the remaining out-of-pocket limit by deducting the allowed amount from the previous line item.

Phase 3: Apply special cost-sharing

The plan determines whether the claim is subject to special cost sharing. The calculator determines whether special cost sharing has been specified. If special cost sharing has been specified by the benefit design, the calculator counts the number of visits or copays specified in the BENEFIT_DESIGN worksheet for each line item that has been classified as Professional Services: Primary Care and applies primary care cost-sharing once the number of visits or copays has been reached.

Phase 4: Apply the monthly and annual coverage limits

Based on the coverage that applies to the benefit category, the Calculator looks up the monthly limit that applies to the line item. It calculates the total number of claims for the same service that have been provided during the same month as the current claim. If the total number of claims is less than the monthly limit or if the plan does not apply a monthly limit, the claim is covered by the plan and nothing

accrues to the subscriber. If the total number of claims equals or exceeds the monthly limit, the allowable charge accrues to the subscriber.

Based on the coverage that applies to the benefit category, the Calculator looks up the annual limit that applies to the line item. It calculates the total number of claims for the same service that have been provided during the same year as the current claim. If the total number of claims is less than the annual limit or if the plan does not apply an annual limit, the claim is covered by the plan and nothing accrues to the subscriber. If the total number of claims equals or exceeds the annual limit, the allowable charge accrues to the subscriber.

Phase 5: Apply the required deductible

The amount of the allowed amount that is subject to the deductible is equal to the allowed amount less any copayment or coinsurance that has accrued to the subscriber.

The application of the appropriate deductible proceeds in five stages corresponding to each of the five deductibles that may apply to a line item. The benefit design may subject each line item to one of five deductibles or to no deductible. These five deductibles are:

1. The overall plan deductible;
2. The prescription drug deductible;
3. An optional deductible (e.g., that applies to Emergency Services) referred to as deductible C;
4. An optional deductible (e.g., that applies to Physician Services) referred to as deductible D;
5. A deductible that applies only to the benefit category.

The calculator determines whether the overall plan deductible applies to the line item based on the benefit category for the line item. If the overall plan deductible applies, the calculator obtains the plan deductible and deducts any payments that counted toward the plan deductible for items and services that were received prior to the line-item being adjudicated. If the remaining plan deductible is greater than the allowed amount that is subject to the deductible, the amount subject to the deductible accrues to the subscriber. If the remaining plan deductible is less than the allowed amount that is subject to the deductible, the amount of the remaining plan deductible accrues to the subscriber.

This same procedure is repeated for each of the remaining deductibles.

Phase 6: Apply copay and coinsurance

If the line-item is covered by the plan and is not subject to the monthly or annual limit, the Calculator looks up the co-payment that applies to the line item based on the coverage that applies to the benefit category. If the copayment amount is greater than zero, the amount of the copayment accrues to the subscriber.

If the line item is covered by the plan and is not subject to the monthly or annual limit, the Calculator looks up the co-insurance rate that applies to the line item based on the coverage that applies to the benefit category. If the insurance rate is greater than zero, the amount of the coinsurance that accrues to the subscriber is calculated by multiplying the coinsurance rate by the allowable amount.

Phase 7: Calculate the total subscriber payment

Calculates the remaining covered allowed amount and subscriber-paid amounts after applying subscriber cost-sharing from previous steps.

Phase 8: Summarize payments by payer and phase category

The amount of any subscriber liability is allocated to the reporting categories (i.e., not covered or exclusions, coinsurance, copayment, or deductibles) by comparing the amount of the subscriber's liability that is determined at each step to the amount of the subscriber's liability after application of the out-of-pocket limit.

If the subscriber is liable for the claim because the monthly or annual limits have been exceeded, the amount of the allowed amount up to the amount of the total subscriber liability after application of the out-of-pocket limit is allocated to "exclusions".

If the subscriber was not liable for the claim because the monthly or annual limits have been exceeded, and the amount of copayment is less than or equal to the amount of the total subscriber liability after application of the out-of-pocket limit, the amount of the copayment up to the total subscriber liability after application of the out-of-pocket limit is allocated to "co-payments".

If the subscriber was not liable for the claim because the monthly or annual limits have been exceeded, and the amount of coinsurance is less than or equal to the amount of the total subscriber liability after application of the out-of-pocket limit, the amount of the coinsurance up to the total subscriber liability after application of the out-of-pocket limit is allocated to "co-insurance".

If the subscriber was not liable for the claim because the monthly or annual limits have been exceeded, and the amount of the allowed amount that was charged against deductibles is less than or equal to the amount of the total subscriber liability after application of the out-of-pocket limit less the amount of any coinsurance or deductible, the amount of the allowed amount that was charged against deductibles up to the total subscriber liability after application of the out-of-pocket limit is allocated to "deductibles".

Appendix B: PLAN_INPUT_DATA external data file specifications

Table B-1 specifies the required data elements and formats for an external data file of plan parameters. This file must have no header and no trailer. It should contain only plan parameter data.

Table B-1. Layout of PLAN_INPUT_DATA external data file

Column	Data category	Variable	Allowable values
1	Plan-level parameters	PLAN_ID	Alphanumeric
2	Plan-level parameters	Plan deductible	Blank or numeric
3	Plan-level parameters	Rx deductible	Blank or numeric
4	Plan-level parameters	Deductible C	Blank or numeric
5	Plan-level parameters	Deductible D	Blank or numeric
6	Plan-level parameters	OOP Limit	Blank or numeric
7	Inpatient Hospital Care (Facility)	Cost sharing Type	See note 1
8	Inpatient Hospital Care (Facility)	Benefit Deductible	Blank or numeric
9	Inpatient Hospital Care (Facility)	Co-payment	Blank or numeric
10	Inpatient Hospital Care (Facility)	Co-insurance	Blank or numeric
11	Inpatient Hospital Care (Facility)	Monthly Limits	Blank, "None" or numeric
12	Inpatient Hospital Care (Facility)	Annual Limits	Blank, "None" or numeric
13	Inpatient Hospital Care (Facility)	OOP Limit Applies	Blank, "Yes" or "No"
14	Other Facility Services	Cost sharing Type	See note 1
15	Other Facility Services	Benefit Deductible	Blank or numeric
16	Other Facility Services	Co-payment	Blank or numeric
17	Other Facility Services	Co-insurance	Blank or numeric
18	Other Facility Services	Monthly Limits	Blank, "None" or numeric
19	Other Facility Services	Annual Limits	Blank, "None" or numeric
20	Other Facility Services	OOP Limit Applies	Blank, "Yes" or "No"

Column	Data category	Variable	Allowable values
21	Emergency Department (Facility)	Cost sharing Type	See note 1
22	Emergency Department (Facility)	Benefit Deductible	Blank or numeric
23	Emergency Department (Facility)	Co-payment	Blank or numeric
24	Emergency Department (Facility)	Co-insurance	Blank or numeric
25	Emergency Department (Facility)	Monthly Limits	Blank, "None" or numeric
26	Emergency Department (Facility)	Annual Limits	Blank, "None" or numeric
27	Emergency Department (Facility)	OOP Limit Applies	Blank, "Yes" or "No"
28	Ambulance	Cost sharing Type	See note 1
29	Ambulance	Benefit Deductible	Blank or numeric
30	Ambulance	Co-payment	Blank or numeric
31	Ambulance	Co-insurance	Blank or numeric
32	Ambulance	Monthly Limits	Blank, "None" or numeric
33	Ambulance	Annual Limits	Blank, "None" or numeric
34	Ambulance	OOP Limit Applies	Blank, "Yes" or "No"
35	Professional Services: Primary Care	Cost sharing Type	See note 1
36	Professional Services: Primary Care	Benefit Deductible	Blank or numeric
37	Professional Services: Primary Care	Co-payment	Blank or numeric
38	Professional Services: Primary Care	Co-insurance	Blank or numeric
39	Professional Services: Primary Care	Monthly Limits	Blank, "None" or numeric

Column	Data category	Variable	Allowable values
40	Professional Services: Primary Care	Annual Limits	Blank, "None" or numeric
41	Professional Services: Primary Care	OOP Limit Applies	Blank, "Yes" or "No"
42	Professional Services: Emergency Department	Cost sharing Type	See note 1
43	Professional Services: Emergency Department	Benefit Deductible	Blank or numeric
44	Professional Services: Emergency Department	Co-payment	Blank or numeric
45	Professional Services: Emergency Department	Co-insurance	Blank or numeric
46	Professional Services: Emergency Department	Monthly Limits	Blank, "None" or numeric
47	Professional Services: Emergency Department	Annual Limits	Blank, "None" or numeric
48	Professional Services: Emergency Department	OOP Limit Applies	Blank, "Yes" or "No"
49	Professional Services: Inpatient	Cost sharing Type	See note 1
50	Professional Services: Inpatient	Benefit Deductible	Blank or numeric
51	Professional Services: Inpatient	Co-payment	Blank or numeric
52	Professional Services: Inpatient	Co-insurance	Blank or numeric
53	Professional Services: Inpatient	Monthly Limits	Blank, “None” or numeric
54	Professional Services: inpatient	Annual Limits	Blank, “None” or numeric
55	Professional Services: Inpatient	OOP Limit Applies	Blank, “Yes” or “No”
56	Professional Services: Specialist	Cost sharing Type	See note 1
57	Professional Services: Specialist	Benefit Deductible	Blank or numeric

Column	Data category	Variable	Allowable values
58	Professional Services: Specialist	Co-payment	Blank or numeric
59	Professional Services: Specialist	Co-insurance	Blank or numeric
60	Professional Services: Specialist	Monthly Limits	Blank, "None" or numeric
61	Professional Services: Specialist	Annual Limits	Blank, "None" or numeric
62	Professional Services: Specialist	OOP Limit Applies	Blank, "Yes" or "No"
63	Professional Services: Obstetric Care (Bundled)	Cost sharing Type	See note 1
64	Professional Services: Obstetric Care (Bundled)	Benefit Deductible	Blank or numeric
65	Professional Services: Obstetric Care (Bundled)	Co-payment	Blank or numeric
66	Professional Services: Obstetric Care (Bundled)	Co-insurance	Blank or numeric
67	Professional Services: Obstetric Care (Bundled)	Monthly Limits	Blank, "None" or numeric
68	Professional Services: Obstetric Care (Bundled)	Annual Limits	Blank, "None" or numeric
69	Professional Services: Obstetric Care (Bundled)	OOP Limit Applies	Blank, "Yes" or "No"
70	Professional Services: Procedures & Other	Cost sharing Type	See note 1
71	Professional Services: Procedures & Other	Benefit Deductible	Blank or numeric
72	Professional Services: Procedures & Other	Co-payment	Blank or numeric
73	Professional Services: Procedures & Other	Co-insurance	Blank or numeric
74	Professional Services: Procedures & Other	Monthly Limits	Blank, "None" or numeric

Column	Data category	Variable	Allowable values
75	Professional Services: Procedures & Other	Annual Limits	Blank, "None" or numeric
76	Professional Services: Procedures & Other	OOP Limit Applies	Blank, "Yes" or "No"
77	Professional Services: Physical Therapy	Cost sharing Type	See note 1
78	Professional Services: Physical Therapy	Benefit Deductible	Blank or numeric
79	Professional Services: Physical Therapy	Co-payment	Blank or numeric
80	Professional Services: Physical Therapy	Co-insurance	Blank or numeric
81	Professional Services: Physical Therapy	Monthly Limits	Blank, "None" or numeric
82	Professional Services: Physical Therapy	Annual Limits	Blank, "None" or numeric
83	Professional Services: Physical Therapy	OOP Limit Applies	Blank, "Yes" or "No"
84	Diagnostic Services: Radiology	Cost sharing Type	See note 1
85	Diagnostic Services: Radiology	Benefit Deductible	Blank or numeric
86	Diagnostic Services: Radiology	Co-payment	Blank or numeric
87	Diagnostic Services: Radiology	Co-insurance	Blank or numeric
88	Diagnostic Services: Radiology	Monthly Limits	Blank, "None" or numeric
89	Diagnostic Services: Radiology	Annual Limits	Blank, "None" or numeric
90	Diagnostic Services: Radiology	OOP Limit Applies	Blank, "Yes" or "No"
91	Diagnostic Services: Laboratory	Cost sharing Type	See note 1
92	Diagnostic Services: Laboratory	Benefit Deductible	Blank or numeric

Column	Data category	Variable	Allowable values
93	Diagnostic Services: Laboratory	Co-payment	Blank or numeric
94	Diagnostic Services: Laboratory	Co-insurance	Blank or numeric
95	Diagnostic Services: Laboratory	Monthly Limits	Blank, "None" or numeric
96	Diagnostic Services: Laboratory	Annual Limits	Blank, "None" or numeric
97	Diagnostic Services: Laboratory	OOP Limit Applies	Blank, "Yes" or "No"
98	Prescription Drugs: Generic	Cost sharing Type	See note 1
99	Prescription Drugs: Generic	Benefit Deductible	Blank or numeric
100	Prescription Drugs: Generic	Co-payment	Blank or numeric
101	Prescription Drugs: Generic	Co-insurance	Blank or numeric
102	Prescription Drugs: Generic	Monthly Limits	Blank, "None" or numeric
103	Prescription Drugs: Generic	Annual Limits	Blank, "None" or numeric
104	Prescription Drugs: Generic	OOP Limit Applies	Blank, "Yes" or "No"
105	Prescription Drugs: Branded	Cost sharing Type	See note 1
106	Prescription Drugs: Branded	Benefit Deductible	Blank or numeric
107	Prescription Drugs: Branded	Co-payment	Blank or numeric
108	Prescription Drugs: Branded	Co-insurance	Blank or numeric
109	Prescription Drugs: Branded	Monthly Limits	Blank, "None" or numeric
110	Prescription Drugs: Branded	Annual Limits	Blank, "None" or numeric
111	Prescription Drugs: Branded	OOP Limit Applies	Blank, "Yes" or "No"
112	Prescription Drugs: Insulin	Cost sharing Type	See note 1
113	Prescription Drugs: Insulin	Benefit Deductible	Blank or numeric
114	Prescription Drugs: Insulin	Co-payment	Blank or numeric
115	Prescription Drugs: Insulin	Co-insurance	Blank or numeric

Column	Data category	Variable	Allowable values
116	Prescription Drugs: Insulin	Monthly Limits	Blank, “None” or numeric
117	Prescription Drugs: Insulin	Annual Limits	Blank, “None” or numeric
118	Prescription Drugs: Insulin	OOP Limit Applies	Blank, “Yes” or “No”
119	Over-the-counter Drugs	Cost sharing Type	See note 1
120	Over-the-counter Drugs	Benefit Deductible	Blank or numeric
121	Over-the-counter Drugs	Co-payment	Blank or numeric
122	Over-the-counter Drugs	Co-insurance	Blank or numeric
123	Over-the-counter Drugs	Monthly Limits	Blank, "None" or numeric
124	Over-the-counter Drugs	Annual Limits	Blank, "None" or numeric
125	Over-the-counter Drugs	OOP Limit Applies	Blank, "Yes" or "No"
126	Preventive Services & Vaccines	Cost sharing Type	See note 1
127	Preventive Services & Vaccines	Benefit Deductible	Blank or numeric
128	Preventive Services & Vaccines	Co-payment	Blank or numeric
129	Preventive Services & Vaccines	Co-insurance	Blank or numeric
130	Preventive Services & Vaccines	Monthly Limits	Blank, "None" or numeric
131	Preventive Services & Vaccines	Annual Limits	Blank, "None" or numeric
132	Preventive Services & Vaccines	OOP Limit Applies	Blank, "Yes" or "No"
133	Durable Medical Equipment	Cost sharing Type	See note 1
134	Durable Medical Equipment	Benefit Deductible	Blank or numeric
135	Durable Medical Equipment	Co-payment	Blank or numeric
136	Durable Medical Equipment	Co-insurance	Blank or numeric
137	Durable Medical Equipment	Monthly Limits	Blank, "None" or numeric
138	Durable Medical Equipment	Annual Limits	Blank, "None" or numeric

Column	Data category	Variable	Allowable values
139	Durable Medical Equipment	OOP Limit Applies	Blank, "Yes" or "No"
140	Medical Supplies	Cost sharing Type	See note 1
141	Medical Supplies	Benefit Deductible	Blank or numeric
142	Medical Supplies	Co-payment	Blank or numeric
143	Medical Supplies	Co-insurance	Blank or numeric
144	Medical Supplies	Monthly Limits	Blank, "None" or numeric
145	Medical Supplies	Annual Limits	Blank, "None" or numeric
146	Medical Supplies	OOP Limit Applies	Blank, "Yes" or "No"
147	Over-the-counter Medical Supplies	Cost sharing Type	See note 1
148	Over-the-counter Medical Supplies	Benefit Deductible	Blank or numeric
149	Over-the-counter Medical Supplies	Co-payment	Blank or numeric
150	Over-the-counter Medical Supplies	Co-insurance	Blank or numeric
151	Over-the-counter Medical Supplies	Monthly Limits	Blank, "None" or numeric
152	Over-the-counter Medical Supplies	Annual Limits	Blank, "None" or numeric
153	Over-the-counter Medical Supplies	OOP Limit Applies	Blank, "Yes" or "No"
154	Other Items & Services	Cost sharing Type	See note 1
155	Other Items & Services	Benefit Deductible	Blank or numeric
156	Other Items & Services	Co-payment	Blank or numeric
157	Other Items & Services	Co-insurance	Blank or numeric
158	Other Items & Services	Monthly Limits	Blank, "None" or numeric
159	Other Items & Services	Annual Limits	Blank, "None" or numeric
160	Other Items & Services	OOP Limit Applies	Blank, "Yes" or "No"

Note 1: One of the 19 cost sharing options listed in §4.2, Table 4.2. Must match the spelling of one of the 19 options.

Appendix C: PLAN_OUTPUT_DATA external data file

The CECSC generates an external data file containing the output data for the plans listed in the PLAN_INPUT_DATA worksheet. (NOTE: when the CECSC generates output data it also generates a corresponding PLAN_INPUT_DATA file. Therefore be careful not to overwrite an input data file.)

The CECSC output data file consists of a tab-separated text file containing 19 variables. These correspond to the data that are generated and stored on the PLAN_OUTPUT_DATA worksheet. The outputs from the CECSC can be used to populate the *Deductibles, Copayments, Coinsurance, Limits or Exclusions, and Total [patient] would pay is* sections of the coverage example in the SBC.

1. The plan identifier (PLAN_ID)
2. Six output variables for the Maternity example:
    a. The amount of the plan payment
    b. The amount of the subscriber payment
    c. The amount of the subscriber payment attributable to deductibles
    d. The amount of the subscriber payment attributable to co-payment
    e. The amount of the subscriber payment attributable to co-insurance
    f. The amount of the subscriber payment attributable to exclusions and non-covered items and services
3. Six output variables for the Diabetes example:
    a. The amount of the plan payment
    b. The amount of the subscriber payment
    c. The amount of the subscriber payment attributable to deductibles
    d. The amount of the subscriber payment attributable to co-payment
    e. The amount of the subscriber payment attributable to co-insurance
    f. The amount of the subscriber payment attributable to exclusions and non-covered items and services
4. Six output variables for the Foot Fracture example:
    a. The amount of the plan payment
    b. The amount of the subscriber payment
    c. The amount of the subscriber payment attributable to deductibles
    d. The amount of the subscriber payment attributable to co-payment
    e. The amount of the subscriber payment attributable to co-insurance
    f. The amount of the subscriber payment attributable to exclusions and non-covered items and services