***Data Services Benefits Calculation Amounts Guide***

***Version 1.09***

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Overview

The Benefit Calculation Amounts procedure is designed to use the deduction code configuration rules to determine the proper Benefit Amount for an EE Elected Benefit Amount.

But wait, doesn’t the EmpDed include the Benefit Amount?

Yes, but the Benefit Amount stored in the EmpDed table may or may be an Elected Rate or Percent, Salary Multiplier election, or require Age Graded Rate reduction rules or rounding rules applied to it before sending that amount over to the vendor.

So the basic premise behind the procedure is that it will piggy-back on the BDM results and include take any configuration variables passed into the BDM Configuration table, as well as the BCA Configuration table and apply those rules and give you a calculated Benefit Amount.

Here are the steps that it will follow during execution:

1. Perform calculations based on the “ValidForExport” results contained within the BDM tables.
2. Calculations performed include Flat Rate elected benefit amounts, Employee Elected Rate or Percentage benefits, EE and ER Premium Amounts
3. Determine if the amount is above the Maximum amount configured, then cap out the benefit amount based on the Maximum amount configured.
4. Age Graded Rate Reduction rules applied
5. Any rounding rules applied to the logic
6. Age Graded Rate Reduction rules can be applied based on the Spouses Age.
7. Employee Elected Rates can be configured to override using the Deduction Code “Amount \* Rate” rule, to pull from the EE Elected Rate or Percent as a basis for the calculated amount.

**Note:** This procedure will not calculate the Benefit Amounts for benefits that have a Calculation rule of “Expression” for obvious purposes. So for any deduction codes that are calculated using an Expression, please configure and calculate these amounts manually. You can use the same logic/process for calculating the amounts as it pertains to the calculation, but the procedure will not calculate these amounts for you and will return an amount of 0.00 in the BcaBenAmtCalc field for these Benefits.

Quick Start

Paste the following code into your stored procedure:

DELETE FROM dbo.U\_dsi\_bdm\_Configuration WHERE FormatCode = @FormatCode;

INSERT INTO dbo.U\_dsi\_bdm\_Configuration VALUES (@FormatCode, 'DedCodes', '<your deduction codes>');

INSERT INTO dbo.U\_dsi\_bdm\_Configuration VALUES (@FormatCode, 'StartDateTime', GETDATE() - 7);

INSERT INTO dbo.U\_dsi\_bdm\_Configuration VALUES (@FormatCode, 'EndDateTime', GETDATE());

INSERT INTO dbo.U\_dsi\_bdm\_Configuration VALUES (@FormatCode, 'TermSelectionOption', 'AuditDate');

EXEC dbo.dsi\_bdm\_sp\_PopulateDeductionsTable @FormatCode;

--If you have a need to include any Bundled benefits, insert them into BDM here. (See page 6 for example)

EXEC dbo.dsi\_bdm\_sp\_CalculateBenefitAmounts @FormatCode;

--If you included any Bundled benefits, update their BcaBenAmtCalc value from the bundled deduction code here. (See page 6 for example)

Once the BDM finishes executing it will populate the dbo.u\_dsi\_bdm\_BenCalculationAmounts table and perform the necessary calculations based on the configuration, based on the deduction code setup rules and the Configuration rules applied.

Build your driver tables and add the following join for employees. Set the string below in the Where clause.

JOIN dbo.U\_dsi\_bdm\_EmpDeductions ON EedCOID = xCOID AND EedEEID = xEEID

JOIN dbo.u\_dsi\_bdm\_BenCalculationAmounts ON eedeeid = bcaeeid AND eedcoid = bcacoid

AND eedFormatCode = bcaFormatCode AND eeddedcode = bcadedcode

AND BcaDepRecID IS NULL

Where EedFormatCode = @FormatCode AND EedValidForExport = 'Y'

Add the following join for dependents:

JOIN dbo.U\_dsi\_bdm\_DepDeductions ON DbnEEID = xEEID AND DbnDepRecID = ConSystemID

JOIN dbo.u\_dsi\_bdm\_BenCalculationAmounts ON dbneeid = bcaeeid AND dbncoid = bcacoid

AND dbnFormatCode = bcaFormatCode AND dbndedcode = bcadedcode

AND BcaDepRecID = dbndeprecid

Where DbnFormatCode = @FormatCode AND DbnValidForExport = 'Y'

Note: The Calculated Benefit Amounts are stored in the BcaBenAmtCalc field in the dbo.u\_dsi\_bdm\_BenCalculationAmounts table. The Premium Amounts are stored in the BcaEEAmt and BcaERAmt fields, respectively.

IMPORTANT – DO NOT IN ANY WAY MODIFY ANY OF THE BDM OBJECTS

Often times, the BDM objects will be installed with product releases; therefore any modifications you make to any objects within the install script will be overwritten.

Miscellaneous Parameters

## I need the Age Graded Rate Reduction rule to be based on the Spouses age, not the EE’s age.

INSERT INTO dbo.U\_dsi\_bdm\_Configuration VALUES (@FormatCode,'DependentBenefitAgeGradedRate','<DEDCODES>');

By entering this configuration, any deduction codes inserted with this configuration will use the Spouses age as the basis for the Age Graded Rate Reduction rules when performing the calculation.   
  
Example:  
EE elects LIFES coverage amount of $50,000. Age Graded Rate reduction rule indicates 75% of coverage after the age of 60. If the Spouses Age is above 60, but less than the next level of the reduction rule, then the benefit amount will calculate out to be $37,500.

## I like the idea of using a Calculated Amount, but the vendor wants the full elected benefit amount, and will perform the Age Graded rate reduction on their end.

INSERT INTO dbo.U\_dsi\_bdm\_Configuration VALUES (@FormatCode,'SkipAgeGradedRateCalcRule','<DEDCODES>');

This will use all the other rules for calculating the benefit amount, without the Age Graded rate reduction rule applied for this deduction code.

## My client has their EE’s elect the Rate or Percent in which to use as a basis for the calculation, pull from there, instead of the deduction code Rate or Percent default.

INSERT INTO dbo.U\_dsi\_bdm\_Configuration VALUES (@FormatCode,'EmployeeElectedRateorPct','<DEDCODES>');

This will take the EE’s elected rate or percent and use that as the percentage to use as the basis for the calculation for the Benefit Amount.

## The vendor wants me to send EE or ER Premium amounts, but the Age of the EE is based on a specific “Plan Date” each year, and not the current age of the EE. Can we make that work?

This supports up to 5 different possible configurable date options based on the needs for varying “EE Age” dates as it applies to calculating Insurance Rate Premiums on the file.

INSERT INTO dbo.U\_dsi\_bdm\_BCAConfiguration VALUES (@FormatCode,'InsRateAsOfDate','<DEDCODES>','<PLAN DATE>')

INSERT INTO dbo.U\_dsi\_bdm\_BCAConfiguration VALUES (@FormatCode,'InsRateAsOfDate2','<DEDCODES>','<PLAN DATE>')

INSERT INTO dbo.U\_dsi\_bdm\_BCAConfiguration VALUES (@FormatCode,'InsRateAsOfDate3','<DEDCODES>','<PLAN DATE>')

INSERT INTO dbo.U\_dsi\_bdm\_BCAConfiguration VALUES (@FormatCode,'InsRateAsOfDate4','<DEDCODES>','<PLAN DATE>')

INSERT INTO dbo.U\_dsi\_bdm\_BCAConfiguration VALUES (@FormatCode,'InsRateAsOfDate5','<DEDCODES>','<PLAN DATE>')

## The benefit rounding rules are different than the configurable values for the plan, so can I skip the Benefit Amount Rounding Rule in the calculation? Or the Age Graded Rate Reduction rule has the correct amount before the Rounding Rules are applied, please ignore the Rounding Rule. (If the Non-Age Graded benefits still need the rounding rule applied, please apply this after the completion of the BCA procedure, in a manual calculation)

INSERT INTO dbo.U\_dsi\_bdm\_BCAConfiguration VALUES (@FormatCode, 'SkipRoundingRule','<DEDCODES>','<PLAN DATE>')

Some Standard BCA Queries

**Main tables**

SELECT eepnamelast, eepnamefirst, eeddedcode, eedbenamt, bcaBenAmtCalc, BcaEEAmt, BCAERAmt, BcaCalcRowStatus

FROM dbo.U\_dsi\_bdm\_EmpDeductions JOIN emppers on eepeeid = eedeeid

JOIN dbo.u\_dsi\_bdm\_BenCalculationAmounts on eedeeid = bcaeeid AND eedcoid = bcacoid

AND eedFormatCode = bcaFormatCode AND eeddedcode = bcadedcode

AND BcaDepRecID IS NULL

WHERE eedFormatCode = 'EXXXXXXXXX' AND eedvalidforexport = 'Y'

--Dependents:

SELECT eepnamelast, eepnamefirst, connamelast, connamefirst, dbndedcode, dedEEbenamt, bcaBenAmtCalc, BcaCalcRowStatus

FROM dbo.U\_dsi\_bdm\_DepDeductions JOIN emppers ON eepeeid = dbneeid

JOIN Contacts ON ConSystemID = dbnDepRecID

JOIN dbo.u\_dsi\_bdm\_BenCalculationAmounts ON dbneeid = bcaeeid AND dbncoid = bcacoid

AND dbnFormatCode = bcaFormatCode AND dbndedcode = bcadedcode

AND BcaDepRecID = dbndeprecid

WHERE dbnFormatCode = 'EXXXXXXXXX' AND dbnvalidforexport = 'Y'

**Use the following INSERT statement when using Bundled benefits:**

INSERT INTO dbo.U\_dsi\_bdm\_EmpDeductions (eedformatcode, eedcoid, eedeeid, eedbenamt, eedbenoption, eedbenstatus, eedbenstartdate, eedbenstopdate, eeddedcode, eedvalidforexport, deddedcode, deddedtype)

(SELECT eedformatcode, eedcoid, eedeeid, eedbenamt, eedbenoption, eedbenstatus, eedbenstartdate, eedbenstopdate, 'ADD', eedvalidforexport, 'ADD', deddedtype

FROM dbo.U\_dsi\_bdm\_EmpDeductions WITH (nolock)

WHERE eedformatcode = @FormatCode AND eeddedcode = 'GLIFE');

**Use the following UPDATE statement when using Bundled benefits:**

UPDATE dbo.u\_dsi\_bdm\_BenCalculationAmounts

SET bcaBenAmtCalc = lf.amtcalc

FROM dbo.u\_dsi\_bdm\_BenCalculationAmounts

JOIN (SELECT DISTINCT bcaeeid eeid, bcacoid coid, bcaBenAmtCalc amtcalc

FROM dbo.u\_dsi\_bdm\_BenCalculationAmounts

WHERE bcaFormatCode = @FormatCode AND bcaDedCode = 'GLIFE'

AND BcaDepRecID IS NULL) lf ON lf.eeid = bcaeeid AND lf.coid = bcacoid

WHERE bcaFormatCode = @FormatCode AND bcadedcode = 'ADD';

**Use the following UPDATE statement to carry the EE’s elected amount down to the Dependent record, to ensure they aren’t mismatched:**

--Make Sure Dependent Amount matches the EE Amount:

UPDATE dbo.U\_dsi\_bdm\_BenCalculationAmounts

SET BcaBenAmtCalc = ee.amt

FROM dbo.U\_dsi\_bdm\_BenCalculationAmounts

JOIN (select bcaeeid eeid, bcacoid coid, bcadedcode dedcode, BcaBenAmtCalc amt

FROM dbo.U\_dsi\_bdm\_BenCalculationAmounts

WHERE BcaFormatCode = @FormatCode AND BcaDepRecID IS NULL) ee on ee.eeid = bcaeeid AND ee.coid = BcaCoID AND ee.dedcode = BcaDedCode AND ee.amt <> BcaBenAmtCalc

WHERE BcaDepRecID IS NOT NULL

Appendix: BCA Version History

**BCA v1.09 Changes/Enhancements Summary**

1. Updated EE/ER Rate Calculation rules to include 3 rules previously unaccounted for. (99 = None, 30 = Benefit Amount \* Rate, 20 = Flat Amount).

**BCA v1.08 Changes/Enhancements Summary**

1. Added Configuration Option to skip Benefit Rounding rules, but allow all other rules to be applied in the calculation.

**BCA v1.07 Changes/Enhancements Summary**

1. Added Insurance Rate calculations for EE Premium amounts and ER Premium amount calculations for deduction codes that tie to the OptRate and InsRate tables.
2. Fixed bug as it pertains to the Insurance Rate Premium calculations and the date to use, based on the deduction code setup rule.
3. Added feature to configure rolling dates for plan dates to use for EE Age as it pertains to Insurance Rate premium calculations.