Create a Logic Check

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Logic checks allow you to flag indicator results that fail common-sense comparisons to other indicators or other disaggregations. You can design your own logic checks in DevResults based on your indicators and view any data that violates these rules. Examples of logic checks include:

- Number of administrators should be greater than or equal to the number of administrators who were trained.
- Doctors + nurses should be less than or equal to the total number of medical professionals.
- Metric tons of corn produced should be less than 40% of total metric tons of crops produced.

When logic checks are calculated, any data that does **not** meet the statement you define in the logic check will throw a warning violation.



Go to Results > Logic Checks.

Click on the **+ New Logic Check** button in the lower right corner:

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						Show warnings for All reporting periods	 Only show warnings
Showing 8 of 8 logic checks		Name	Warnings		Formula		1
		Logic Check #1 for formulas		[2.2-a-N] <= [2.2-a-D]			
Q. Search		Logic Check #2 for formulas	15	[3.1-b-N] <= [3.1-b-D]			
		Logic Check #3 for formulas	26	[3.1-c-D] >= [3.1-c-N]			
		Logic Check #4 for formulas		[3.2-a-D] >= [3.2-a-N]			
		Logic Check #5 for formulas		[4.1-b-D] >= [4.1-b-N]			
		Logic Check #6 for formulas		[4.2-a-N] <= [4.2-a-D]			
		Logic Check #7 for formulas		[4.2-b-N] <= [4.2-b-D]			
		Logic Check #8 for formulas		[4.1-b-D] >= [4.1-b-N]			
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This will open a New Logic Check pop-up. Give your Logic Check a name and click the **+ Create Logic Check** button.

New Logic Check	×
Please enter a name for the new logic check.	
Children who slept under a net must be less than all children survey	
Create Logic Chec	k

There are three required steps for defining logic.

- Logic checks compare two or more indicator results or disaggregations. In the first definition box, list the code for the first indicator or disaggregation. Put the code in square brackets like [this]. When you click outside the editing box, the system will confirm that it recognizes your indicator code or it will give you an error that it does not recognize your indicator code. Correct the code as needed.
- 2. In the second definition box, list the code for the indicator or disaggregation that will be compared, also in square brackets like [this].
- 3. Between the two boxes, select the desired operator for your comparison. The options are:
- = (equal to)
- >= (greater than or equal to)
- > (greater than)
- <= (less than or equal to)</p>
- < (less than)</pre>
- <> (not equal to)

You have the option to add a note about this Logic Check in the **Notes** box. Use this as an explanation for other users so that if they have data that violates the logic check, they have an understanding of what needs to be fixed.

Here's a sample of what the above would look like:

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Children who slept under a net must be less than all children surveyed				O History
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[3.1-c-0] >= * [3.1-c-H]				
✓ Indicators referenced:				
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Notes	_			
The total number of children under 5 in households surveyed about insect-treated nets (ITN) should be greater than or equal to the number of children who were reported as having slept underneath ITN				
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There are no warnings for this logic check.				
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Codes for Disaggregations: If you want the logic check calculation to compare values for an indicator's disaggregation, use a vertical bar "|" after the code within the bracket. For example, male children would be written as [3.1-c-D[Male]]. You can also reference multiple disaggregations if your indicator is cross-disaggregated, such as [3.1-c-D[Male]].

So if we wanted to make a logic check that only looked at the number of female children total compared to the number of female children who were reported as having slept under nets, it would look like this:

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🧹 India	ators referenced:					V Indicators referenced:		
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Once the logic check is created, you can run it immediately using the **Run logic check** button in the lower right. Logic checks are run automatically every 15 minutes.

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The **Warnings** section will show any indicator performance data that does not meet the Logic Check's criteria, listed by activity. You can view these by reporting period using the Reporting Period dropdown.

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Algebraic Expressions: In the definition boxes, you can add algebraic expressions. For example, you might create the logic check [3.1-c-D] > [3.1-c-N]*4. This logic check means that the total number of children surveyed should be more than four times the number of children reported as sleeping under nets.

Multiple Indicators: You can also use multiple indicators in a definition box. So we might have $[3.1-c-D] \ge [3.1-c-N] + [3.1.-d]$, if 3.1-d collects the number of children reported as not having slept under a net.

When you go to any Activity Reporting Period, you will see all of that activity's indicators and any data reported so far for that reporting period. Click **Recalculate logic checks** to refresh the logic checks. Any logic check violations will be flagged in the **Errors** column:

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7 of 7 indicators shown	Search indica	ators							٩	Ø-
Data Source	This activity's Code	data for this re	orrling period has been approved and is locked. Owners can edit the data but other users c Indicator	annot. Data	Warnings	Comments	Previous	Current	Target	% Target Beached
	3.1-a	# people living	with HIV/AIDS (PLHIV) reached with a minimum package of prevention with PLHIV (PWP) interventions	Dat			143	149	125	119 %
	3.1-b	% households v	vith at least one insecticide-treated net (ITN)	For			27 %	75 %	50 %	151 %
	3.1-b-D	# households s	urveyed about insecticide-treated nets (ITN)	Dire	1		1,508	1,665	1,800	93 %
	3.1-b-N	# households w	ith at least one insecticide-treated net (ITN)	Dire	1		409	1,255	1,500	84 %
	3.1-c	% children und	er 5 years old who slept under an insecticide-treated net (ITN) the previous night	For			61 %	54 %	7 %	774 %
	3.1-c-D	# children unde	r 5 years old in households surveyed about insecticide-treated nets ((TN)	Dire	2		1,188	3,317	5,000	66 %
	3.1-c-N	# children unde	r 5 years old who slept under an insecticide-treated net (ITN) the previous night	Dire	2]	721	1,798	1,500	120 %
						-				
DevResults										Done

When do logic checks run?

Logic checks are re-run automatically system-wide every 15 minutes. You can click the **Recalculate logic checks** button to manually recalculate them at any time, too.

Didn't answer your question? Please email us athelp@devresults.com .

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