



# Variables to estimate needs of acute malnutrition

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Variable	Definition and Source	Quantification/Qualification
<b>Prevalence's of GAM/MAM/SAM (A)</b>	<b>The cross-sectional point in-time proportion (%) of GAM/MAM/SAM only from AIMWG validated standard SMART nutrition surveys</b>	Variable based the validated/agreed results of specific surveys with below qualifications <ol style="list-style-type: none"> <li>National level average – only from FSNAU seasonal surveys or MICS or DHS whenever available</li> <li>Regional/State level – only from FSNAU seasonal surveys depending on the FSNAU generated regional average</li> <li>District level –               <ol style="list-style-type: none"> <li>from FSNAU livelihood surveys applying the livelihood result to all districts under the specific livelihood with an assumption livelihood homogeneity</li> <li>from validated district level, standard surveys done by any entity</li> </ol> </li> </ol>
<b>Population figure</b>	<b>Projected 2014 UNFPA figures using the population growth factor<sup>1</sup> provided by UNFPA till the next census</b>	Sequential calculation/projection of specific year population using the growth factor (in Somalia case 2.8%/year). Examples; <ol style="list-style-type: none"> <li>Calculate 2015 Pop#s; (2014 Pop# * 2.8%) +  2014 Pop#) w/h would be (12,316,895 * 2.8%) +  12,316,895)=<b>12,661,768</b></li> <li>Calculate 2017 Pop#; one has keep on doing the above to generate 2016 projected pop fig to generate the 2017 Pop#. Hence (2016 Pop# * 2.8%) +  2016 Pop#) w/h would be (13,016,298 * 2.8%) +  13,016,298)=<b>13,380,754</b></li> </ol>
<b># of children under five (B)</b>	<b>Calculated # of under five children from a given population using proportion of under-five children<sup>2</sup></b>	# of children <5 for 2017 = 2017 Pop# * 18% w/h would be <b>13,380,754 * 18%=2,408,436 <u>agreed to use 20%</u></b>
<b>Prevalence # of in Need of GAM/MAM/SAM (C)</b>	<b>Snap shot of # of GAM/MAM/SAM in a specific point in time of the survey which doesn't represent the total need over period of time</b>	It is estimated from (A) & (B) as a function of simple multiplication of <b>A*B</b>
<b>Incidence # of in Need of GAM/MAM/SAM (D)</b>	<b># of new/relapse cases of GAM/MAM/SAM over a period of time (often one year) which is critical in calculating the need</b>	It is estimated using global standard correction factor which is <b>1.6</b> through <b>C*1.6</b>
<b>Total # (caseload) of in Need of GAM/MAM/SAM (E)</b>	<b>Total burden of # of GAM/MAM/SAM representing the total need over period of time for specific location</b>	This is the appropriate estimate of total need/burden which considers both prevalence and incidence as a function of summation. Hence, <b>E = C + D</b> or <b>E = C * 2.6</b>
<b>Target of GAM/MAM/SAM etc... (T)</b>	<b>Defined # of target to reach recognizant to access, capacity and resources</b>	This is mainly calculated as multiplication of (E) and coverage estimate whenever available or arbitrary agreed estimation. In Somalia case we always aspire to reach 75% or more of the burden

<sup>1</sup> Population growth is the increase in the number of individuals in a population and normally its factor generated during census as percentage/year for use for any planning that involves population. This is a global standard as census is being done every 10 years and can't be done every year.

<sup>2</sup> Proportion of under-five children suggested by the cluster is 18% of total population based evidences from Polio and other NIDs though most SMART surveys indicate 20-25%. This could be flexibly kept to 20% based on collective agreement.

Other operational factors to be applied for burden forecast vis-à-vis supply pipeline under specific scenario context

<b>Deterioration scenario caseload for a situation between an emergency and critical levels of GAM (current situation in Somalia)</b>	<b>To be used only when GAM estimates aren't available with 50% likelihood increase over calculated burden if the calculation is done using a survey estimate of 2-3 months old</b>
<b>Deterioration scenario caseload for a situation forecasted to be above critical levels of GAM based on doubling of admission and deteriorations in other contextual factors</b>	<b>To be used only when GAM estimates aren't available with 100% (doubled) likelihood increase over calculated burden if the calculation is done using a survey estimate of 2-3 months old and there is doubling admission pattern</b>
<b>Buffer stock</b>	<b>To be calculated using minimum of 10% calculated burden (E) of 10% of calculated target (T)</b>