CAMPAIGN MASTERY'S ADVERSE EFFECTS ENGINE

The following is excepted from Campaign Mastery's Adverse Effects Engine. Refer to the original article for additional information.

Core Mechanic:
Roll Nd6 until a total of T or more sixes have appeared. Every 1 that shows on a roll triggers an adverse event; the more ones in a single roll (K), the worse the event. The GM sets N, T, and the adverse events for each K result.

The table below shows the Expected number of rolls (E) to reach T and the likely number of times that a particular K will arise in the course of those rolls.

Table Key:
"No +" represents low chance of more. Use the indicated number of occurrances in estimating total impact from impact per occurrance.

"+" represents a moderate chance of more. Use the indicated number of occurrances in estimating total impact from impact per occurrance.

"++" represents a significant chance of more. Use the indicated number of occurrances + 0.5 to estimate the average total impact from impact per occurrance.

"+++" represents a high likelihood of more occurrances than the number shown, and a high confidence of at least this many occurrances. Use the indicated number +1 to estimate the average total impact from impact per occurrance.

T	N	E	K=1	K=2	K=3	K=4	K=5	K=6	K=7	K=8
1	1	6	1							
1	2	4	1	0						
1	3	3	1	0	0					
1	4	2	0+++	0	0	0				
1	5	2	0+++	0+	0	0	0			
1	6	2	0+++	0+	0	0	0	0		
1	7	2	0+++	0+	0	0	0	0	0	
1	8	2	0++	0++	0	0	0	0	0	0
2	1	12	2							
2	2	7	1+++	0						
2	3	5	1++	0+	0					
2	4	4	1++	0+	0	0				
2	5	3	1	0+	0	0	0			
2	6	3	1	0++	0	0	0	0		
2	7	3	1	0++	0	0	0	0	0	
2	8	2	0++	0++	0	0	0	0	0	0
3	1	18	3							
3	2	10	2+++	0+						
3	3	7	2+	0+	0					
3	4	5	1+++	0++	0	0				
3	5	4	1++	0++	0	0	0			
3	6	4	1++	0+++	0	0	0	0		
3	7	3	1	0++	0	0	0	0	0	
3	8	3	1	0+++	0+	0	0	0	0	0

T	N	E	K=1	K=2	K=3	K=4	K=5	K=6	K=7	K=8
4	1	24	4							
4	2	13	3++	0+						
4	3	9	3	0++	0					
4	4	7	2++	0+++	0	0				
4	5	6	2+	0+++	0	0	0			
4	6	5	2	1	0+	0	0	0		
4	7	4	1++	0+++	0+	0	0	0	0	
4	8	4	1+	1	0+	0	0	0	0	0
5	1	30	5							
5	2	16	4+	0+						
5	3	11	3+++	0+++	0					
5	4	8	3	0+++	0	0				
5	5	7	2+++	1	0	0	0			
5	6	6	2+	1	0+	0	0	0		
5	7	5	1+++	1	0+	0	0	0	0	
5	8	5	1+++	1+	0++	0	0	0	0	0
6	1	36	6							
6	2	19	5+	0++						
6	3	13	4++	0+++	0					
6	4	10	3+++	1	0	0				
6	5	8	3	1+	0+	0	0			
6	6	7	2+++	1+	0+	0	0	0		
6	7	6	2+	1+	0+	0	0	0	0	
6	8	5	1+++	1+	0++	0	0	0	0	0
7	1	42	7							
7	2	22	6	0++						
7	3	15	5	1	0					
7	4	11	4	1+	0	0				
7	5	9	3++	1+	0+	0	0			
7	6	8	3	1++	0+	0	0	0		
7	7	7	2++	1++	0++	0	0	0	0	
7	8	6	2	1++	0++	0	0	0	0	0
8	1	48	8							
8	2	25	6+++	0++						
8	3	17	5+++	1	0					
8	4	13	5	1++	0	0				
8	5	10	4	1++	0+	0	0			
8	6	9	3++	1+++	0+	0	0	0		
8	7	8	3	1+++	0++	0	0	0	0	
8	8	7	2++	1+++	0++	0	0	0	0	0

E is usually a decimalized number because the calculations determine the average outcome over many sets of rolls. "2.6" means that 40% of the time it will take 2 rolls and 60% of the time it will take 3 - but there is always an outside chance that it might take 1 or 4, so those percentages are approximate. Because in the real world you can't have "0.6 of a roll", these have been rounded up, and the resulting whole number of rolls used to calculate the rest of the table.

Choosing N and T

Unless you are modelling a specific set of conditions that dictate otherwise, or are working to deliver an 'average fixed amount of damage' (see the source article), the place to start is with the time intervals between rolls and the number of rolls expected to be needed, E. That will give you a short-list (perhaps VERY short) to choose between.

Nesting Damage Types
Cumulative damage assigments (eg K=2 is K=1 + something extra) permit different damage / impact types to be ‘stacked’ in progressive layers.

The Healing Difference
Some situations / GMs may choose not to permit magical / assisted healing until the process has run its course.

Other Options
1. The Exhaustion Option: *When you roll a 6, after adding it to your tally, that dice no longer gets rolled.*

2. The Continual Option: *Once you roll a 1, it stays unrolled thereafter and counts toward future penalties. Rolling continues until every dice shows either a 1 or a 6. The Core exit condition of accumulating T sixes remains in effect but is overshadowed by the alternative.*

3. The Progressively-worse Option: *Each 1 that gets rolled increases the Target by 1.*

4. The Blessed Balm Option: *Sixes rolled can undo some of the harm caused. Two sixes = one 1, three sixes = 2 ones, and so on.*

5. The Devestating Option: *The first 6 in a roll doesn't count, only sixes above that one.* Warning: Extends E greatly.

6. The With-A-Bang Option: *A selected number of the dice pool (N) start already showing ones and are not rerolled. These reduce by 1 each round, becoming regular dice rolled and not ‘fixed ones’.*

    6a. Bigger Bang Subvariant: *The ‘fixed ones’ are only removed when a 6 is rolled. A 6 used for the purpose does not count toward the target.*

    6b. It Will All Be Over Soon Subvariant: *As per the basic option 6, but fixed ones do not become regular dice, they become automatic sixes.*

All of these options can be applied individually or in combinations to simulate different event types.

Uses For The Adverse Effects Engine:
The AEE can be applied to any collaborative effort. It can be used to model threatening weather. It can be used for research projects and for modelling poisons, diseases, and plagues in individuals from the flu to the black death or Ebola, and everything in between. See the original article for details and examples.