Supplementary File 2

Mixed-effects ML regression	Number of observations	4,171
Group variable: Individual patient	Number of groups	1,229

	Observations per group:	
	minimum	1
	average	3.4
	maximum	20
	Wald chi2(8)	4778.99
Log likelihood = -37298.01	Prob > chi2	0.0000

Cumulative fluid balance	Coefficient	Std. Err.	z	P>z	95% Conf. Interval	
Non-resuscitation fluids (mL)	0.50	.018	27	0.000	.46	.53
Cumulative duration of ICU stay (hours)	-8.57	1.43	-6.0	0.000	-11.34	-5.78
Interaction term (non-resusc fluids*duration)	-.0006	.000	-10.6	0.000	-.0007	-.0005
Resuscitation fluids (mL)	0.999	.05	21.7	0.000	.908	1.09
Interaction term (resusc fluids*duration)	.0013	.0003	4.83	0.000	.0008	.0019
SAPS-3 score	20.7	3.8	5.33	0.000	13.1	28.3
Intercept	-1281	249.4	-5.14	0.000	-1770	-792

Random-effects Parameters	Estimate	Std. Err.	95% Conf. Interval	
Individual patient: Identity				
var(_cons)	2529101	124642	2296234	2785582
var(Residual)	2238271	56118	2130941	2351007

LR test vs. linear model: chibar2(01) = 2301.39   Prob >= chibar2 = 0.0000

Table S2a: Linear mixed-effects model for cumulative fluid balance during ICU stay in medical patients admitted with sepsis. Fixed effects: cumulative non-resuscitation fluids (maintenance/replacement + fluid creep) + interaction with time, time, cumulative resuscitation fluids + interaction with time. Random intercept for each patient.

Demographic data	n = 1,229				
Female (%)	501 (40.8%)				
Age (mean in years ± SD)	62.4 ± 15.3				
SAPS-3 (mean ± SD)	63.0 ± 14.0				
Length of ICU stay (mean in days ± SD)	10.3± 14.4				
Details on administered fluids	Day 1	Day 2	Day 3	Day 4	Day 5
Non-resuscitation fluids (mean volume (**mL/h**))	92.3	88.8	80.2	74.1	70.3
Resuscitation fluids (mean volume (**mL**)	521	332	155	118	78

Table S2b: Demographic characteristics and details on mean daily fluid volumes in the subgroup of medical patients admitted for sepsis. Figure 4 in the manuscript is a simulation based on the regression model in Table S2a and the real-life data and fluid volumes in Table S2b. To simulate daily practice, resuscitation fluids were entered as a bolus at the beginning of each ICU-day (explaining the stepwise appearance), while non-resuscitation solution (maintenance/replacement and fluid creep) were entered as a continuous rate.