

Appendix to: Kidney Procurement System in Colombia: A System Dynamics Approach

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Appendix A

Scenarios of the impact of KEP implementation on the number of CKD deaths on waiting lists.

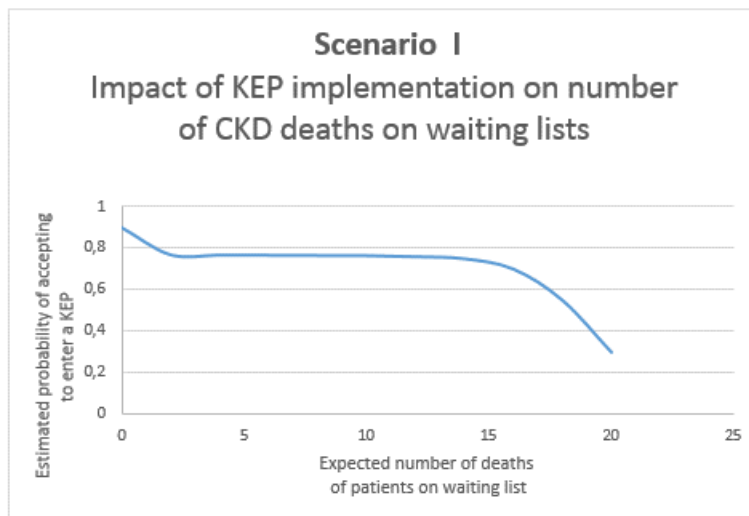


Fig. 1: Scenario 1. Smooth impact of KEP on number of deaths of patients registered on waiting list. Source: Own elaboration.

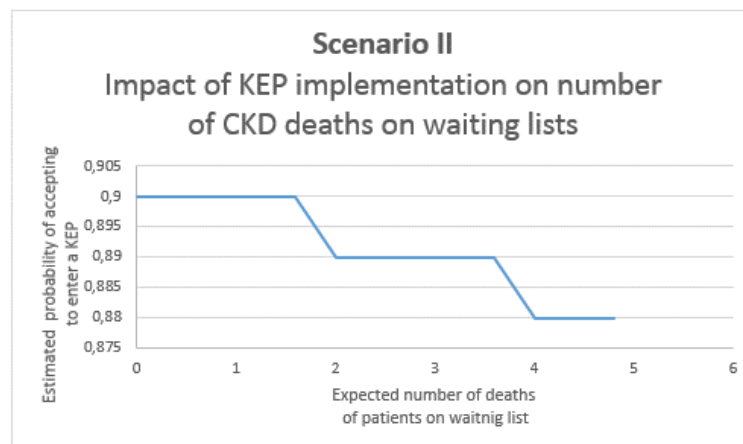


Fig. 2: Scenario 2. Step wise impact of KEP on number of deaths of patients registered on waiting list. Source: Own elaboration.

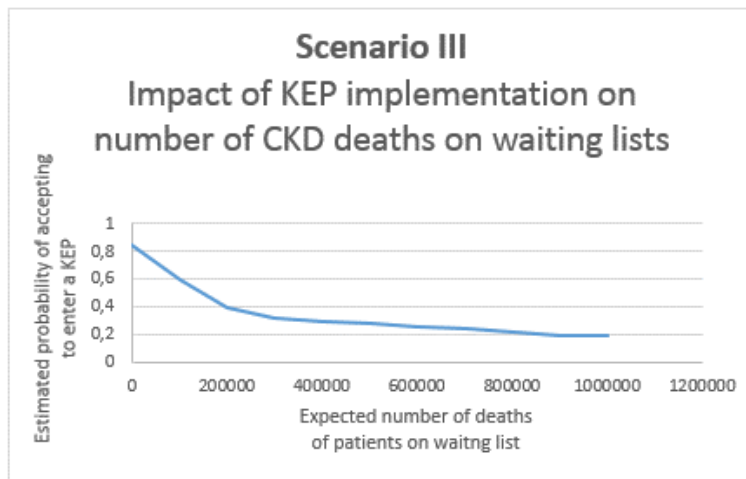


Fig. 3: Scenario 3. Exponential decay on the impact of KEP on number of deaths of patients registered on waiting list. Source: Own elaboration.

Appendix B: List of input data for the simulation and sources.

	VARIABLE	VALUE in 2015	Unit	Source
1	Birth rate	15,77	Births per 1000 people	World Bank Data [36]
2	Birth (in 2015)	645550	People	Departamento Administrativo Nacional de Estadística DANE [37]
3	Colombian population	48203405	People	World Bank Data [36]
4	Population in healthcare system	90,63%	Percentage	Ministerio de Salud [38]
5	Incidence	5,3	Patients per 1000 people	Fondo Colombiano de Enfermedades de Alto Costo [32]
6	Prevalence	2,03%	Percentage	
7	Population with CKD	979409	People	
8	Patients with CKD stage 4 and 5 diagnosis	51122	Patients	
9	Patients with CKD stage 1, 2 and 3 diagnosis	336777	Patients	
10	Treatment (patients receiving treatment)	336260	Patients	
11	Kidney waiting list	2015	Patients	Instituto Nacional de Salud [2]

12	Deaths in waiting list	42	Patients	Ministerio de Salud [38]
13	Deaths due to CKD	42	Patients	
14	Mortality rate	5,87	Deaths per 100,000 people	World Bank Data [36]
15	Deaths	45339	People	Departamento Administrativo Nacional de Estadística DANE [37]
16	Transplanted patients	5235	Patients	Fondo Colombiano de Enfermedades de Alto Costo [32]
17	Patients who reject kidney	2%	Percentage	
18	Potential donors	768	People	Ministerio de Salud [38]
19	Cadaveric donors	642	People	
20	Percentage of family acceptance for donations.	63%	From families with deceased donor	
21	Awareness campaigns	324	Number of activities - (quarters 1 and 2)	

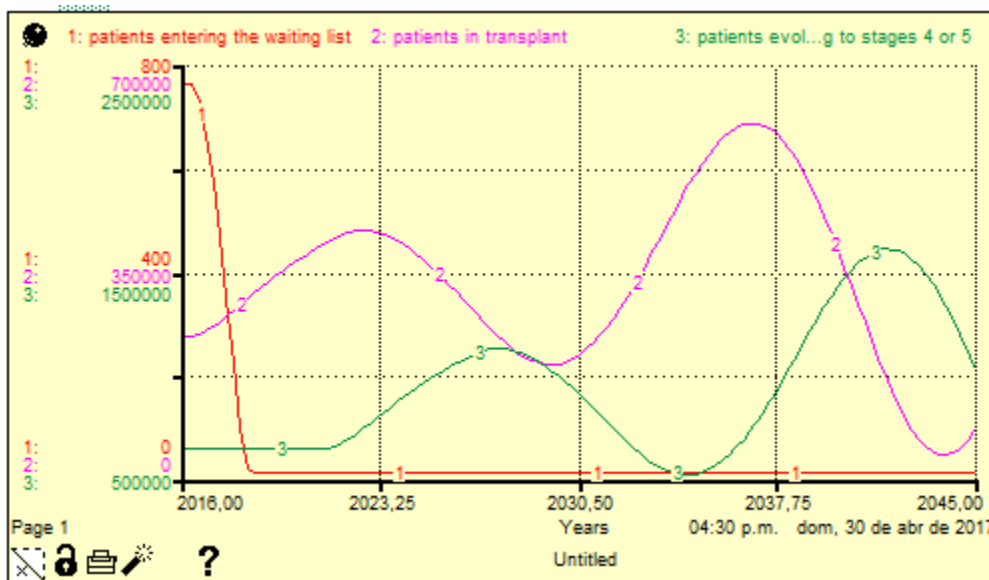


Fig. 4. Simulation with hypothesis that the acceptance rate would remain at 63% but the death rate per thousand in habitants would grow by one 340%. Source: Own elaboration.

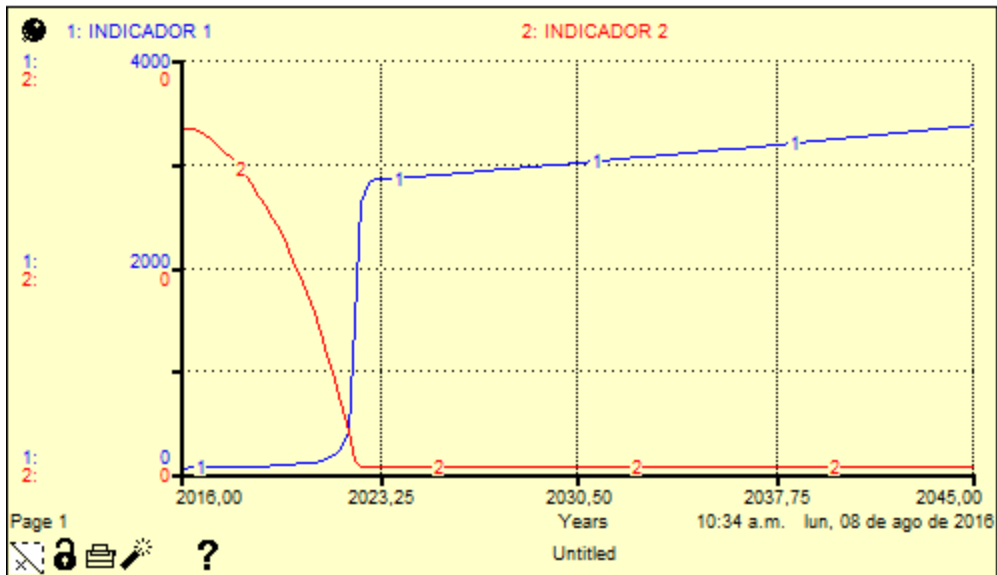


Fig. 5. Simulation with hypothesis that the acceptance rate would remain at 63% but the death rate per thousand in habitants would grow by one 340%. Source: Own elaboration.

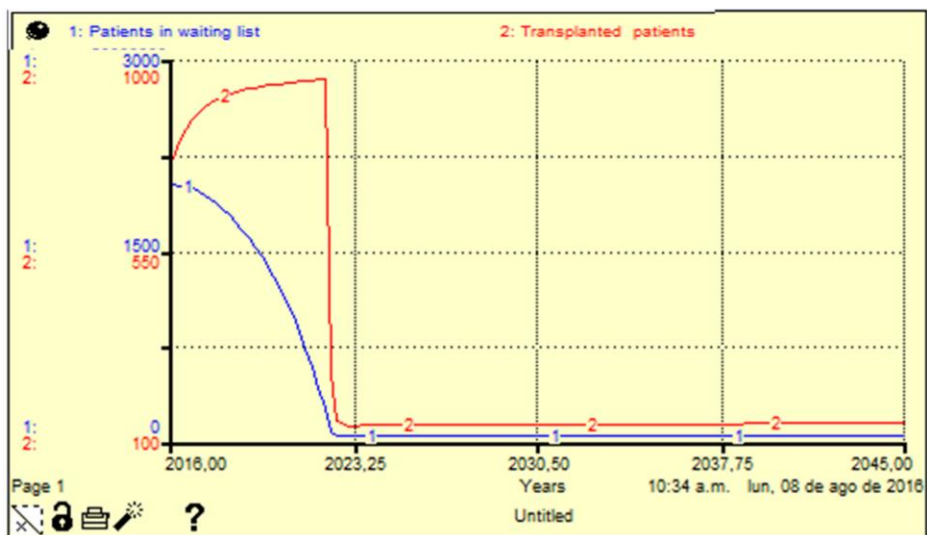


Fig. 6. Simulation transplant waiting list and transplant patients in the amendment to Law 73 of 1988. Source: Own elaboration.

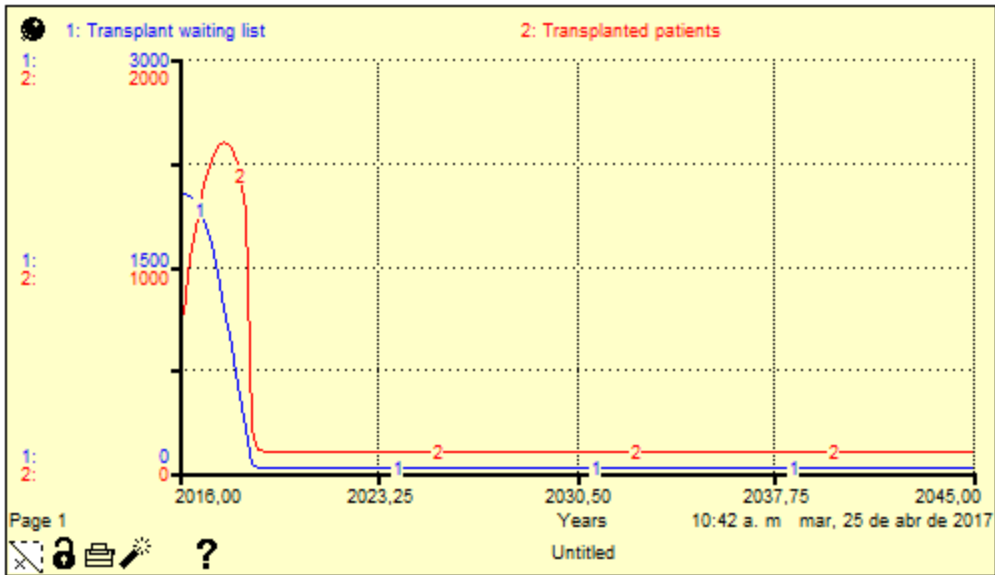


Fig. 7. Simulation of the waiting list and transplant patients with the implementation of KEP. Source: Own elaboration.

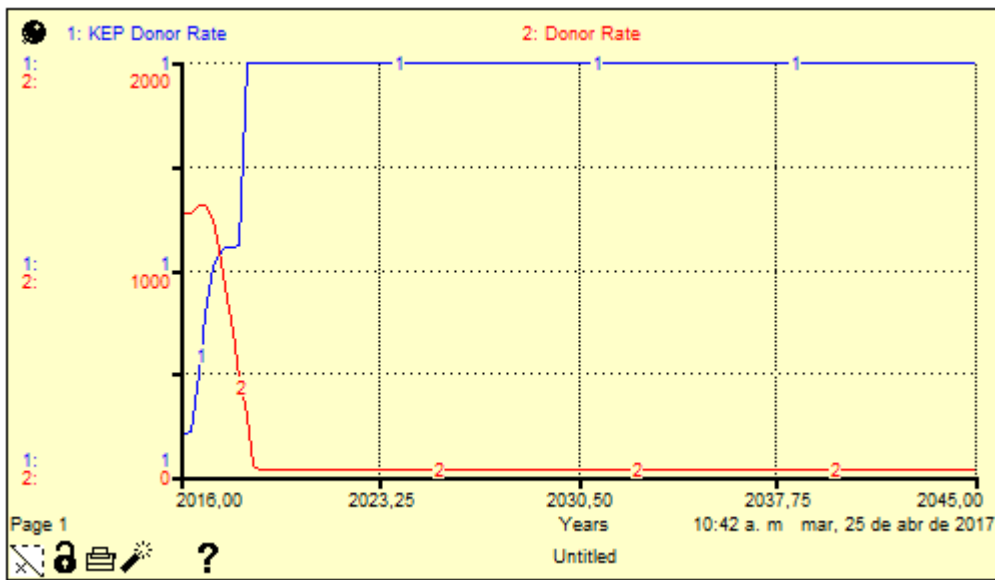


Fig. 8. Comparison of Donor rate (first or current scenario) and KEP Donor rate, under the conditions of implementation of KEP (third scenario). Source: Own elaboration.

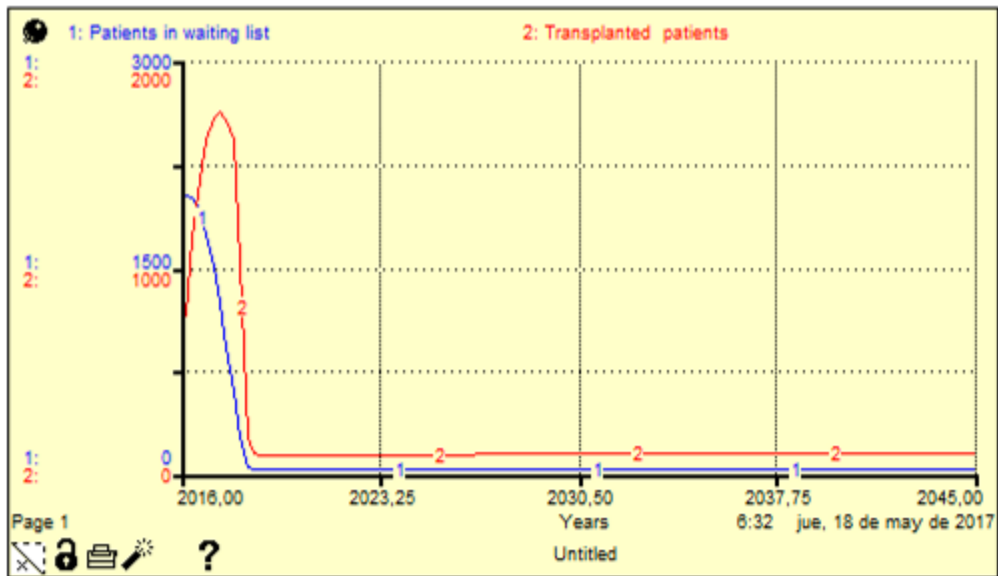


Fig. 9. Simulation of the waiting list size and transplant patients under fourth scenario. Source: Own elaboration.