

ing system inside any medical or health-related business. However, it needs to be more performant for modeling and simulating large systems.

Conclusions

Simulation is a practical preliminary step for implementing a patient workflow or careflow management system. Simulation is based on the process model as the clinical practice guideline and the organization model as human and technological resources, allowing the detection of bottlenecks in the care delivery organization and finding the optimal resource allocation.

References

1. Le VT, Le TL, Nguyen TH, et al. Strokes in South Vietnam: an epidemiologic study. *Rev Neurol* 1999;155:137-40. [Article in French].
2. Ton MD, CD Co, Luong NK, et al. Current state of stroke care in Vietnam. *Stroke Vasc Interv Neurol* 2022;2:e000331.
3. Chugh C. Acute ischemic stroke: management approach. *Indian J Crit Care Med* 2019;23:S140-6.
4. Iglesias N, Juarez JM, Campos M. Business process model and notation and openehr task planning for clinical pathway standards in infections: critical analysis. *J Med Internet Res* 2022;24:e29927.
5. Herpich F, Rincon F. Management of acute ischemic stroke. *Crit Care Med* 2020;48:1654-63.
6. Leite CR, Martin DL, Sizzilio GR, et al. Modeling of medical care with stochastic Petri nets. *Annu Int Conf IEEE Eng Med Biol Soc* 2010;2010:1336-9.
7. Sun H, Liu J, Han Z, Jiang J. Stochastic Petri net based modeling of emergency medical rescue processes during earthquakes. *J Syst Sci Complex* 2021;34:1063-86.
8. Huguet M, Sarazin M, Perrier L, Augusto V. How we can reap the full benefit of teleconsultations: economic evaluation combined with a performance evaluation through a discrete-event simulation. *J Med Internet Res* 2022;24:e32002.
9. Xu M, Qin S, Liu S, et al. Modeling and optimization of routing problems for community elderly care service. In: Chen X, Wang J, Wang J, Tang Y, eds. Piscataway, Institute of Electrical and Electronics Engineers Inc.; 2022. pp 442-7.
10. Wang J, Healthcare Patient Flow Modeling and Analysis with Timed Petri Nets *Advances in Computing, Informatics, Networking and Cybersecurity*, 2022, Volume 289, ISBN : 978-3-030-87048-5.
11. Quaglini S, Caffi F, Cavallini A, Micieli G, Stefanelli M. Simulation of a stroke unit careflow. *Stud Health Technol Inform.* 2007;129(Pt 2):1190-1. PMID: 11604918.
12. Panzarasa S, Quaglini S, Micieli G, Marcheselli S, Pessina M, Pernice C, Cavallini A, Stefanelli M. Improving compliance to guidelines through workflow technology: implementation and results in a stroke unit. *Stud Health Technol Inform.* 2007;129(Pt 2):834-9. PMID: 17911833.

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