CHOIR STAFF

PROF. DR. RICHARD BOUCHERIE
Professor in Stochastic Operations Research; co-founder of CHOIR. Specializes in the development and application of predictive and prescriptive techniques for the optimization of decisions in healthcare delivery processes.

DR. IR. ALEIDA BRAAKSMA
Assistant Professor in Stochastic Operations Research. Specializes in developing mathematical models supporting sequential decision-making under uncertainty, with a particular focus on appointment scheduling in healthcare.

DR. DERYA DEMIRTAS
Assistant Professor in Healthcare Operations Research. Specializes in developing data-driven models aimed at improving decision-making in healthcare, with a particular focus on public health resource planning and emergency response.

PROF. DR. ERWIN HANS
Professor in Healthcare Operations Management; co-founder of CHOIR. Specializes in operations management and integral capacity management of healthcare organizations.

DR. IR. GRÉANNE LEEFTINK
Assistant Professor in Healthcare Operations Management. Specializes in optimizing the planning of complex healthcare processes, with a special focus on diagnostics and treatment in cancer care.

PROF. DR. NICO VAN DIJK
Professor in Stochastic Operations Research. Specializes in practical queueing analysis and simulation, with a special focus on blood inventory management.

DR. IR. MAARTJE VAN DE VRUGT
Postdoctoral researcher in Stochastic Operations Research. Also has a position at a hospital to bridge the gap between theory and practice, and focuses on Operating Room scheduling.

DR. IR. MAARTJE ZONDERLAND

MORE INFORMATION
Please contact us for more information about our research, education, or valorization activities via the contact details below.

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CHOR is the Dutch Knowledge Center in the Field of Healthcare Logistics / Operations Management.

Through research, education and valorization, CHOR helps healthcare practitioners face their complex logistical challenges.

What we do?

Healthcare institutions deal with major challenges in a constantly changing market. Since 2003, CHOR’s mission is to help healthcare institutions to improve the efficiency, quality of care and service, and quality of labor through redesigning and optimizing their processes.

Through a series of more than 200 MSc projects since 2003, more than 100 publications, and 10 completed PhD projects since 2010, CHOR has become one of the most active and productive projects since 2010, CHOR has become one of the most active and productive projects in its domain.

CHOR’s activities have three pillars: research, education and valorization. Through research we develop knowledge and answers for the complex challenges healthcare faces. Through education we train professionals who are much-needed in the sector. Through valorization we support implementation of complex organizational interventions, decision support tools, and dashboard applications.

Research

CHOR’s research agenda is almost exclusively driven by the healthcare sector. We closely collaborate with healthcare organizations, where we place our researchers. This enables us to identify challenging research topics together with the problem owners. Of particular interest are problems that are experienced by other care providers as well, and problems that go beyond a single department and encompass the entire patient care path.

We use a scientific approach to design and/or optimize the planning and control of processes, and take into account each stakeholder’s perspective. Stakeholder involvement is an essential condition for successful implementation. Our challenge is to develop realistic and robust models, which may include aspects like waiting time, access time, cancellations, workload pressure, overtime, utilization, one-stop-shop appointments, inventory costs, and transportation distance.

When developing organizational interventions we use mathematical models and computer simulations for prospectively testing these in a realistic and safe environment, under various scenarios and a long horizon. This quantitative approach helps healthcare practitioners and administrators to objectively decision making, in a context where subjective decision dominates.

Education

CHOR develops and provides education in various programs within University of Twente (UT), and for healthcare practitioners.

We offer PhD level training through the national Graduate Program Operations Management & Logistics (GP-OML), in the format of an international summer school.

We also provide a two-year post-master PDEng program in Healthcare Logistics. Its focus is on the design of high-end and innovative solutions for complex multi-disciplinary logistics problems in healthcare. Through this program we combine academic research in an industrial context with taught modules in a range of related subjects.

To fulfill the need for training healthcare professionals, we provide tailored in-company training programs for healthcare managers, administrators, and clinicians. During these combined research and practice, healthcare professionals are exposed to the latest developments in their field.

Valorization

As expressed in UT’s slogan “High Tech, Human Touch”, valorization is in our DNA. In several ways, we strive to implement our research in practice.

We receive many requests from healthcare institutions to implement our latest developments in their operations. CHOR provides this service through the spin-off Rhythm.

Rhythm is a collaboration between CHOR and ORTEC, one of the largest providers of decision support software worldwide, with headquarters in the Netherlands. Rooted in CHOR’s research, Rhythm provides access to the latest research insights and innovations for optimization of healthcare services. Through services like consultancy, decision support software development, and business analytics, Rhythm helps healthcare providers to innovate their processes in order to deliver high quality care services efficiently and effectively.

In symbiosis, CHOR’s research feeds Rhythm with state-of-the-art knowledge, algorithms, models and techniques for implementation and dissemination in healthcare. Rhythm’s activities also feed CHOR with complex problems that drive scientific research.

Every 2-3 months, CHOR organizes seminars and symposia to disseminate research results to practitioners, and discuss how to bring them into practice. Symposia (called “CHOR on Tour”) take place at one of the collaborating healthcare organizations.