

Healthcare informatics



Actionable intelligence to help you orchestrate care at multiple levels.

Philips Patient Flow Capacity Suite

# Combining clinical and operational data to drive actionable intelligence

When patient transition decisions are made at both the enterprise and the unit level, priorities and bottlenecks may be difficult to identify—potentially leading to inconsistent care delivery. A holistic approach to care orchestration is needed, one that combines clinical and operational data and transforms it into actionable intelligence.

**Philips Patient Flow Capacity Suite** is a patient logistics application that can help care teams realize an integrated delivery of care. Our approach to care orchestration connects the front lines with hospital enterprise operations, so you can systematically predict demand, make informed decisions, and visualize patient flow bottlenecks.



# Predict capacity surges



# Enterprise Demand Capacity (Predicted Census)

The built-in "digital twin" adaptive model supports an enterprise-wide view of capacity with predictive analytics, to support forecasting at enterprise, hospital and unit levels. Powered by machine learning, the algorithm uses retrospective hospital data, along with hourly patient data and weekly trends, to continuously adapt and help staff proactively prevent bottlenecks.

# Help identify unnecessary admissions



# Readmission Prediction Score (RPS)

Supports clinical decision-making at admission and discharge by identifying early indications of patient readmission risk and highlighting patients who may be more likely to be readmitted within 30 days. The machine learning-based algorithm is trained on multi-year data from various US-based hospitals.

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# Recurring Patient Flag (RPF)

Helps identify recurring patients so they are triaged appropriately to optimally manage post-acute care and prevent bouncebacks. The algorithm uses multiple years of data from various US-based hospitals to define thresholds for number of emergency department visits, number of non-elective admissions, and days between current and previous admissions.

# Support patient flow decisions

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### Transition Review Score (TRS)

Supports early identification of patient needs in emergency department and general care. The machine learning-based algorithm is trained on multi-year data from various US-based hospitals to provide high performance for predicting care escalation needs, six hours in advance.

# Promote focused use of critical resources



### ST/AR algorithm

Provides visualization of alarms and alarm trends to help prioritize telemetry patient reviews. Compared to the reference data base, the algorithm provides effective monitoring of arrhythmia events. Alarms are collected by PIC iX and sent to Patient Flow Capacity Suite, which displays yellow/red alarms and trends.

# Support proactive identification of in/out-patient flow

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### Actionable checklist and care status

Care status provides an in-depth view at the patient level, with color-coded thresholds. The actionable checklist identifies items for completion at admission and discharge, with highlighting for delayed actions.

# Predict remaining length of stay

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								Fall	<48 hrs	65		
								DNI	x24 hrs	27	Delayed	
								ONR	<48 hrs	60		
								FME .	<48 hrs	55		
								Other	<24 hrs	34	Delayed	

### Med-Surg Remaining Length of Stay (RLOS)

Supports the care team in discharge evaluation of patients. The machine learning-based algorithm is trained on multi-year data from US-based hospitals. It takes labs, vitals, trending, medications and reason for visit into account to provide an initial prediction four hours into the med-surg admission. Predictions are updated at 24, 48, and 72 hours.

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### ICU Remaining Length of Stay (RLOS)

Specifically designed for the ICU to support the care team in discharge evaluation of patients. The machine learning-based algorithm models surviving and perishing patients as competing events and is trained on a rich ICU dataset that include 495,000 patients admitted during 2017 and 2018 from 366 ICUs within 228 different hospitals in the USA. It takes labs, vitals, patient characteristics, evaluations, and reason for admission into account to predict if patient will be discharged in under 24 hours, 24-48 hours, or >48 hours.

# With Patient Flow Capacity Suite, you have access to tools and support that can help you realize your goals related to supporting the Quadruple Aim.

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Improved patient experience: By right-sizing length-of-stays and minimizing service lengths, Philips believes Patient Flow Capacity Suite can make an impact toward more positive experience for patients.

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Improved staff satisfaction: Patient Flow Capacity Suite can help you improve patient handoffs and staff collaboration—which in turn can support enhanced staff satisfaction.



Better health outcomes: Patient Flow Capacity Suite is intended to help you expand access to care for patients within

your service area by supporting your efforts to eliminate wasted inpatient capacity and helping providers to focus their care on patients who require their expertise.

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Lower cost of care: Patient Flow Capacity Suite is designed to help you spread the fixed and semi-fixed costs of the system over

a greater volume of care experiences, which may help you lower the cost of each episode and support improvements in hospital operating margins.

Learn how Patient Flow Capacity Suite provides actionable intelligence to help you orchestrate care at multiple levels. Visit philips.com/patient-flow-capacity-suite.







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