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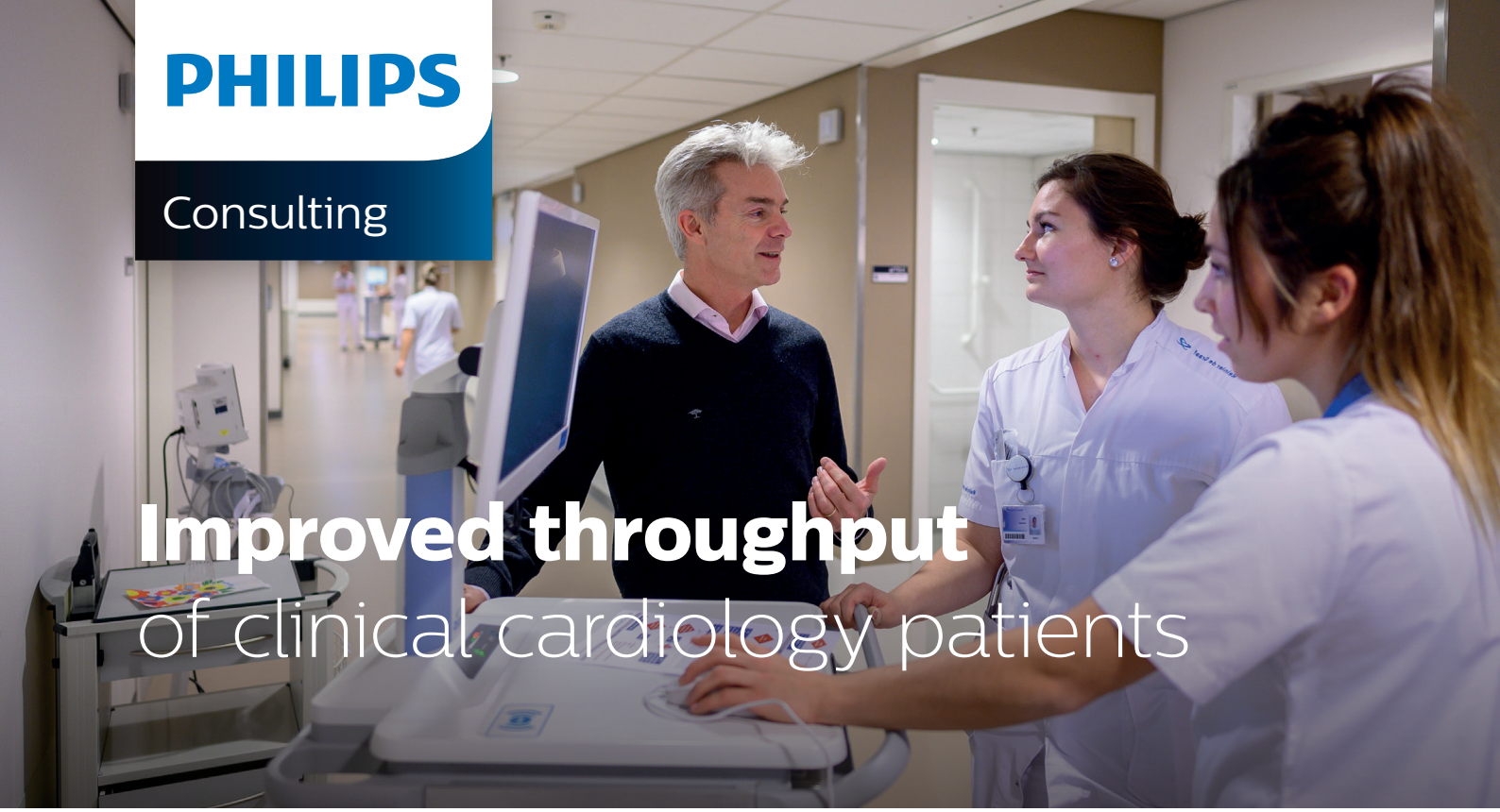

Improved throughput of clinical cardiology patients

Challenge

The cardiology department at the Reinier de Graaf Hospital was wrestling with a domino effect. Once the general patient ward became full, there was a knock-on effect in the Cardiac Care Unit (CCU) and Chest Pain Center (CPC), preventing them from admitting patients. The hospital asked for help improving patient throughput to address this issue.

Solution

The key issues were identified by performing a detailed root-cause analysis based on departmental data. Various ideas for improving throughput were considered together with input from nursing staff and physicians. Simulations were used to decide which initiatives had the most potential to bring improvements, and those initiatives were then implemented.

Results

The project resulted in the following:

- On average patients go home an hour earlier
- By setting up an emergency outpatient clinic, CPC intake decreased by 9%*
- The number of admission freezes for the CPC decreased by 57%**

Philips consultants helped the cardiology department at the Reinier de Graaf Hospital, Delft, Netherlands with this challenge: How can throughput be improved so that the department no longer has to freeze admissions to the Chest Pain Center (CPC)? Jolanda Versteegen, Interim Business Manager of the cardiology department and Matthijs Bax, Medical Manager, tell us about their experience. “This is the first time I really have the impression that an improvement project will bring lasting results,” says Versteegen.

“I am not such a fan of consultants. It’s an investment and doesn’t always produce results. But this team had great communication skills and helped us make the right choices.”

Jolanda Versteegen, Interim Business Manager, Cardiology, Reinier de Graaf Hospital

For almost eight centuries, the Reinier de Graaf Hospital has been providing outstanding care for the residents of the city of Delft and its surrounding area in the Netherlands. Of the hospital’s 2600 employees, 200 are medical specialists and 800 are nursing staff. The hospital has 481 beds. Together with the HagaZiekenhuis and the LangeLand Ziekenhuis, Reinier de Graaf is part of the Reinier Haga Groep.

Boosting efficiency

Jolanda Versteegen is Manager of the Mother and Child Care Unit and has also been Interim Manager of the cardiology department since September 2018. “Just like many other hospitals, our cardiology department is facing a growing demand for care. We need to meet this demand within our existing budget and we have had to freeze admissions to the CPC more and more often.

During a freeze we stop accepting patients for a few hours, and they have to go to a different hospital. We wanted to improve our efficiency to avoid this situation. In some cases certain CCU patients could go to the general ward, but no beds were available because patients were waiting to be moved to home care. Could we find a way to discharge patients more quickly?”

Management offered us the opportunity to use the consultancy hours from the hospital’s long-term strategic contract with Philips to tackle this issue. “The Philips consultants started in November 2018,” Jolanda recalls. “During the first few weeks, they observed the department’s processes and interviewed all our staff in depth about any bottlenecks and issues they experience. Every two weeks, they gave us feedback, and we used this to jointly formulate our research question.”

Matthijs Bax is a Cardiologist and spends half of his time as Medical Manager of the cardiology department at Reinier de Graaf Hospital. The other half of his time, he works in the Heart and Lung Center at HagaZiekenhuis. He and Jolanda form the cardiology management team. “The Philips consultants took a very practical approach. They sat down with our staff and asked them, ‘What would be easiest to implement and what would have the biggest impact?’ My role in this was to consider what would be feasible from a medical perspective.”

Earlier discharge

One idea we investigated straight away was earlier discharge from the cardiology ward. It might be possible to achieve by restructuring the process for the ward rounds. “This idea was worked out using a real co-creation approach,” explains Versteegen, “in short sessions with big boards and sticky notes.”

Bax says, “Everyone got involved—nursing staff, ward physicians, cardiologists, assistants—and had a chance to give their input, which I thought was very valuable.” Using simulation models and calculations, the consultants presented a clear picture of the impact that changing the discharge process would have on the department. The changes were then implemented. “Everything went very smoothly thanks to the Philips consultants, who supervised the whole process from within the department,” attests Versteegen.

“We now have the first results: On average, patients go home an hour earlier. That may not sound like much, but it makes a big difference whether patients are discharged at half past three or ten to three. Half past three is when we change over from the day shift to the evening shift. Staffing levels are lower during the evening shift, so it’s far better for our throughput if we can discharge patients during the day shift.”

Creating an emergency outpatient clinic

Once staff saw how well this improvement worked in the clinic, it was time to address a major concern in the cardiology outpatient clinic. Just like many other outpatient clinics, Reinier de Graaf is dealing with longer waiting times. “This puts a great deal of pressure on staff,” explains Versteegen. “Imagine you spend the whole day on the phone with cardiac patients and you’re not able to schedule their appointments soon enough. You feel responsible. What if an appointment in three weeks’ time is too late?”

The solution was an emergency outpatient clinic for patients who need to be seen within a period of two days to two weeks. Via phone, general practitioners decide together with the cardiologists who needs to go to the emergency outpatient clinic. All cardiac diagnostic tests can be done at the new clinic. “Setting up the emergency outpatient clinic wasn’t a simple process,” Bax recalls, “but the help we received from the Philips consultants was fantastic. They extracted a lot of data from our Hospital Information System (HiX system). It was quite an arduous process for them to collect all of the relevant data, but it didn’t affect us at all. They were quickly able to provide us very sound advice based on actual data in clear and simple terms. This took a huge weight off our shoulders,” confirms Versteegen.

The emergency outpatient clinic is up and running and working splendidly. Patients, schedulers and physicians are all extremely satisfied. This has also helped decrease the number of CPC freezes, because urgent patients who previously could only be seen in the CPC can now go to the emergency outpatient clinic instead.

On average,
patients go home an hour earlier

By setting up an emergency outpatient clinic, Chest Pain Center patient intake decreased by **9%***.

The number of admission freezes for the Chest Pain Center decreased by **57%****

* During office hours
** From January to September 2018. Several factors contributed to this reduction, including the initiatives described in this article. It is not possible to determine the percentage that each initiative contributed.

Results from case studies are not predictive of results in other cases. Results in other cases may vary.

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