



Photo: Annamaria Palsi-Ikonen

Careflow optimization at Heart Hospital TaUH

Where

Heart Hospital at Tampere University Hospital (TaUH), Tampere, Finland

Challenge

Identify areas of improvement in work processes and premises usage for the cardiac catheterization labs and heart surgery department at Heart Hospital TaUH. This to support the hospital's vision and strategy of being a center of excellence in cardiac care focused on patient and staff experience, excellent operations, and sustainable growth.

Solution

Philips conducted a thorough assessment of processes by using careflow mapping for the cardiac catheterization labs and heart surgery department to identify and guide improvements to enhance patient experience, promote staff well-being and improve operations.

Heart Hospital, a private subsidiary of Tampere University Hospital, is a full-service hospital specializing in diagnosis, treatment and follow up of cardiac diseases. In addition to the full service hospital in Tampere, Heart Hospital provides services at a growing number of sites, including Valkeakoski, Hämeenlinna and Helsinki. Heart Hospital specializes in cardiac care for both the public and private sector throughout the Pirkanmaa district. The hospital employs approximately 400 professionals, including nearly 75 physicians, and services more than 33,000 patients annually.

As part of a multi-year strategic partnership agreement with Philips, Heart Hospital TaUH engaged the Healthcare Transformation Services consulting team to help understand gaps between processes and practices and to define a set of careflow improvement initiatives that could be implemented in the current location and in the brand new 12,500m² free-standing facility. Twelve areas of potential improvement were identified and prioritized.

Heart Hospital TaUH strategically focuses on flexible access to high-quality cardiac care and an optimal experience for patients and staff. To maintain a continuous improvement strategy, they sought to better understand the patient journey and staff workflow from beginning to end. This included insights into quality of care, utilization, turnover time, efficiency, and cost management.

Philips and Heart Hospital TaUH entered into a long-term partnership agreement, leveraging the expertise of Philips as a true 'solutions' company to help improve cardiac care in Finland. This includes providing state-of-the-art equipment and solutions, managed services and consultancy services aimed at optimizing careflows (quality, cost, and satisfaction) and population health.

Heart Hospital TaUH requested assistance with a process and experience review of their cath lab and heart surgery departments conducted through the consulting team of Philips Healthcare Transformation Services.

Our approach

A team of six Philips consultants with diverse local and global expertise were assembled for this improvement project. They brought skills in data analysis (including benchmarking data), careflow optimization, clinical knowledge of cardiology, experience solution development, and local/global market insights. The Philips consultants worked closely with a Heart Hospital TaUH project group, consisting of department heads and a cardiac operation manager, on a day-to-day basis and a steering group for project oversight.

Philips' unique careflow mapping methodology was employed to create an overview of the cardiac flow (pacemaker, EP and cath lab) as well as heart surgery flow in the hospital. The following activities were performed as part of the project, which took approximately seven weeks:

- Overview of available literature and process descriptions
- Review of the current careflow

- Interviews with patients, staff and directors
- Development of proposed improvement initiatives
- Workshop for validation of the results

To quantify the careflows and gain insight in operational areas of improvement, data was gathered, analyzed, and compared to best practices from other hospitals. Twelve areas of potential improvement related to both the present building and new facility were identified.

Analysis, assessment and review

Philips consultants began by collecting and reviewing data provided by the hospital regarding turnover time, equipment/resource utilization, start time, and distribution of exams – this to establish a baseline.

Additionally, the Philips team conducted interviews with 25-30 stakeholders onsite, consisting of physicians, nurses, support staff, administrators, management and



patients. Perspectives about their experiences (positive and negative), were discussed in detail, summarized and incorporated into the experience flow map. The team also spent time walking the halls to observe the cath lab and heart surgery process flows from start to finish for thorough insights.

Armed with this input, the consultants began drafting the experience flow map while considering three key performance indicators:

1. Optimization of utilization in procedural areas
2. Reduction of turnover time
3. Focus on first case on-time start

After four days of deliberation, the consulting team re-convened with the Heart Hospital TaUH project group to review a draft of the careflow map, conducting a validation exercise to ensure all insights had been captured. During this review exercise, appropriate edits were made based on the valuable feedback.

The draft careflow map including identified areas of improvement, was then shared with the larger group of 25-30 stakeholders. Responses were solicited and incorporated into the refined flow map. Finally, as executive sponsors, the CFO and CEO of Heart Hospital TaUH reviewed the entire experience flow map to learn how recommendations were indicative of both staff and consultants insights.

“The Philips consultants were very thorough in their review and assessment of our processes and experiences. From comprehensive analyses came a targeted list of improvement opportunities we feel certain will reinforce our commitment to exceptional patient care and sustain us as we move forward.”

Aki Haukilahti, CFO Heart Hospital TaUH



Careflow map

The two careflow maps created for Heart Hospital TaUH (both cath lab and heart surgery) present a combination of detailed process flow, patient and staff experience, perceived issues, and potential improvement areas. To come to a complete overview, it is vital that the input from all stakeholders is captured correctly. It is very much a collaborative effort – to co-create an ideal solution. In the instance of Heart Hospital TaUH, the map also includes a review of the ‘future’ flow in their new facility.



Prioritize improvement areas

An ‘open house’ workshop was held to present the final two careflow maps, including the twelve identified improvement areas, to a wider range of stakeholders. Physicians, nurses, support staff, administrators and management were present to vote for the improvement initiative each thought was most relevant. This validation process was a key element in prioritizing the list of potential improvement areas. Consensus in the cardiology and cardiac surgery workshop demonstrated the following three improvement areas as standouts.

1. Initiate performance improvement,

involving staff aimed at:

- Achieving 80–85% room utilization for cardiac operating room and 75% room utilization for interventional cath labs
- Reducing turnover times (time between cases) to 45 minutes in cardiac operating room
- Increasing first case on-time percentage to 95%

2. Expand the role of nursing,

to allow physicians to perform core activities only they can do.

3. Streamline workflow,

by creating strong integration between IT systems, eliminating dual (manual) entry of data.



Photo: Sari Penttilä

Implement improvement areas

For the IT integration effort, new interfaces were created to improve workflow. For example, echocardiography reports are now sent from Philips IntelliSpace CardioVascular multi-modality image and information management tool to Cinia (Kardio cardiac registry system) using Philips UTR (unformatted text reports), thereby eliminating manual entry and easing clinical decision making.

Another improvement area acted upon in the new facility and affecting patients directly, was to ensure proper lighting for hospital rooms that had no natural daylight. Heart Hospital TaUH turned to HealWell, a lighting solution designed to support a patient's natural circadian rhythms. HealWell helps patients sleep better, feel happier, and heal faster¹. It takes an evidence-based approach to lighting with ceiling modules using dynamic light levels and tones that simulate daylight rhythms while providing excellent visibility for medical examinations.

The new hospital planning team posted all insights and twelve improvement opportunities presented on the careflow maps, on the wall in their planning "war room" to ensure they addressed all existing and potential issues throughout the construction process. And from that point moving forward, these initiatives will receive close attention and remain areas of focus to drive change.

¹ www.philips.com/healwell

A broadening involvement

Heart Hospital TaUH places strong emphasis on innovation and long-term collaboration to achieve coordinated, continuous and seamless care delivery for their patients. Following the success of this cardiology performance improvement project, the Philips Healthcare consulting team also engaged in a 'Noise and Alarm Management' project to help create a safe environment for patients to heal. Other consultancy projects to transform the patient experience and achieve their strategic objectives are similarly underway.

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