



Cross-industry collaboration to improve detection and treatment of patients with familial hypercholesterolemia



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Distinction awarded to team members at SYNLAB Academy, Mannheim, Germany, a subsidiary of SYNLAB Holding Deutschland GmbH, Augsburg, Germany, AMGEN GmbH, Munich, Germany

Familial hypercholesterolemia (FH) is an autosomal, inherited dominant genetic disorder of low-density lipoprotein (LDL) metabolism, causing severe elevations of LDL in patients.

FH is associated with markedly higher risk of premature cardiovascular disease and early death. However, FH is treatable and with appropriate therapy initiated at an early age, the patient's lifespan may approach that of an unaffected person.

Unfortunately, many patients who suffer from FH have their disease state go undetected, even with abnormal cholesterol test results. This is frequently due to lack of awareness of the disease in the general population, and physicians lack of following up on elevated LDL levels.

Dr. Uwe Fraass, MD, Medical Development and Director of Cardio/Renal Medicine at Amgen GmbH, notes that "Due to the premature disease manifestation in FH and the rapid pace of atherosclerosis in these individuals, timely detection and treatment has the potential to reduce expensive interventions and costs associated due to CV events early in life."

A cross-industry collaboration between SYNLAB Holding Germany GmbH and Amgen GmbH implemented an automated algorithm, called FH ALERT to automatically notify physicians when additional testing may be needed.

The FH ALERT is triggered when routine testing of total and/or LDL cholesterol returns results that are above thresholds in patients up to 60 years of age. The physicians who order the routine testing receive an automatically generated alert with a supplementary report that contains specialized information regarding FH.

This supplementary report provides resources for patient management recommendations, including a website that can be used to calculate the probability that their patient has FH. The report also includes information on how to utilize the Dutch Lipid Clinics Network (DLCN) scores to increase the pre-test probability before sending the patient for genetic testing or deciding to initiate treatment.

Genetic diagnosis of FH provides additional value for clinicians by identifying patients with molecular defects that multiply their risk for cardiovascular disease significantly.

Their care initiative has generated remarkable and immediate results. Within the first 3 months of implementation, over 3,500 patients were identified as at risk for FH, compared to the previous 3 months in which none were identified, with a subsequent increase of 24% compared to the previous year of FH genetic testing. Risk in 211 of the identified patients were confirmed for heterozygous FH, triggering treatment and immediate care for previously undiagnosed patients. The program is now successfully implemented also in other areas in Germany and continuous education has significantly improved the awareness of general practitioners.

The success of the FH ALERT care initiative included collaborative effort by many disciplines and with five team leaders who were recognized with distinction by the 2019 UNIVANTS of Healthcare Excellence: Winfried März, MD, Director of SYNLAB Academy, Business Development Manager and Full Professor of Clinical Chemistry, Mr. Felix Fath, M.Sc., Project Manager for SYNLAB Holding Germany GmbH, Uwe Frass, MD, Ms. Adrienne Schmittat, MBA, External Consultant, and Mr. Mathias Barresi, Magister, Manager of Analytics/Data Management.

THREE KEY TAKEAWAYS:

1. LDL and total cholesterol are vital for identification of patients with potential risk for FH.
2. Strategic use of informatics can trigger automatic alerts, highlighting the need for additional diagnostic work-up in patients with previously unsuspected risk.
3. Key performance outcomes from the FH ALERT initiative include enhanced patient and physician awareness, improved patient risk stratification, increased clinician satisfaction, and improved healthcare costs.