UnBLOCK
the Chain

Better outcomes through clinical decision support

How can a clinical decision support system help to achieve measurably better healthcare outcomes?

Dr. Peter Thorausch
Co-founder & CEO of MVZ
Cottbus, Cottbus, Germany

"The Collaboratory" reflects the transformation through collaboration that Abbott wants to ignite by working in partnership with clients. Abbott supports healthcare organizations to overcome their challenges and materialize their future state vision, by breaking down the silos and barriers that exist today in healthcare. The results of a global study show the contribution expected from labs to facilitate this transformation as shown in the data points below. By leveraging their data and teaming up with other services and stakeholders, labs can shift from being a manufacturing facility to a decision support engine, helping the decision making across the system and achieve measurably better healthcare performance.

With advancements in medical research and technology breakthroughs happening daily, doctors and clinicians must remain on top of latest medical guidelines, patient historical and holistic information to reduce unwarranted variations, improve patient outcomes and reduce costs.

The Limbach Group is a leading private provider of laboratory services in Germany, with more than 6,000 staff and 32 laboratories. MVZ Cottbus, the group's laboratory, serves four hospitals and a rehabilitation center, and provides diagnostic services for a population of more than 1 million people. Burdened by the extensive employee-hours needed to process and analyze laboratory data, MVZ Cottbus, in partnership with Abbott, recently completed phase 1 of a project to establish how the use of Abbott's AlinIQ Clinical Decision Support (CDS) solution could: 1) standardize the application of clinical guidelines and evidence-based medicine, 2) improve clinician test-ordering practices, 3) save laboratory time and resources, and 4) improve the quality of reports provided to clinicians. According to Dr. Peter Thorausch, co-founder and CEO "A huge part of our time is spent processing and analyzing data and writing reports. Being able to automate much of this work – and providing guidance to the requesting clinician – will lead to smarter, leaner and quicker diagnostics and ultimately adding real value to the services we provide."

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After 3 months, the MVZ Cottbus phase 1 of the project demonstrated that AlinIQ CDS was able to provide recommendations to improve test ordering and identify secondary diagnosis and comorbidities. The implementation of CDS live has the potential to improve patient outcomes, materialize operational efficiencies and achieve cost savings. Additionally, with just the 70 rules created by MVZ Cottbus and Abbott in this phase, AlinIQ CDS not only recommended testing and provided results interpretations for the four ICD/DRG targeted conditions, but also for other conditions that originally were outside the scope of the project. These results show the benefits that AlinIQ CDS can deliver for healthcare organizations. Beyond that, AlinIQ CDS flagged potential co-morbidities for further investigation, which could have a significant impact in terms of optimizing patient treatments and improving reimbursement coding for the organization.

For phase 1 there were 2 main objectives chosen:

1 By targeting 4 main conditions (COPD, AMI, Pneumonia, AF) see if AlinIQ CDS could improve test ordering based on patient's initial diagnoses. For example, for a patient with a diagnosis of COPD, Cottbus wanted to identify cases where diagnostic tests related to COPD were not ordered.

2 By targeting 5 diagnostic procedures for renal, thyroid, diabetes, anemia, and lipid diseases – demonstrate that AlinIQ CDS could identify secondary diagnosis and comorbidities as well as Interpreting results and providing relevant recommendations.

12,395 randomly selected cases were analyzed by AlinIQ using the 70 rules and the following results could be identified:

1 As per the 1st objective 338 cases were identifi ed corresponding to the 4 main conditions. 100% of the cases received interpretation reports including proper ICD/DRG coding and testing ordering recommendations.

2 As per the 2nd objective 4,616 recommendations were provided linked to the 5 diseases (renal, thyroid, diabetes, anemia, and lipid diseases).

Terminology:
Rule = Structure responsible for implementing and automating algorithm steps; ICD= International Statistical Classification of Diseases and Related Health Problems list by the World Health Organization; DRG= Diagnosis Related Group is a system to classify hospital cases into groups;
Disease = The term "disease" broadly refers to any condition that impairs the normal functioning of the body

Following the success of phase 1, AlinIQ CDS has now been integrated with the laboratory's database and live data streams at MVZ Cottbus to enable real-time analysis and reporting. Prior to commencing this phase, Abbott trained the staff to ensure a smooth transition and the team worked to review the results of the phase 1 and adjust the CDS rules before the system went live with reports and comments for the physicians. Additional work is ongoing to evaluate the strategic, operational and financial impact of AlinIQ CDS in a live setting, comparing performance metrics against the baseline benchmark. In the future, MVZ Cottbus will be able to expand the reach of AlinIQ CDS to other clinical use cases, disease states and laboratory locations. Additional data streams will be integrated to enrich the clinical information available and enhance the generation of patient-specific recommendations. ■

93%
OF HOSPITAL EXECUTIVES BELIEVE THE LABORATORY CAN IMPACT HEALTHCARE IT AND ANALYTICS

77%
OF DOCTORS WOULD VALUE THE LAB PROVIDING ADDITIONAL INTERPRETATION TO SUPPORT DIAGNOSIS

For further information please talk to our experts at the Abbott booth during Arab Health or MEDLAB 2019, get in touch with a local Abbott representative, or send an email to **wired@abbott.com**.