

Precisia Clinical Risk Adjustment at Scale

Precisia® brings 'clinical risk adjustment at scale', to Life Sciences. The life science industry can use the tool to reshape product development. Health systems collaborate with the industry and can use the tool to develop and implement innovative solutions, tailored to the needs of their population.

What is clinical risk adjustment?

Clinical risk adjustment is the process of understanding an individual's risk of adverse clinical outcomes based on their unique health status. This is important. Every person has their own combination of risk-factors, reflecting the conditions from which they suffer. Many patients have multiple long-term conditions (multimorbidity). In addition, a patient's clinical status will be impacted by social determinants of health.

Why is clinical risk adjustment at scale important?

Clinical risk-adjustment alone is not enough. We know that there is no 'average' patient, real life is not predictable and real patients are complex. Relatively small sample sizes do not accurately represent real variation.

Making health-related decisions based on sampling and averages doesn't account for differences between people or differences between health systems. Inferences from specific cohorts aren't necessarily generalisable and have a significant risk of bias.

Therefore, clinical risk-adjustment needs to be carried out at scale. It should include all patients, in order to get an accurate picture. This might be across a health system such as an Integrated Care System, across a hospital, or across a particular geography.

C2-Ai technology enables clinical risk-adjustment at scale for large groups of individuals. Analysis across these groups, with the [C2-Ai ICS Observatory](#), makes it possible to understand if patients are achieving the outcomes they should. From this, unwarranted variation and health inequity can be identified, together with areas for action.

Clinical risk-adjustment can also be used prospectively to help clinicians and patients make decisions about the care they receive. Health systems can plan delivery of services to better meet the needs of specific groups and sub-groups within their population. [C2-Ai RiskTriage](#) uses clinical risk-adjustment at scale to deliver the detailed clinical risk assessment needed to prioritise complex waiting lists.

Why is clinical risk adjustment relevant for Life Sciences?

Because it provides an increased level of sophistication. Moving beyond simply measuring prevalence of a disease it provides an understanding of who, within a population, is at greatest risk of poor outcomes.

The life science sector is at a critical juncture, with an explosion of technological possibilities for new treatments, at a time when health systems are facing huge pressure. There are four key challenges for the sector.

1. Pressure on the life sciences business model to develop medicines which reflect the diversity of the intended populations and the need for innovation in clinical development.
2. Challenges in partnering with health systems to address health inequities, without a robust understanding of target areas for action.
3. Implementing precision medicine at a population level and targeting innovation to address unmet need, in the context of health systems impacted by resource constraints.
4. The need to demonstrate effectiveness of innovation and new technologies in a real-world setting.
5. Deciding how to use currently available data to guide decision-making now, rather than waiting for solutions to technical challenges in capturing and analysing more detailed information.

The challenge is for the 'right innovation' to get the 'right patients', at the 'right time'. But who are the 'right patients'? And when is the 'right time' for them? Developing a better understanding of unmet need is now possible using clinical risk-adjustment at scale. For major chronic conditions it will be possible to:

- Identify unmet need and inform [clinical research](#) so that clinical development programmes are more relevant to the real-world
- Enable [clinical risk-mapping](#) across a region, to demonstrate effectiveness of local care and identify areas for action
- Support [precision population health](#) with targeting of patients for anticipatory care pathways. Improve access to innovation or interventions such as NICE approved therapies and optimisation of medicines management
- Demonstrate unwarranted variation and areas of [health inequity](#) for action. Provide a robust evidence base for decision-making in this area and enable strategic cross-sector [partnership working](#)
- Monitor the clinical and financial impact of implementation of a new technology or intervention, such as a change in clinical pathway