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# Problem description

**ABC Pharma** wants to understand patient **drug persistency**—whether patients continue to take their medications as prescribed by physicians. The goal is to build a **machine learning model** that predicts persistency using patient demographics, clinical history, risk factors, and treatment behavior. Automating this process will help physicians and the pharma company improve adherence strategies and personalize patient interventions.

# Business understanding

The business objective of this project is to improve drug adherence by identifying patients who are at risk of non-persistence. This initiative aims to reduce costs associated with non-adherence, enhance patient health outcomes, and enable more effective targeting of patient support programs. Key stakeholders include the pharmaceutical company ABC Pharma, the data science team, and healthcare providers. The success of the project will be measured by the development of a predictive model that demonstrates high recall and precision in identifying non-persistent patients, along with sufficient model explainability to support actionable clinical and programmatic interventions.

# Project lifecycle along with deadline

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| Phase | Task |
| Week 8 | EDA, cleaning, preprocessing |
| Week 9 | Feature engineering, modeling |
| Week 10 | Model tuning, evaluation |
| Week 11 | Deployment |
| Week 12 | reporting |