

Predictive Technology-powered outpatient consultations – A sustainability impact analysis



- **STUDY DESIGN** – We conducted a case study involving 174 patients, who had completed their diagnostic journey and had undergone all the relevant investigations. The final diagnosis of these cases was used as a gold standard for the purpose of assessment and comparison. The case history (without investigations) of these cases was fed to the predictive model (YouDiagnose) to generate the best disease prediction and pathway recommendations e.g., type of care facility, urgency, referrals etc. The specialist surgeons were then asked to assess and validate the pathway recommendations.
- **FINDINGS** - Model (YouDiagnose) analysis generated predictions for each case in the form of GP consultations, routine and urgent referrals to hospital units and direct investigations. The model deemed 73 cases suitable for GP consultations, 77 for routine and urgent referral to hospital units and 24 cases that can be directly sent for investigations such as scans or x-rays without the need for consultations.
- **SUSTAINABILITY IMPACT ANALYSIS** - The model designed the diagnostic journey of these 174 patients with 184 GP and 382 hospital visits, e.g., with 29% fewer trips and without the risk of missing a cancer or suspected case or needlessly investigating someone. The model showed a predictive accuracy of 82.8% when compared with the final diagnosis. The doctors agreed with the model's recommendations more than 85% of the time. Most of the disagreement between models and doctors arose due to varying workflow in different hospitals across the country.
- **CONCLUSION** - Implementing a prediction model-powered workflow could have saved 158 hospital visits and 77 GP consultations, not to mention 17 tons of CO2 (a saving of 29% compared to real-life events) emissions resulting from it.