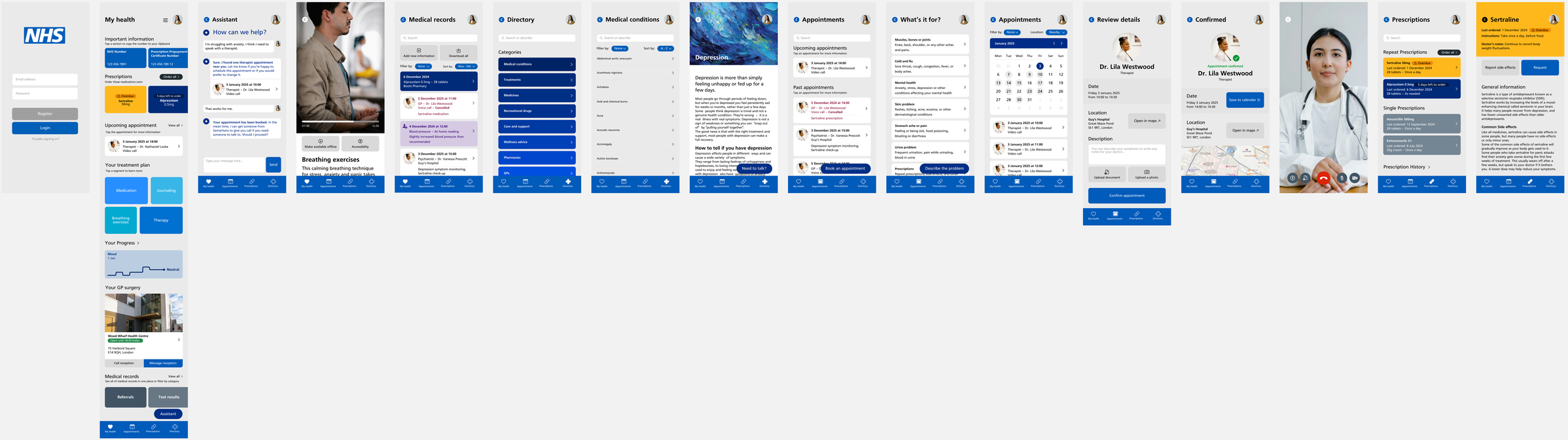HIGH FIDELITY PROTOTYPE