

Virtual Ward Case Studies

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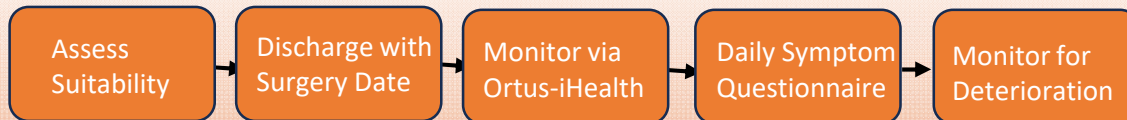
Cardiac Surgery Virtual Ward

Problem:

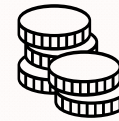
- Bed days wait for inpatient surgery is rising to 10-12 days.
- Increased risk of death due to Myocardial Infarction (MI), hospital acquired infection and other complications.
- Disrupted patient flow, capacity problems, inefficient and expensive use of healthcare resources.

Solution:

- 20% patients meet criteria to be safely managed at home on the Cardiac Surgery Virtual Ward.
- These patients transition from urgent non-elective cardiac surgery to elective cardiac surgery.
- Patients wait for procedure at home rather than as inpatients.
- Ortus-iHealth remote monitoring platform provides clinicians with a digital platform to remotely monitor patients, communicate, schedule appointments, manage consent and deliver patient education and information.



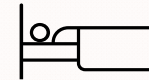
*Results:



£19,000 earned per elective surgery



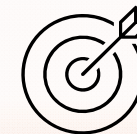
1 in 5 patients managed safely at home



10 bed days freed up per patient + inpatient wait time reduced



95% Good – Overall patient experience



Zero clinician-led cancellations

**In a study of 100 patients onboarded to Cardiac Surgery Virtual Ward, Barts Health Centre*

Remote Monitoring of the Cardiac Elective List

Problem:

- Elective waits across all specialties have increased post Covid
- Longer waits increase the risk of morbidity and mortality
- Whilst on wait list patients must be monitored for deterioration and escalated in a timely manner
- Traditional pathways utilise reactive, time-consuming and inefficient harm reviews to assess the risk of all patients on wait lists rather than identifying first, those most at risk.

Solution:

- While waiting, Ortus-iHealth patient and clinician platform enables earlier, accurate identification of condition deterioration with surgery expedited
- Patients routinely submit tailored symptom questionnaires based upon their condition and elective procedure
- Ortus-iHealth Risk matrix algorithms highlight patients who are deteriorating
- Clinicians utilise Ortus-iHealth clinician facing dashboard to review wait list and intervene and escalate patients as appropriate
- Clinicians able to use the clinical tools within the system to manage many patients asynchronously eg templated/group messaging, graphical representation of deterioration, questionnaire-based data gathering and flagging)
- Post-procedure, enables earlier supported discharge from acute hospital bed and improved patient experience with reduced Length of Stay and earlier home recovery

*Results:



>8000 patients have enrolled in pathway

>2000 patients actively monitored at any one time



Fewer unplanned admissions



Increasing efficiency :

- Automated Care Plans
- Pre-assessment questionnaires
- PROMs collection
- eConsent



Very high (80+%) patient activation and engagement

Better patient experience

**Pan London Tertiary Cardiac Centres
Remote Monitoring of Cardiac Elective List*

AT Home Low Risk Acute Coronary Syndrome (ATLAS) Virtual Ward

Problem:

- 100,000 NSTEMI cases per year in UK
- Large healthcare burden – hospital admission, diagnostics, invasive procedures
- International guidelines recommend treatment within 72-96hrs of admission to avoid adverse outcomes in highest risk patients
- Often delays from admission to diagnostic angiography

Solution:

- A novel virtual ward-assisted outpatient angiography pathway
- Facilitate the discharge of low-risk patients allowing them to wait at home for their coronary angiography whilst being monitored on a digital virtual ward enabled by Ortus-iHealth platform
- Increase proportion of patients treated within 72 hrs improving patient outcomes and meeting national and international guidelines

Results:



£3,000 earned per elective procedure



1000 NSTEMI patients through ATLAS Virtual Ward (Nov 22-July24)



*Reduced waiting times - Average inpatient wait of 3 days versus 7 days national average via traditional pathways



*Improved Patient Satisfaction - Patients love the comfort and convenience of being monitored at home.



*Saved Costs - Cancellations reduced to just 0.4%, 1760 bed days freed



Zero MACE or 30-day re-admissions

**Based on study of 440 patients via ATLAS Virtual Ward at Barts Heart Centre*

Acute Myocardial Infarction (AMI) Follow-Up Virtual Ward

Problem:

- Insufficient clinical staff
- Shortage of face-to-face outpatient appointment capacity
- Inconsistent patient follow-up
- Post-procedure, difficult to ensure medication titration and compliance
- Inconsistent collection of PROMs, PREMs and Vitals data

Solution:

- Modelling and digitisation of AMI Follow-up pathway
- Provide patients and clinicians with the Ortus-iHealth digital platform for patient-clinician communication, appointment scheduling and consent management, patient education and information, patient monitoring. Tools included:
 - Remote patient monitoring of symptoms and vitals
 - Biometric data, PROMs and Questionnaire collection
 - Enabling of digital consent
 - Proactive delivery of patient information and education
 - Virtual Wards
 - Telehealth consultations
- Asynchronous communication

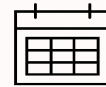
Results:



Reduced Post-Op discharge time from 3-5 days to 1-2 days



Reduced lead time for first outpatient appointment from 12 weeks to 6 weeks



75% reduction in Did Not Attends (DNAs)



70% more patients received medicine titration and optimisation – Performed asynchronously



75% of patients saved at least 1 hour or more travel and waiting time



95% of patients satisfied or very satisfied with new model of care

Digitise your Cardiac Rehabilitation Service (eg Post-STEMI)

Problem:

- Requires time-intensive follow-up and an array of symptom and observations data, often conducted via tertiary centres.
- Patients require provision of exercise programs, lifestyle advice and ability to escalate to medical team for follow-up when failing to adequately progress.
- Current systems to collect data place significant time constraints on medical and administrative teams
- Often failure to submit data into the National Audit Cardiac Rehabilitation(NACR) resulting in non-compliance for the hospital

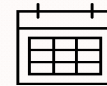
Solution:

- Ortus-iHealth Platform digitises the cardiac rehab workflow
- Paperless, templated pre and post assessment questionnaires automatically delivered to the patient via the Ortus-iHealth patient facing app
- Patients pre-fill questionnaires reducing consultation time with clinicians
- Patients access online cardiac rehab resources via the patient app eg videos, exercises, education. Reminders and nudges can modify behaviour
- Clinicians remotely monitor patient symptom and observational data via the clinician facing dashboard and can provide timely updates, remote medicines optimisation, programme alterations and nudges
- Patient-Initiated Follow-Up (PIFU) reducing non-attendance rates, capturing changes in clinical status and reducing workloads of clinical staff.

Results:



Save up to 2 hours of clinician and admin staff time per patient inputting and reviewing patient data



Enable Patient Initiated Follow Up (PIFU) and reduce DNAs



Improve ease and efficiency of reporting into National Cardiac Audit Programme (NACR)



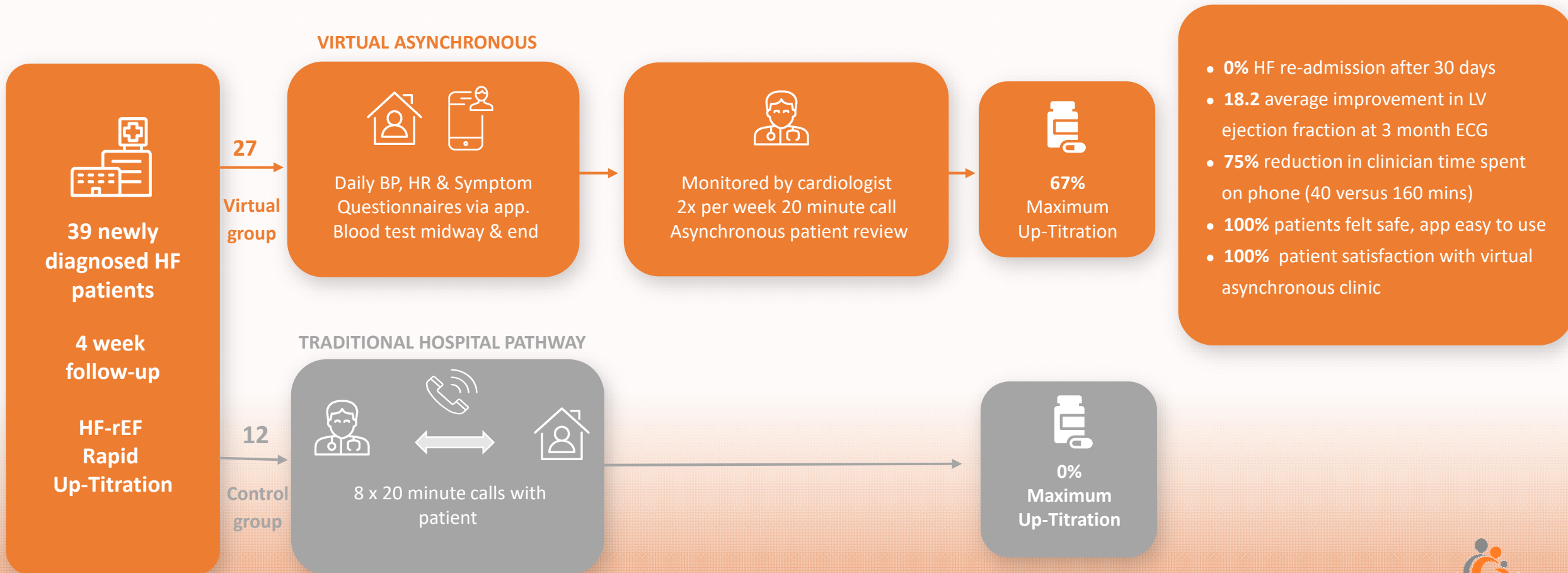
Improve medicine titration and compliance



Improve patient outcomes

Heart Failure Rapid UpTitration Virtual Ward

Experience with **Asynchronous Virtual Ward** versus Traditional Hospital Pathway
Rapid Up-Titration to 4 Pillars of Medication in Newly Diagnosed HF-rEF patients



Conclusion: The virtual asynchronous clinic is a promising resource-efficient solution in achieving safe and rapid optimisation of prognostic heart failure medications demonstrating high levels of patient satisfaction in the process

Heart Failure At Home Virtual Ward

Problem:

- Heart failure a significant and growing health burden on the NHS.
- Traditionally managed through regular outpatient appointments, this approach often delays symptom identification and timely intervention

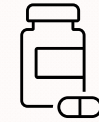
Solution:

- Ortus-iHealth platform monitors patients remotely, ensuring faster interventions and more efficient use of healthcare resources.
- Suitable, stable patients are discharged home with a blood pressure monitor and medical-grade scales.
- Patients enter their results into the Ortus-ihealth patient facing app daily and the results, along with any symptoms, are monitored by the cardiology team via the Ortus-iHealth clinician facing dashboard
- Where needed, medication can be adjusted, with doctors available over the phone/video call to respond to any concerns

Ortus-iHealth Differentiation:

- Rich patient data and easy to analyse clinician-facing dashboard facilitates confident clinical decision making to spot health trends and deteriorations
- Asynchronous, timely communication with patients enables pro-active care and results in fewer clinic appts and teleconsultations
- Clinicians are freed up to focus on patients most in need of care

Results:



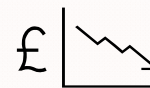
Improved compliance with treatment plans



Faster clinical intervention when needed



Delighted patients



Significant reductions in both financial and time costs compared to conventional outpatient management.

Long Term Cardiac Conditions Follow-Up Virtual Ward

Problem:

- Cardiac Conditions such as Long QT syndrome and inherited arrhythmias often require lifelong follow-up
- Routine outpatient appointments often scheduled for monitoring, but non-attendance and inconsistent compliance complicate effective management.
- Managing these patients contribute to high financial and administrative costs and consume significant clinician time.
- Traditional care models may also delay timely interventions, as changes in a patient's condition may not be identified until next scheduled visit.

Solution:

- Ortus-iHealth's digital platform allows patients to be monitored remotely and conduct Patient Initiated Follow-Up (PIFU)
- Patients are provided with monitoring equipment allowing collection and upload vital signs such as heart rate, ECG (Alivecor) and PPG (Happitech) and blood pressure
- Structured symptom questionnaires collect qualitative data, giving clinicians insight into how well a patient is responding to treatment.
- For stable patients, follow-ups can be conducted remotely. Initiate reviews only when symptoms change, or condition is not improving
- If concerning data is detected, patients can be escalated for face-to-face reviews or other interventions
- Allows clinicians to focus on higher-risk cases while continuing to monitor stable patients remotely.
- This ensures timelier intervention when necessary and reduces the strain on healthcare services.

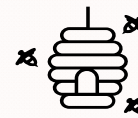
Results:



Patient Initiated Follow-Up (PIFU)



Patient Empowerment



Improve healthcare resource utilisation



Timely interventions



Improved patient outcomes