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# Rejuvenating General Practice

## Case study compendium

**September 2025**

# Contents

# Introduction

This compendium presents a series of case studies showcasing successful national and international, models of general practice and primary care. We identified these examples during our research for our report, *Rejuvenating general practice: Ensuring a resilient future for primary care*. The align to the challenges and solutions highlighted in the report and demonstrate how general practice, and primary care can work differently to deliver better outcomes for staff and patients and contribute to the delivery of the government's 10-Year Health Plan for the NHS.

These practical, good practice examples show how innovative approaches and rejuvenated care models can increase clinicians' job satisfaction, improve their efficiency, management and treatment of patients and deliver more proactive preventative care closer to home. In fostering collaboration and integration of services, these examples are improving patient access to primary care, reducing reliance on hospital-based care, enhancing the patient experience, and improving overall health outcomes.

This compendium provides valuable insights for organisations seeking to implement similar transformative changes within their own healthcare systems. We acknowledge there are many other such examples and would be happy to include them in our compendium provided evidence of improved outcomes is available.

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# Brookside Group Practice

## Transforming primary care using innovation and population segmentation

**Berkshire, UK**

### Challenged Faced

Brookside Group Practice is a Primary Care Network (PCN) across four sites in Earley, Reading, employing a team of 130 people including doctors, practice nurses, physician associates, healthcare associates, pharmacy team, health and wellbeing advisors primary care paramedic physiotherapists, patient services and support staff. The PCN covers approximately 31,000 patients, The practice area has low unemployment and a higher-than-average GP consultation rate. The patient demographic is skewed towards those aged 30-59. Their aim is to provide a high standard of healthcare by making appropriate and innovative use of limited NHS resources in partnership with other healthcare providers. The practice was experiencing significant increased demand for appointments, resulting in patients experiencing delay in accessing heir GP, which the practice was concerned would contribute to poorer health outcomes.

### Intervention Description

- The practice, part of the Buckinghamshire, Oxfordshire and Berkshire West Integrated Care Board (BOB ICS), created an integrated digital triage and segmentation solution combining Anima (a digital triage platform) with the John Hopkins Adjusted Clinical Groups System (ACGTM) patient segmentation model within the Frimley ICS and Partners Connected Care population health management (PHM) platform. The system applies a RAG (Red, Amber, Green) rating for both patient conditions and needs, optimising care prioritisation. Combining population segmentation with real-time presenting issues ensures an efficient triage and streamlined processes. Using these digital tools and their Patient Health Teams Model (PHT), the whole team can now prioritise the care they give to patients, to deliver the right care at the right time, at the right place with the right person. This streamlines and reduces workload for clinicians and the reception staff who are booking the appointments.
- The PHT model of care assigns patient groups to a core multi-disciplinary team (MDT) comprising a partner, an associate, a physician associate, a social prescriber and a patient services liaison (PALs) member of the reception team. Other member of the MDT including pharmacists, nursing, paramedics, visiting, mental health practitioner, health care assistants, musculo-skeletal services, dermatology, gynaecology and other roles all wrap around the core PHT model. By using these tools, the surgery improves continuity, reduces clinician administration and makes best use of roles. This collaborative team working includes monthly PHT meetings to discuss complex cases and ongoing support for the clinical and non-clinical staff involved.

### Outcomes Achieved

Brookside Group Practice has significantly improved patient access, care continuity and outcomes by implementing the innovative non-clinician triage model. Through automated stratification, patient liaison roles, strong collaborative teamwork and streamlined processes using the new tool, they have optimised the prioritisation of clinician care, reduced clinician workload and improved decision-making. Appointments are for a minimum of 15 minutes by streamlining requests through the same system to prioritise the most unwell people.

Appropriate tests (such as blood tests or photos) are completed before an appointment is booked. Clinicians can access detailed information on each patient enabling better informed decision making and reduced workload. Staff booking appointments can make best use of the MDT. Between April 2023 and January 2025, the practice has achieved significant improvements in meeting the increasing demand and improving patient experience, for example they:

- enhanced continuity of care - the percentage of patients consistently seeing the same healthcare team more than doubled, rising from 33% to 71%
- improved access - online access options favoured by over 75% of patients, dramatically reducing average call waiting times from 18 minutes in January 2023 to just 4 minutes in January 2025
- elevated patient and carer experience - overall, the experience for patients and their carers has been significantly enhanced.
- improved operational efficiency - achieved through better workflow management, particularly on-the-day requests and in managing long term conditions. Appointment allocation is much more efficient, as patients are sent a text to book an appointment, while specifying the type of appointment as well as the clinician and time frame. This increases continuity as patients can only book with the appropriate team or clinician.

Souce: https://www.hopkinsacg.org/wp-content/uploads/2024/10/Johns-Hopkins-ACG-System-Brookside-Case-Study-102824.pdf

# Modality Partnership

## Improving the working day through safe, scalable, automation and AI

**UK Nation-wide**

### Challenge(s) Faced

General practice faces unprecedented strain from rising demand, complex patient needs and workforce shortages. At Modality (GP super-partnership operating primary health care and community services with more than 360 GPs across 53 sites nationally), clinicians reported a 135% increase in admin workload, with GPs spending over 13 hours a week on documentation and staff struggling to manage growing volumes of email consultations. These pressures reduced time with patients, fueled burnout, and increased reliance on locums. Manual processes also created inefficiencies, variable record quality and risks of error. Traditional methods of typing, dictation and paper-based triage could not keep pace. To maintain access, protect workforce wellbeing and deliver sustainable care, Modality recognised the urgent need for digital innovation using automation and AI.

### Intervention Description

As part of their Digital Transformation strategy, Modality has invested in a programme of automation and AI designed to remove routine workload, increase staff satisfaction and wellbeing and release clinical time. Solutions that illustrate this approach include the following:

- A Robotic Process Automation (RPA) platform was deployed across 50+ sites and 35+ processes such as patient registrations, filing of normal results, medication safety alerts have been built and implemented. Bots extract key details, and process / route tasks as per human workflow.
- Modality partnered with Heidi Health to pilot an ambient AI scribe that captures and structures consultations in real time. Over 25 days, 47 GPs transcribed 2,879 consultations, saving 1.5–2.5 hours per GP daily. The project has since scaled to 190+ clinicians and is now used by 31% of UK GPs.
- In collaboration with a Precision Health AI solutions provider, LiberateAI, Modality is automating long-term condition care (LTC) pathways, beginning with asthma reviews. To start, 3k+ patients were invited to complete digital questionnaires.

### Outcomes Achieved

- **Efficiency and time savings:** 45,000+ admin/clinical hours released to date across 50+ sites. AI scribe delivered 51% faster in-consultation documentation and 61% reduction in after-hours admin. LTC asthma automation: 91% reduction in manual calls through digital invites; 41% reduction in review appointments as many patients did not require one.
- **Workforce wellbeing and resilience:** 78% of GPs reported lower cognitive load using AI scribe. 45% reported improved work–life balance. Staff satisfaction rose as RPA reduced repetitive, burdensome tasks.
- **Patient experience:** 100% of patients accepted the AI scribe; many reported GPs felt “more present” and engaged. Digital asthma questionnaires achieved 80% response rate, with more care delivered remotely. Reduced appointment waiting times through efficiency gains.
- **Financial & system impact:** Modality estimates that they have seen a 200% return on investment achieved with RPA. AI scribe reduced reliance on locums by increasing GP capacity. LTC automation enabled significant optimisation in LTC management.
- **Spread and scalability:** 35+ RPA processes developed across EMIS and S1 clinical systems. LTC automation positioned Modality to expand into diabetes, hypertension and COPD. AI scribe scaled from 47 to 190+ clinicians in Modality, now adopted by ~31% of UK GPs. Shared toolkits, safety assessments and peer-learning events enabled replication nationally.

Sources: https://drive.google.com/file/d/1QQkv2foRjPpgevRokcqSJK8FHooHbPKm/view?usp=sharing https://liberate-ai.com/ and BMJ 2025;389:r663 http://doi.org/10.1136/bmj.r663

# Norfolk Primary Care CIC

## Primary care at scale: supporting the resilience and sustainability of the integrated system

**North Norfolk, UK**

### Challenge Faced

North Norfolk Primary Care was established in 2017 as a GP alliance formed of 19 general practices, aimed at making life in general practice enjoyable again while realising the true potential of at-scale services for patients. In April 2024, it transitioned to a community interest company (CIC) known as Norfolk Primary Care (NPC), seen as a significant milestone in the evolution of healthcare in the region, promising substantial benefits for primary care services, GPs, the Norfolk & Waveney (N&W) ICB, and patients alike. NPC works closely with member practices, helping to deliver high-quality care to local communities while driving improvements through practical, forward-thinking solutions. A key initiative requiring effective planning and management of resources is the General Practice at the Front Door service (GP@FDS) established in response to the increasing pressure felt by Emergency Departments (EDs) to help patients get the most appropriate care for their needs when seeking medical attention.

### Intervention Description

- NPC CIC works across the N&W Health System in collaborations with the following delivery partners: N&W GP Practices, James Paget University Hospitals NHS Trust (JPUH), Norfolk and Norwich University Hospitals (NNUH) NHS Foundation Trust, Queen Elizabeth Hospital(QEH) Kings Lynn NHS Foundation Trust, N&W ICB, Norfolk Community Health and Care NHS Trust, East Coast Community Healthcare CIC, IC24 and the PCNs within the five N&W Locality Areas.
- NPC employs more than 260 people with the managerial and administrative teams expanding to provide both the capacity and capability necessary to support the system.
- Introduced standardised approaches to planning and manging the GP@FDS including deploying the Patient Safety Incident Response Framework (PSIRF). This shift in approach to patient safety, aligns with the approach at the three hospitals, while enhancing NPC's culture around learning and improvement. In providing a more compassionate, systems-based response to incidents, it reinforces NPC's commitment to transparency, accountability, and continuous improvement and safe and high-quality provision of patient care across the NPC workforce.
- From 1st April 2024 to 31st March 2025 the GP@FDS was delivered to all three acute hospital trust partners. alongside the Norwich Walk-In centre. Together these services delivered 119,265 same-day Primary Care appointments for patients. This figure underscores the pivotal role which NPC plays in supporting the local urgent healthcare system.

### Outcomes Achieved

- Achieved Learning Organisation status in 2024, in recognition of the commitment to fostering a culture of reflection, growth, and sustainability through PSIRF. The inclusion & exclusion criteria for the GP@FDS are the same across all three acute Trusts and always adhered to by the streaming clinician with a strong emphasis on patient safety and experience.
- JPUH GP@FD commenced in September 2021. In 2024-25 it streamed an average of 44% of patients who walked into the ED to be seen by the GP led service (between 9am and 9pm). The equates to 39,755 patients streamed and 17,346 of those being seen, assessed, and discharged, admitted, or onward referred into the hospital. NPC continuously works with the ED management teams to improve and implement quality improvements for the benefit of supporting the ED and the patient experience. Patient feedback surveys of the service included an average of 88% of patients rating the service as 'Excellent' or Very Good', and average 90.5% Family and Friends recommendation. Following the successful application for Learning Organisation status for the GP@FDS Service in May 2024, JPUH proudly welcomed its first GP trainee in October 2024.
- QEH GP@FDS was initiated in January 2022. In 2024-25 it streamed 38,262 patients and saw 15,111 patients. This equates to seeing 39% of all walk-in patients to the ED during the hours of 9am to 9pm. Over the same period the patient feedback survey resulted in an average of 90% of patient saying the service was 'Excellent' or Very Good', and an average of 96% Family and Friends recommendation.
- NPC has delivered the GP@FDS at the NNUH since July 2023, assessing and discharging or onward referral of 16,919 patients. However, here the NNUH ED clinical team do the streaming using the same inclusion and exclusion criteria and patient experience. In 2024-25 patient feedback for the service was an average 82% of patient saying 'Excellent' or 'Very Good', and an average 87.5% Family and Friends recommendation.

Source: NPC Annual Quality Account 2024-2025 FINAL APPROVED

# Taurus Healthcare

## Redesigning primary care at scale.

### Herefordshire UK

### Challenge Faced

Taurus Healthcare, is a GP federation comprising 19 practices across Hereford working together as the Herefordshire General Practice Provider Collaborative to improve the sustainability of general practice and, working with wider primary care providers, to improve population health outcomes. The model is rooted in trust, shared values, and a commitment to local care. The model also builds on earlier work to establish a Primary Care Home, fostering partnerships and new ways of working across the counties five localities (targeting 30-50,000 populations per locality). In 2023-24, the collaborative delivered services to patients via local GP Practices, Primary Care Networks (PCNs) and 'At scale' (through Taurus Healthcare) with services available to patients 24/7, 365 days a year. However, challenges include uncertainty over future funding models and while more GPs are available, many are choosing to become salaried rather than partners.

### Intervention Description

- Taurus Healthcare has focused on building relationships and using 'Primary Care Analytics' at scale to consolidate partnership working. A key strategy has been providing more population focused and less organisation-centric care by continuing to work with health and care partners to deliver 'joined up care' that makes sense to patients. This 'One Herefordshire' approach aims to reduce duplication and waste, provide clear pathways to services and deliver care closer to patients' homes.
- Herefordshire General Practice, Primary Care Analytics has developed tailored analytical products to drive meaningful change by establishing a robust analytical function within the Federation, with a vision to scale this model to support other practices, PCNs, and federations across the country.
- The Collaborative, has used its prevention agenda to address health inequalities by underserved communities. Taurus Healthcare's Talk Wellbeing service outreach programme and targeted PCN-led campaigns, facilitated by high quality, targeted population health management data, has provided 'pop-ups' across the county in agricultural settings, homeless services, community cafes and refugee centres. And as the main delivery partner (working with Herefordshire Council) has brought health checks to key employer locations in the county.
- Taurus has been pilot testing 'Health on the High Street' to understand if easily accessible, drop-in service would remove some of the barriers people experience in accessing healthcare.

### Outcomes Achieved

Collaborative working has enabled significant improvements in primary care to be implemented at a greater pace and scale, with Taurus working alongside the PCN and practices to optimise patient care. Between 1st October 2023 and 30th September 2024:

- Taurus Healthcare delivered 728,989 routine appointments. In addition, over 19,648 urgent GP appointments were delivered by the Taurus Out of Hours service; and 41,533 routine appointments and 36,466 remote patient consultations were delivered through Taurus Healthcare's Herefordshire Remote Health service.
- Taurus' Talk Wellbeing Service (outreach and Hereford Hub), supported 1,685 people saving NHS England an estimated £49,050 through preventative healthcare, with 3.231 NHS Health checks delivered in practices (1,740 provided by Taurus Healthcare).
- In the past six months over 900 patients, out of the 2,000 West Midlands Ambulance Service WMAS referrals, were able to be managed in the community following contact with the Community Referral Hub (run jointly by Taurus and the Wye Valley NHS Acute Trust).
- Delivered a holistic approach that supports continuity (using the same EMIS IT system as that used by the GPs and PCN), linking to prevention services and making every contact count by managing any next steps required in the patient journey.
- Collaborative redesign enabled faster and broader improvements across the locality operating alongside other providers to achieve change at scale.
- Pop-up table space at the Community Hub was used 156 times by different organisations, saving them approximately £7,800, the Hub 'pods' (consultation rooms) have been booked 130 times by different organisations, saving them approximately £10,400.

Source: Taurus Healthcare Annual Report 2023 2024 WEB.pdf

# Nightingale Surgery and Hippo Labs

## Technology-enabled improvements to GP administrative systems

**London, UK**

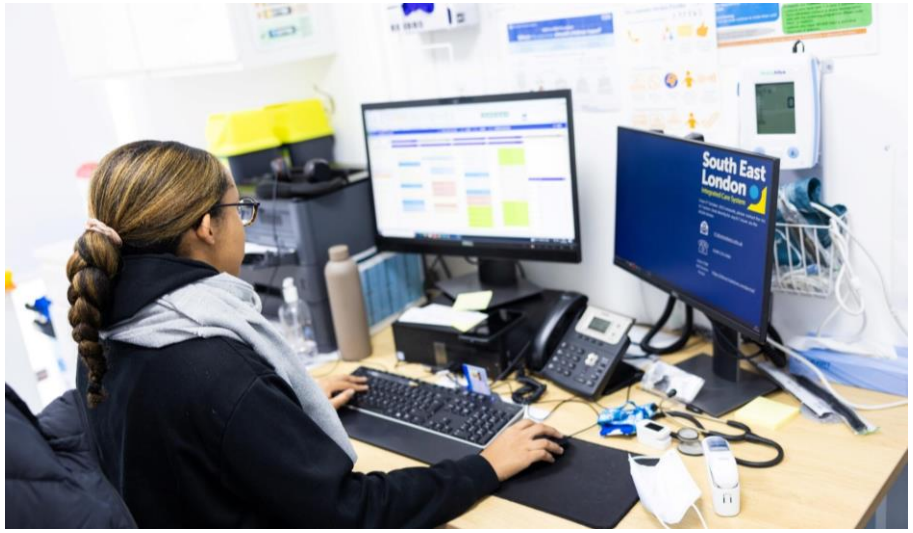
### Challenge Faced

Nightingale Surgery, like most general practices, struggled with inefficient patient recall processes used to invite people for health checks while minimising the administrative burden on staff. Manual management resulted in high administrative costs (staff spent countless hours on recalls) and low response rates (traditional methods like letters and phone calls resulted in limited patient engagement). These inefficiencies led to missed opportunities for proactive, preventive care, leading to potential delays in diagnosis and reduced quality of care.

### Intervention Description

To address these challenges, Nightingale Surgery implemented Hippo Labs' Hippo Recaller tool. An intelligent, automated, patient recall solution that can help practices carry out proactive care more efficiently and effectively. Hippo Recaller:

- automates patient engagement for health check reminders by sending multiple personalised messages via SMS, WhatsApp, and email for proactive health invitations, with integrated links to appointment booking.
- enables efficient tracking and analysis of patient responses, identifying gaps in recall campaigns to improve recall strategies.
- seamlessly integrates with the surgery's existing GP software and electronic health record systems.




### Outcomes Achieved

The implementation of Hippo Recaller for an Annual Health Review yielded significant improvements for the Nightingale surgery:

- impact across all campaigns included 2,683 appointments booked, a 50% conversion rate, saving a total of £11,500, in reduced administrative costs and 826 hours of admin time saved.
- improved Response Rates: Across various campaigns, response rates significantly increased:
  - diabetes – Over 275 patients booked conversion rate of 53% (compared to 20% previously)
  - flu vaccine - Over 900 patients booked, conversion 50% (compared to 20% previously)
  - child immunisation – Over 130 patients booked, conversion 35% (compared to 20% previously)
- significant time savings were achieved across all campaigns:
  - Diabetes: Over 6 days manual admin time saved (some £650 in costs)
  - Flu Vaccine: Over 25 days saved (£2,700 in costs)
  - Child Immunisation: 5 days saved (£500 in costs)

These improvements demonstrate how Hippo Recaller can transform recall processes, leading to better patient outcomes and significant cost savings for Nightingale Surgery. And how general practices can leverage innovation and technology to enhance operational efficiency, improve patient engagement, and ultimately deliver higher-quality care.

Source: https://www.hippolabs.co.uk/post/case-study-hippo-labs-x-nightingale-surgery

# Nimbuscare Frailty Crisis Hub

## Facilitating the shift from hospital to community for frail vulnerable patients

**York, UK**

### Challenge Faced

The growth in the number of frail older people in York highlighted the urgent need to find a solution to the fragmented care provided to this population group and the need for a more integrated, coordinated response to prevent unnecessary hospital admissions. In November 2023, Nimbuscare established the York Community Frailty Hub to address the challenge. Nimbuscare Ltd is a not-for-profit, ta-scale provider of primary healthcare services, owned by all 11 GP practices in York, providing community-based healthcare services to more than 250,000 people. They also deliver services over a wider footprint, such as community-based frailty care and urgent care services provided in collaboration with hospitals and GP practices in York, Scarborough, Selby, Malton and Whitby. Nimbuscare believes that by working collaboratively they can sustain resilient general practice, lead health and care re-design, improve quality of care and address local needs in an equitable way. Their focus is on supporting improvements in population health and patient experience through multi-disciplinary integrated working across the health and care system prioritising the shift of services into the community where possible.

### Intervention Description

The York Community Frailty Hub is an integrated multidisciplinary initiative designed to proactively manage frailty. The frailty team is comprised of co-located frailty nurses, physiotherapists, occupational therapists, dietitians, social prescribers, social worker, health support workers, GPs with a special interest in frailty (GPwSIF), a GP with a special interest in dementia, community ambulance response teams, Age UK Home from hospital service, Carer's Centre support workers, and urgent responders. The service was expanded in 2024 to provide a 7-day-a week service, comprising a:

- Frailty prevention team supporting the Humber Virtual Frailty Ward for Scarborough, Whitby & Ryedale, by providing GP cover and remote GPwSIF clinical oversight. It offers advice to frail residents, families, carers and health professionals, and works collaboratively to determine the best course of action to keep people safely at home. It also provides case management for complex vulnerable individuals with the primary aim of supporting independence and promoting health as well as interim support where required from a proactive multidisciplinary frailty team
- Frailty crisis response team provides medical urgent community response (UCR) visits for frail patients presenting in crisis.
- A discharge support team (the Discharge to Assess Bridging Service) supports frail patients by having social worker assessments performed in their own home rather than waiting to have the assessment carried out in hospital.

Nimbuscare takes the lead in coordinating services, while accountability for safe high-quality care remains with each employing organisation. To foster a shared culture of learning and improvement, Nimbuscare convenes a weekly, in-person Quality & Governance meeting to openly share learning, reflect on events, and work collectively to enhance safety and quality across the system.

### Outcomes Achieved

- In July 2025, the Frailty Prevention service provided case management for over 3,415 of the City's most complex and vulnerable individuals (a 17% increase without extra funding by working more collaboratively). This includes annual comprehensive geriatric assessments (CGA) with all new referrals receiving a CGA within four weeks of referral. Individuals are assigned a named Frailty Nurse and given direct access to the Frailty Crisis Advice and Guidance (A&G) line as an alternative to contacting emergency services via 999. Between December 2024 and December 2025, the prevention team were contacted by over 4,000 people,1,800 were prevented from going to A&E inappropriately, follow-ups for wrap around support found that most were still in their usual place of residence a month later, were safe and being rehabilitated back to good health.
- The 7-day Frailty Hub service is now being piloted across other geographies. All UCR paramedics visiting patients are supported remotely by the Frailty Hub Crisis line providing a multidisciplinary team approach to keeping frail patients at home wherever possible. Over the past year the Frailty Crisis team has successfully prevented 2,743 patients from attending the Emergency Department (ED) or necessitating a 999-emergency call, enabling paramedics to avoid 84% of hospital transfers by providing timely clinical advice.
- Over the past six months, the Discharge to Access initiative saved a total of 1,008 bed days and reduced the average hospital length of stay for the patient cohort by eight days per individual. Between April and June 2025, the Enhanced Discharge Support Service received referrals to: Age UK (127), social prescribing (63), Carers Centre (39) and North Yorkshire Sport (8).
- This case study provides an evidenced based example of cross sector collaboration facilitating the shift from hospital to community care, with general practice providing an expert community coordination role.

Source: https://www.nimbuscare.co.uk/services/york-integrated-community-team-yict/york-community-frailty-hub/

# Tower Hamlets (Barts Health NHS Trust)

## Neighbourhood health and the establishment of Women’s Health Hubs

**Tower Hamlets, UK**

### Challenge Faced

Patients from the London borough of Tower Hamlets faced significant challenges in women's healthcare, including increasing demand for care (especially for chronic conditions like menopause, menstrual health, and Poly cystic ovarian syndrome (PCOS);. There were  inconsistent management skills among primary care providers; convoluted referral pathways; long wait times; inappropriate referrals to specialist clinics; and inefficient use of outpatient capacity. They also faced internal HR challenges in recruiting and funding multi-professional specialists.

### Intervention Description

- In December 2023, Tower Hamlets launched a Women's Health Hub based within Mile End Hospital. This centralised hub brings together a multidisciplinary team (MDT) of gynaecologists, sexual and reproductive health doctors and nurses, GPs with a special interest in women’s health, a physiotherapist, a nursing associate, and other healthcare professionals.
- The MDT provides primary care support to GPs, directs patients to appropriate services, and offers direct treatment at the hub. The hub's integrated approach allows for comprehensive assessments and interventions in a single appointment, reducing the need for multiple visits significantly. It brings care closer to the community and enhances patient experience by cutting down wait times.

### Outcomes Achieved

The Women's Health Hub has dramatically improved women's healthcare access and efficiency in Tower Hamlets:

- The number of women waiting for gynaecology treatment at The Royal London Hospital decreased by one-third in one year. The average wait time for an appointment dropped from 27 weeks to 11 weeks, significantly undercutting the national 18-week target. This also freed up hospital capacity, for women needing specialist treatment leading to faster access for those requiring specialist care.
- All referrals from across the borough are received by one specialist team with the hub managing over 3,000 referrals since it's December 2023 launch. The hub triages patients to direct them to the most appropriate setting, ensuring that only those requiring surgery or specialist treatment are referred to the hospital; conditions not requiring specialist treatment are treated by the referring GP or within the hub.
- By streamlining pathways and reducing wait times, the hub significantly improved the overall patient experience.

The Tower Hamlets Women's Health Hub exemplifies a successful model for improving women's healthcare access and efficiency through integrated, multidisciplinary care and efficient referral management.

In August 2024, Barts Health launched the Whipps Cross hub, supporting over 2,000 women across Waltham Forest and Redbridge – with many seen directly at the hub, referred to gynaecology or guided back to their GP with specialist advice. The trust are  now working with partners to open a hub at Newham Hospital, aiming to launch by January 2026.

Source: https://www.bartshealth.nhs.uk/news/pioneering-health-hub-cuts-waiting-times-by-a-third-17313 and https://www.bartshealth.nhs.uk/download/quality-accounts-202425.pdf?ver=57923

# Aspley Medical Centre and Beechdale Care Home Affiliation

## Interoperable data sharing between GPs and community partners.

**Nottingham-shire, UK**

### Challenge Faced

Beechdale Care Home and their residents' GP practice, Aspley Medical Centre, have a good working relationship but faced inefficiencies in data exchange and management when communicating with the Aspley Medical Centre. The reliance on emails for correspondence was challenging, particularly in reconciling medication requests which relied on time-consuming sifting through individual emails to match the right medication requests to individuals, making tracking and reconciliation difficult. Manual recording and emailing of scanned vital signs added further inefficiencies, compounded by reliance on paper-based systems.

### Intervention Description

- Beechdale Care Home wanted to improve both the level of data security for sending resident information to Aspley Medical Centre and the efficiency in reconciling medication requests.
- Beechdale integrated the messaging and measurement functionalities in Patients Know Best (PKB) to connect with Aspley Medical Centre. Eight staff members received training on the new system and workflows.
- PKB is a social enterprise and technology platform, designed to help health and social care providers bring together patient data, along with the patient's own data, creating one secure Personal Health Record (PHR) for the patient. It is the first PHR to integrate with the NHS App making it more accessible to more people across the UK.

### Outcomes Achieved

Utilising PKB's messaging functionality has helped Beechdale Care Home and Aspley Medical Centre, working in collaboration, to streamline their communication processes, enhance data security and improve operational efficiencies. Specifically they have:

- Facilitated real-time medication request updates and drastically reduced the time spent on this process. Searching for missing medication for specific residents became more targeted and efficient. The ability to directly access PKB records streamlined the process of requesting and tracking medication. Also significantly accelerated medication responses from the GP practice and the pharmacy, from 2-3 days to a couple of hours, enabling same-day administration.
- PKB's messaging feature made it easy to send GP images, particularly for wound assessments. The exchange of images and data enables better assessment of urgency, helping determine whether an immediate visit is needed or if the resident can wait for the weekly ward round. Aspley Medical Centre's GP acknowledged the utility of the images for timely decision-making and the ability to track a patient's recovery progress.
- The utilisation of PKB's Measurement functionality has enabled Beechdale House to capture residents' daily vital signs, directly into each patient's PKB record, rather than on paper, care home staff and the GP to see. This has enabled data-driven insights and adjustments to treatment plans. Between June 2022 and May 2023, PKB facilitated 455 messages, 8,471 measurements, and 482 lab results, vastly transforming efficiency and collaboration between Beechdale House and Aspley Medical Centre.

Source: Aspley Medical Centre and Beechdale Care Home Affiliation - Patients Know Best

# Clalit Health Services, Clalit Innovation, Clalit Research Institute

## A population health management platform (C-Pi) harnesses longitudinal data and AI to transform primary care

**Israel**

### Challenge Faced

Primary care systems worldwide are under growing strain from ageing populations, rising chronic disease burdens, workforce shortages, and escalating costs. Traditional reactive care models are no longer sustainable. In Israel, Clalit Health Services (CHS) the largest not-for-profit integrated care heath provider, serving over five million patients, across hospitals and community clinics, identified the need to shift from reactive treatment toward predictive, proactive and preventive ($P^3$) models of care. With universal healthcare coverage in Israel and low attrition rates, most Clalit members remain covered by the organisation for their entire lives (>95% five-year retention). Clalit owns and operates 1,500 primary care clinics and 14 hospitals, including 30% of Israel's hospital acute care beds, and employs nearly 50,000 doctors, nurses, pharmacists, paramedics, technicians, and administrators. The Clalit Research Institute (CRI), founded in 2010, was established to turn Clalit's longitudinal data assets into actionable insights that improve outcomes and inform both clinical and policy decision-making. Building on this foundation, Clalit Innovation serves as the organization's dedicated innovation arm, leveraging Clalit's unparalleled longitudinal data, clinical expertise, and global collaborations to accelerate the shift towards predictive, proactive, and personalized care. Together, we drive breakthrough research, bring innovative healthcare solutions to global use, and redefine tomorrow's healthcare today.

### Intervention Description

**At the core of this primary care transformation stands C-Pi, Clalit's AI-driven population health platform for predictive, proactive, and preventive interventions.**

- **Data foundation:** C-Pi leverages Clalit's unique longitudinal dataset, integrating decades of electronic health record, pharmacy, laboratory, imaging, and health data for over 7 million patients (through the years).
- **Automated Clinical Pathways:** Clinical guidelines are converted to automated algorithms that (on a daily basis) leverage the rich data to identify clinical care gaps for all of Clalit's patients.
- **AI & predictive models:** CRI develops and validates machine-learning models to identify high-risk individuals early, enabling timely preventive interventions. Examples include:
  - Identifying unknown Hepatitis C Carriers
  - Identifying 10-year cardiovascular risk
  - Identifying 10-year risk of osteoporotic fractures
- **Clinical integration:** Through C-Pi, the automated clinical pathways and prediction models are embedded into primary care workflows. Smart prioritization (combining risk and clinical gaps) enables targeted and efficient outreach. Highly detailed patient summaries and personalized recommendations offer clinical decision support both during outreach and during regular appointments ("opportunistically"). Beyond this, C-Pi integrates seamlessly with the electronic health record enabling users to automatically select and action clinical recommendations and to record a proactive healthcare visit in the patient file.

### Outcomes Achieved

- **Efficient identification of at-risk patients:** For example the hepatitis C model currently deployed in C-Pi was demonstrated to be ¬100x more effective at identifying Hepatitis C carriers than the general national screening program
- **High adoption rates amongst primary care practitioners:** C-Pi is used by thousands of Clalit primary care physicians and community nurses.
- **Large scale impact:** Primary care physicians now view over 80,000 patients in C-Pi per month. From our routine monitoring, the likelihood of closing a clinical care gap is roughly 2-4 x higher when the primary care physician opens C-Pi during an appointment.
- **A shift from reactive to proactive care:** A growing number of primary care physicians are using C-Pi proactively during "proactive healthcare time". In an initial analysis of physicians using proactive time for 2 hours a week, the number of patients defined as in "focus" by the platform (patients in the highest priority group – a function of risk and clinical gaps) went down by 10-20% each month compared to no monthly change in a control group.

### Conclusion

Clalit's $P^3$ approach, powered by C-Pi, illustrates how a large integrated health system can systematically move from reactive treatment toward proactive, predictive, and preventive medicine at scale – strengthening primary care, reducing pressure on hospitals, and ultimately delivering better outcomes for millions of patients.

Source: https://www.clalit-innovation.org/predictivemedicine and https://ai.nejm.org/doi/pdf/10.1056/aioa2300012

# ChenMed’s differentiated model of primary care

## Creating a new healthcare model for older, vulnerable, more complex, patients

**U.S.A.**

### Challenge Faced

ChenMed is a fast-growing, mission-driven, value-based, senior care healthcare organisation in the US that has grown from a small, family business into a national operation with over 120 primary care centres (PCCs), spanning more than 65 cities across 15 states. Its focus is on solving, serious, highly prevalent yet unresolved health problem by creating affordable, effective and dignified primary care for older, sicker and poorer Americans. Its goal is to replace the current and almost universally applied, fee-for-service healthcare model (which incentivises episodic care, suboptimal outcomes at higher spending); with an integrated care-coordination model, prioritising primary care physician (PCP) led, cost-effective, continuity of care. The challenge is that primary care is significantly underfunded relative to its contribution to overall healthcare services (35% of services, but only 5% of healthcare spending). The need to reverse the unrelenting rise in numbers and increasing poverty amongst senior populations, together with widening health inequalities, means the ethical imperative is clear. With over 50 per cent of healthcare costs attributed to 5% of the population and 75% to 15%; so is the economic imperative.

### Intervention Description

ChenMed's primary care medical management and technology company seeks to address these challenges by focusing on a value-based, physician-led, care model for low-income seniors with complex health needs that embraces patient-centred design, provides intensive training to develop relational skills and delivers measurable, evidence-based outcomes (such as fewer hospitalisations and catastrophic events and improved healthy life expectancy). It has been implemented across all PCSs and manages Medicare Advantage and dual-eligible members under a full-risk capitation model; creating strong incentives to prioritise preventive care and proactive management, ensure better healthcare outcomes and reduce costs. It comprises five domains:

- **Convenience and access:** primary health centres offer a broad set of services on site, including dental care, digital x-ray, ultrasound, and acupuncture, as well as between 5 to 15 high-volume specialists. It provides regular monthly contacts and, were needed door-to-door transportation at no charge.
- **Patient and physician time:** the centres PCPs manage a panel of 350 to 450 patients ( compared to the traditional ratio of one PCP to over 2,500 patients), this low PSP to patient ratios enabling more time with patients. Ease of access allows patients to visit the practice more frequently, an average of 13 times per year. This enables PCPs to build trust and a rapport and consequently educate and coach patients on behaviour change, enabling PCPs to provide "compassionate, personalised care".
- **Dispensing of prescription medications:** to boost medication adherence, physicians dispense pre-sealed medications at the time of the patient visit. As a result, patients are then more likely to discuss side effects and other issues that interfere with medication adherence.
- **Physician culture:** ChenMed promotes a culture of collaboration, transparency, and accountability for high-quality care among its PCPs. PCPs on each site meet three times a week to review hospitalised patients and discuss complex cases and practice approaches; and are sometimes joined by specialists and hospitalists. The practice has also designed its primary care estate to support physician collaboration and communication.
- **Customised electronic health records (EHR) and decision support:** ChenMed has developed its own, bespoke, cloud-based, EHR system, with input from PCPs, and customised to measure outcome for chronically ill patients. The system minimalises unnecessary documentation and provides PCPs with the technology to help them be more productive and enhance their job satisfaction.

### Outcomes Achieved

ChenMed’s differentiating model of primary care promotes a culture of continuous innovation yielding significant improvements:

- 30-50% reduction in hospitalisations
- 33% reduction in emergency room visits
- 28% lower overall costs
- 41% increase in preventative medication use
- top decile patient satisfaction scores
- top decile clinical quality metrics.

ChenMed has established, proven, evidence-based ways to innovate to improve outcomes for high-risk Medicare patients through increasing patient satisfaction, boosting the amount of time doctors and patients spend together, improving patients’ medication adherence, and achieving lower rates of hospital use than its peers. Technologies like telehealth, rolled out rapidly during the pandemic now deliver convenience and accessibility that many patients now prefer to in-person visits. Talent development, job satisfaction of and rewards for staff are high.

Source: https://medlinereview.com/chenmed/ and https://www.creatinganewhealthcare.com/2022/10/26/episode-142-how-a-small-group-of-people-are-rehumanizing-primary-care-with-dr-chris-chen-ceo-cofounder-of-chenmed/

# Singapore's radical reform of primary care

## Early lessons on delivering a more integrated preventative primary care system for citizens and residents aged 40 and above

**Singapore**

### Challenge Faced

Despite family doctors (GPs) being seen as the cornerstone of effective healthcare, in 2022 only three in five Singaporeans maintained a regular family doctor. Although Singapore was recognised as having impressive health outcomes and an efficient secondary healthcare system, primary care provision was fragmented with limited government influence over private providers, and the predominance of fee-for-service payments. Some 89% of GPs worked in private clinics but only 11% in public polyclinics. Meanwhile, healthcare costs had continued to rise due to a rapidly ageing population and rising multimorbidity. While around 2,490, mainly single handed, private GP clinics accounted for approximately 80% of primary care services; 25 publicly managed polyclinics handled 20% of the population's primary care patient load but 52% of the country's chronic disease burden. Growing demands and increasingly complex, long-term care needs meant that meeting government expectations for a more preventative approach were proving difficult, placing unprecedented pressures on GPs. Patients also lacked formal referral pathways making it difficult to navigate services, leading to duplication, gaps in care, and suboptimal outcomes. The absence of a strong gatekeeping function, and lack of integration resulted in inappropriate utilisation of specialist services and avoidable hospitalisations.

### Intervention Description

Healthier SG (HSG), is an ambitious, national healthcare reform launched in July 2023, to enhance preventive care across primary care, strengthen patient-doctor relationships, and integrate health and social care. It incorporates a transition to capitation-based payment models and consultations based on structured "health plans" for citizens and permanent residents aged 40 and above. Its aim is to shift healthcare from a hospital-centric model to a community-based approach by assigning residents to family doctors and providing subsidies to primary care clinics and patients.

Singapore's healthcare system was reorganised into three geographically based integrated health clusters to improve collaboration and integration between primary care providers and public hospital; streamline patient journeys; minimise disruptions in care; and enhance the accessibility and effectiveness of services. A common EHR and cohesive workflows within each cluster were established. Clusters also encompass social service agencies, mental health organisations and other relevant stakeholders. The GPFirst Program incentivises patients with non-emergency conditions to see GPs first, reducing the burden on hospital emergency departments. Patients referred to the ED after a GP visit receive a subsidy to offset their ED bill.

Singapore introduced a capitation payment system for primary health care. Each cluster gets a pre-determined fee for every resident living in the region that they are looking after, based on 'bands' calculated using patient age and comorbidities. This deviation from the previous fee-for-service payment model aims to reduce waste and improve quality of care. The capitation model aims to incentivise providers to engage in preventive medicine , empower patients and foster relationship-based care, to keep patients healthy in the comm

Polyclinics now offer direct access to certain advanced diagnostic services (gastroenterology, cardiology, physiotherapy) in public hospitals, eliminating unnecessary delays and improving patient flow. Polyclinic doctors and public hospitals are collaborating to develop shared care protocols for patients with complex conditions, ensuring seamless transitions and holistic care. The establishment of family physician clinics within polyclinics provides more coordinated, holistic management of patients with chronic diseases.

### Outcomes Achieved

By June 2025, 1.2 million ( just over half of the target population had enrolled in HSG (764,500are aged 60 and above and 509.300 between 40 and 59years old. The initiative has faced some structural barriers (governance architecture, service provision mechanisms, financing structures and remuneration systems). Moreover, the subsidies provided are not always seen as enough to encourage enough small providers to change their practices and relinquish their autonomy. Nevertheless, physicians broadly support the program's objectives, seeing the potential to benefit the whole country by enhancing preventive care, improving chronic disease management, and reducing long-term healthcare costs.

Some of the improvements to date include evidence of increased patient engagement with preventive care and awareness of chronic disease management - the introduction of structured health plan discussions has led to a more systematic approach to preventive health, while subsidies for specific screenings and vaccinations have improved accessibility and uptake. However not all patients who have a health plan willingly follow the recommendations or return for annual check-ups.

Remaining challenges include additional admin workload, difficulties in integrating HSG tasks into existing clinical workflows, increased number of patients attending clinics and financial pressures. Additionally, patient misconceptions about HSG, particularly around enrolment requirements and its integration with existing healthcare schemes, have created inefficiencies and confusion.

Research has highlighted the importance of tailoring implementation strategies to address the diverse needs of providers to meet HSG's objectives. There is also a crucial role for public education and communication to provide stakeholders with a collective understanding of HSG's objectives. Meanwhile providers are concerned that data collection requirements divert attention from care requiring a balance between meeting data collection objectives and quality of care.

Source: M. Ramesh & Jiwei Qian (2025) Strengthening primary care in Singapore: aligning vital health system components, Policy Design and Practice, 8:1, 50-63, DOI: 10.1080/25741292.2025.2501826. See also https://doi.org/10.1080/25741292.2025.2501826 and https://bmchealthservres.biomedcentral.com/articles/10.1186/s12913-025-13143-4 and https://www.channelnewsasia.com/today/big-read/healthier-sg-better-health-outcomes-5176061

# Denmark's reform of out-of-hours primary care

## Tackling rising demand, GP shortages and changing demographics

**Denmark**

### Challenge Faced

The Danish healthcare system is universal and based on the principles of free and equal access to healthcare for all citizens. The healthcare system offers high-quality services, the majority of which are financed by general taxes. There is an emphasis on preventive care and cost containment. Its healthcare system is divided into three levels: state, five regions and 98 municipalities. Each level of the system has sperate taxes. Regions are responsible for hospitals and paying for primary care services delivered mostly by self-employed healthcare professionals HCPs). Primary care is seen as the cornerstone of the system with general practitioners (GPs) the gatekeepers to specialised services, responsible for ensuring that patients receive appropriate and coordinated care. In the past decade Denmark has faced a growing challenge in responding to rising demands from a growing ,ageing, co-morbid population requiring 24/7 primary care, and an increasing shortage of GPs resulting in several major reforms of out-of-hours primary care models (OOHPC). However, the decentralised nature of the system, with significant regional autonomy, has meant that solutions have been developed independently, creating a diverse landscape of OOHPC, providing opportunities for comparative analysis.

### Intervention Description

General practices operate a list-based system, with 99.5% of citizens registered with a specific GP, giving rise to enduring relationships and care continuity. The average GP to patient ratio is 1: 1700. GPs are remunerated by a mix of per-capita fees and fee-for-services. The per-capita fees are differentiated with higher fees for GPs working in areas with few GPs and/or with patients with high age or high degree of comorbidity. Around two-thirds of the GP's income is fee-for-service payments the rest capitation.

GPs must offer consultations through telephone, e-mail, face-to-face and secure video access from 8am to 4pm on weekdays with at least one day a week later than 4am. All practices are fully computerised with different software systems handing patient records, electronic prescriptions, referrals to specialists or hospitals, and receiving lab results and hospital discharge letters. Practices have access to point-of-care tests such as haemoglobin, C-reactive protein, blood glucose, urine dipsticks and microscopy, ECG, streptococcal antigen test, etc. A growing number also have ultrasound.

Historically, OOHPC was delivered by GP cooperatives in all five regions; reforms over the past decade have resulted in different OOHPC models.

GP Cooperatives (North, Central, South): since 2024 existing GP cooperatives continue to provide evening and weekend OOHPC care up to 11pm via telephone triage, teleconsultations, and home visits. After 11pm the emergency medical services (ambulance care) is responsible for OOHPC in Central and Northern with physicians and nurses managing triage and paramedics conducting home visits. In Southern OOHPC is administratively overseen by the Emergency Department (ED), with GPs and paramedics delivering care.

In 2022, Region Zealand took back responsibility for OOHPC with a pan-region model employing GPs and other doctors as triage doctors as well as nurses, and paramedics for all visits.

Medical Helpline (Capital): A 24/7 nurse-led helpline, supported by physicians, provided OOHPC, primarily utilising hospital-based consultations.

### Outcomes Achieved

Danish OOHPC models differ in their use of HCPs for delivering acute unplanned care. All regions still provide gatekeeping, with OOHPC performing a primary evaluation before a possible hospital contact. However, delivery of relevant data to registries has decreased substantially potentially creating a barrier for nationwide research on OOHPC.

- All models successfully substituted GPs with other healthcare professionals, mitigating the impact of GP shortages. However, a study investigating team-based collaboration practices in OOHPC focusing on task shifting from GPs to found while feasible in a team-based workflow, resulting in efficient use of available resources and high job satisfaction; GPs should not be replaced with nurses. Instead, their roles and skills should be seen as complementary, which calls for task sharing.
- Collaboration improved, but inconsistencies remained in data sharing between OOHPC, EMS, and hospitals.
- The shift away from the centralised GP cooperative model disrupted national data collection, hindering comprehensive research.
- Payment structures for OOHPC transitioned from fee-for-service to fixed hourly rates across most models.

Denmark has plans to continue to strengthen primary care, including moving to four regions, training hundreds of specialists in primary care, better integration and continued emphasis on preventive services with a new political healthcare reform with a strong focus on primary care and general practice expected to be fully implemented in 2027.

Source: https://www.tandfonline.com/doi/full/10.1080/02813432.2025.2508929#abstract and https://www.tandfonline.com/doi/full/10.1080/02813432.2025.2490915?src=recsys#abstract

Deloitte.