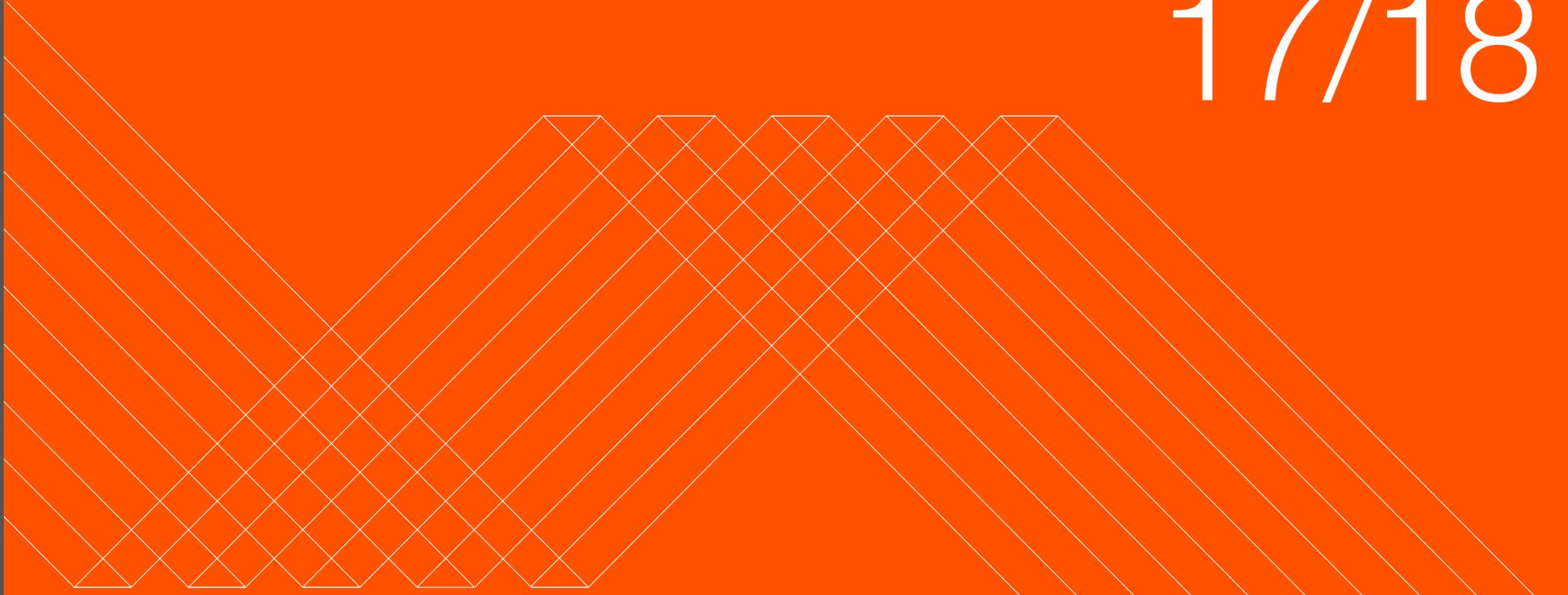


**Kent Surrey Sussex  
Academic Health Science  
Network**

# **Annual Review**

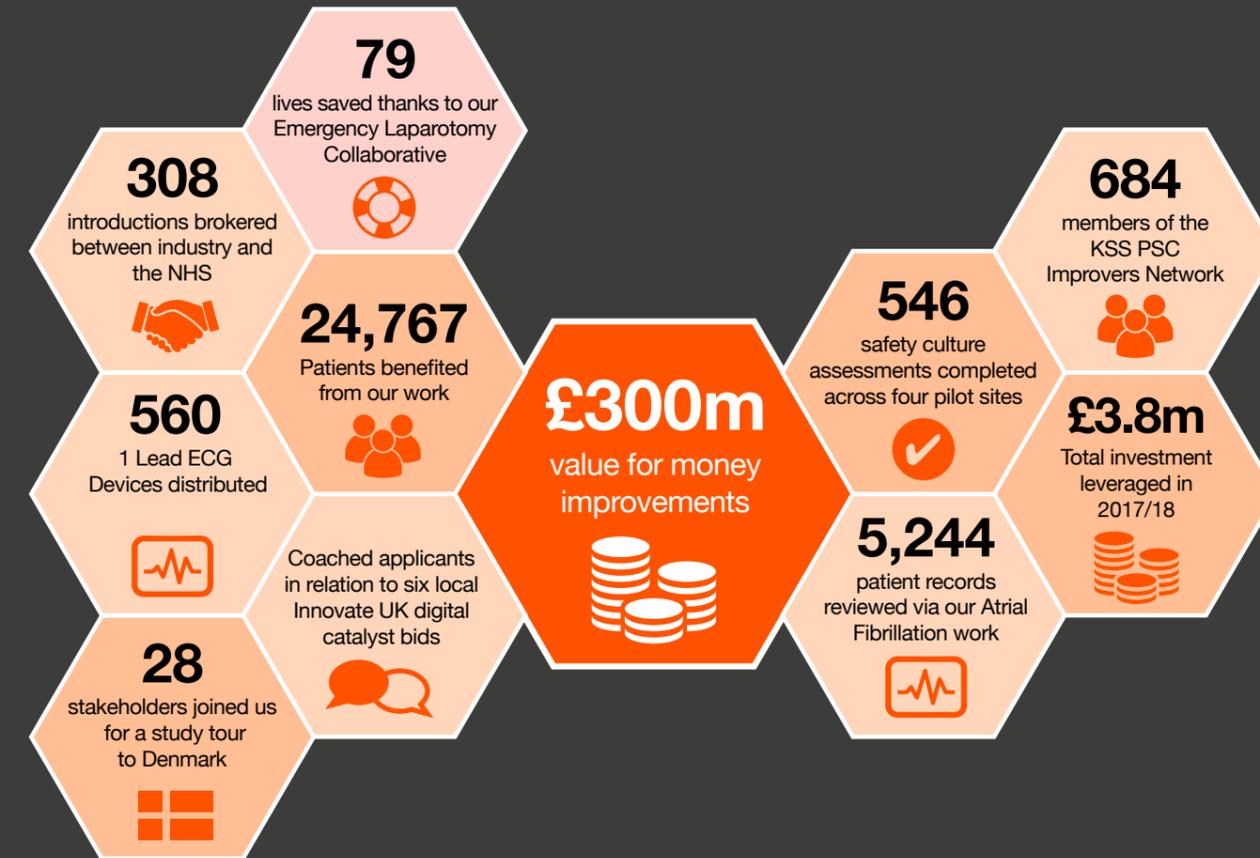
**17/18**



# Contents

- 3 Highlights from 2017/18
- 4 KSS AHSN - the first five years
- 5 Supporting our STPs
- 6 Surrey Heartlands Expo
- 8 Improving clinical outcomes
- 9 Delivering better patient experiences
- 10 Supporting the evaluation of innovative new technology
- 11 Stimulating wealth creation
- 12 Accelerating beneficial affordable Medtech
- 14 Innovation in action

## Highlights from 2017/18



- Our Acute Kidney Injury work within the Deteriorating Patient programme has demonstrated a reduction in 190 deaths when comparing Q2 17/18 data with the previous year (1% mortality reduction) across KSS Trusts as well as a reduction in bed days of 4,985 in the same period. Average lengths of stay has been consistent at 13 days
- We have supported colleagues at NHS England in their delivery of the musculoskeletal event in the South East, in partnership with the Arthritis and Musculoskeletal Alliance (ARMA)
- Ten of the eleven acute trusts in Kent Surrey and Sussex continue to participate in the Improving access to medical technology for diabetics project to increase the uptake of beneficial, good value medical technologies. We have seen a 3.67% increase in the number of patients receiving insulin pump therapy between July 2017 and December 2017.

### International impact

We are supporting the NHS by identifying solutions from Europe that can be adopted here, as well as supporting the export of solutions and helping to establish the NHS as the go to place for healthcare innovation as envisioned in the 5YFV.

- As part of our ADAPT project, we have come together with fifteen other organisations from the UK and France, including research laboratories, companies, NHS trusts, economic clusters and health science networks to tackle mobility problems faced by elderly and disabled people
- KSS AHSN is providing the international expert input into Southern Denmark's e-health city project
- We have joined as a founder member the Global Clinical & Care Co-ordination Forum.

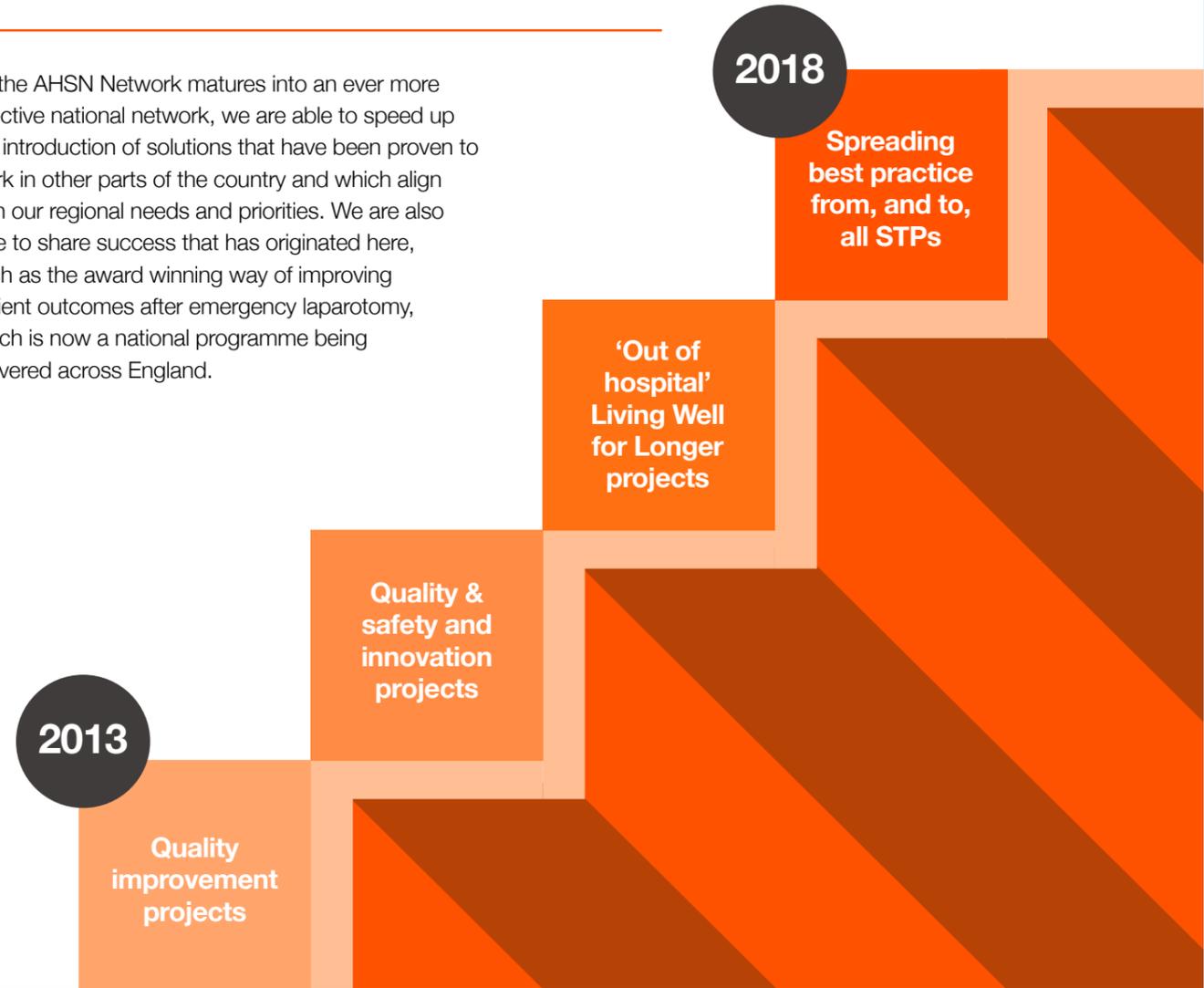
# KSS AHSN - the first five years

AHSNs were created with a five year licence in 2013 to be in the vanguard of NHS England's determination to make the spread of innovation and best practice faster and more systematic.

Now, as the NHS reaches its 70th birthday, AHSNs have received their second licence and are established as key organisations in the innovation landscape. The support from NHS England continues, and the AHSNs now also receive funding from NHS Improvement for patient safety work and from the Office of Life Sciences to further accelerate the spread of innovation to benefit patients and support economic growth.

In its first five years, KSS AHSN has built on the strong clinical networks that were established through the region's Enhancing Quality and Recovery (EQR) programmes. It has linked innovation and industry into those networks and created a further range of services to connect industry with the NHS through its Bridging the Gap programme. The KSS Patient Safety Collaborative was created to deal with the most urgent safety issues identified by clinical communities in Kent, Surrey and Sussex. That collaborative approach to identifying and prioritising remains a cornerstone to how we build our work plans.

As the AHSN Network matures into an ever more effective national network, we are able to speed up the introduction of solutions that have been proven to work in other parts of the country and which align with our regional needs and priorities. We are also able to share success that has originated here, such as the award winning way of improving patient outcomes after emergency laparotomy, which is now a national programme being delivered across England.



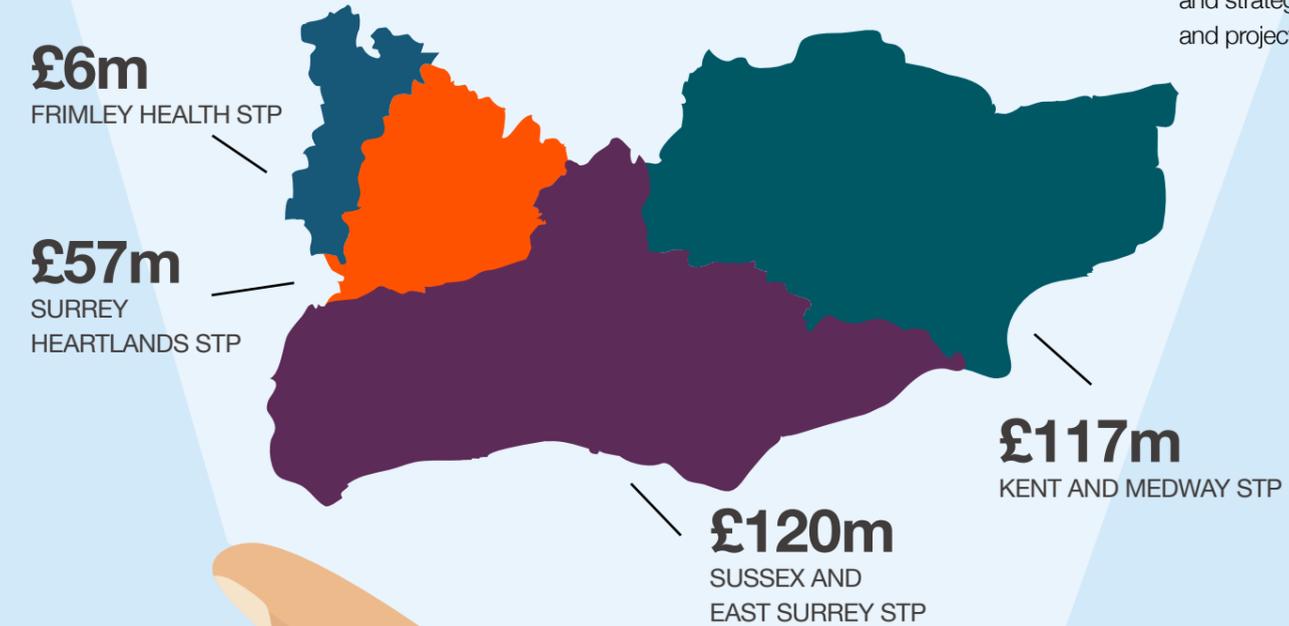
# Supporting our STPs

Our 2017/18 business plan framed our work around supporting faster implementation of local Sustainability and Transformation Partnerships (STPs) and Five Year Forward View (FYFV) delivery.

Our core functions of innovation and improvement underpin the impact we seek to make for our members and stakeholders including STPs, NHS England and NHS Improvement.

Our services for members and partners include our experience, expertise and strategic advice in areas such as innovation scouting, joint bidding and project management, and analysis and evaluation support.

## Value for money improvements achieved per STP



## Working with our STPs we have...

- led and facilitated events for the Sussex and East Surrey STP on the 'Connected Care Assessment', which has had very positive feedback
- enabled Surrey Heartlands STP to develop its Academy Model, which is now seen as the national exemplar to accelerate the development of Integrated Care Systems
- spread the K.i.D. by helping to secure £75k investment into the Surrey Heartlands STP from The Health Foundation to support the establishment of a Surrey Integrated Data set (SCALE)
- continued to support Frimley STP with its Dementia horizon scanning and the development of a system wide transformation dashboard.

## Surrey Heartlands Expo

Technology, and the innovation it drives, hold great potential for healthcare, but one of the great challenges is determining which technology offers the greatest benefit.

Recognising this, Surrey Heartlands (SH), in collaboration with KSS AHSN, staged its inaugural Surrey Heartlands Expo event to bring together the best of industry and health and social care from across Surrey.

The event showcased some of the most creative collaborations and innovations, as well as proving an opportunity to plan how to drive the use of these innovations at pace and scale through clinical transformation work.

More than 300 people attended the event, which was planned jointly by SH and KSS AHSN. The day was designed to deliver on a range of objectives, including engagement with senior and clinical leads and wider colleagues; showcasing best practice and new products and services to enable faster spread and adoption into clinical practice; enable engagement between industry and health and social care in Surrey Heartlands, and to enable patients to benefit from better products and services.

Commenting on the Expo, Mark Hamilton, Executive Clinical Director, Surrey Heartlands

Academy, said: “The expo was a great success, and it was fantastic to offer key stakeholders from across the region the chance to learn more about the range of great technologies that could benefit our citizens.

“We’re now looking to create a series of connected activities that will enable us to harness the energy of the event, and the experience and enthusiasm of our delegates, to develop and drive our priority workstreams.”

Surrey Heartlands is on its way to being in direct control of all health commissioning as well as commissioning of social care and public health activity within its area, through “devolution”, which has been agreed by local and national health and care organisations.

KSS AHSN is supporting Surrey Heartlands, as the devolution process progresses, to adopt and spread innovation that will help transform services and improve health outcomes for the 850,000 people living in Surrey Heartlands.

# Surrey Heartlands EXPO 2018

## Leading on Leadership,

## Capability and Culture

All evidence shows that to improve patient safety you need to focus on a range of issues, and that to make a lasting impact, improving the culture in teams and organisations has to be a priority.

Working with STPs and beyond, Kent Surrey Sussex Patient Safety Collaborative is committed to increase the number of healthcare professionals across the region with the skills and knowledge to deliver long-term, sustainable improvements in patient care.

At the end of the financial year, its Improvers Network had more than 680 members drawn from health, social services and care settings, many of them are also members of Q.

## Assessment of Safety Culture

Through its Assessment of Safety Culture project, KSS PSC has created a set of guidance and tools to support organisations in developing their safety culture.

The project, known as SCQIRE, worked with teams across four large acute hospitals in the south-east to embed a safety culture, and grow leadership and quality improvement capability.

It used a modified version of Yorkshire & Humber Improvement Academy’s model for assessing and improving safety culture in front line teams. Evaluation from the England Centre for Practice Development showed that the approach allowed front line teams to run the project independently.

“By modifying the Y&H model, we were able to build in capability and capacity for teams to run the project themselves, rather than it being driven by us,” said Tony Kelly, Clinical Lead for Leadership, Capability and Culture at KSS PSC.

“The evaluation helped us to determine that our model of delivery didn’t alter the outcomes of the original model. Our research has shown that teams can be empowered to tackle their own safety culture.”

## Communities of Practice

Communities of Practice (CoP) are groups of people who share a concern or a passion for something they do and learn how to do it better as they voluntarily interact regularly.

KSS PSC helped its members to create CoP focusing on Mortality reviews and Serious Incident (SI) Investigations and reporting – two high profile areas we believe will benefit from a collaborative approach to achieve the aim of system learning and improved outcomes for our patients.

Members of the SI CoP have created and delivered a Serious Incident Investigator Training programme. Run over two days, the course is supported by KSS PSC and focusses on a range of issues, including Root Cause Analysis, Duty of Candour, Patient/Carer focus and report writing.

Additionally its Duty of Candour workstream has developed a leaflet covering the importance of Duty of Candour which can then be modified by each trust for their own use.

## Mortality CoP

A survey of medical directors from across Kent, Surrey and Sussex, showed a lack of well-structured training for staff undertaking mortality reviews, despite more than 75% stating that they felt that mortality governance was a top priority of their Trust board.

Based on this research, the Mortality CoP has coordinated the roll out of training of the Royal College of Physicians structured judgement review form. The group will share the learning by creating a safe space to share the themes and trends across KSS, working with patients as partners for improvement to improve patient care.

**Find out more: [www.kssahsn.net/lcc](http://www.kssahsn.net/lcc)**

# Improving Clinical Outcomes

To support providers and commissioners to deliver Patient and NHS benefits

## Making emergency surgery safe

Emergency laparotomy is a major surgical procedure, with 30,000 to 50,000 performed every year in the UK. However, around 15% of patients are reported to die within 30 days of surgery. Over 25% of patients remain in hospital for more than 20 days after surgery, costing the NHS over £200m a year.

Funded by the Health Foundation, the Emergency Laparotomy Collaborative was established in 2015 to use a quality improvement (QI) approach to tackle this. The Collaborative brings together 28 hospitals and 24 NHS trusts across three AHSN regions: Kent Surrey Sussex; Wessex; and West of England.

The Collaborative has worked to improve standards of care for patients undergoing emergency laparotomy surgery, reduce mortality rates, complications and hospital length of stay, while encouraging a culture of collaboration and embedding QI skills to ensure sustainability of change.

This has involved the spread and adoption of the evidence-based Emergency Laparotomy Pathway Quality Improvement Care (ELPQuIC) bundle within the NHS

trusts. The programme has brought together dozens of staff at collaborative learning events from across the trusts – from emergency departments, radiology, acute admission units, theatres, anaesthetics and intensive care.

Initial results show that the roll-out of the care bundle across 28 hospitals successfully reduced average length of stay by 1.3 days and reduced crude in-hospital 30-day mortality rate by 11%, when comparing baseline period with improvement period. In Kent Surrey Sussex alone, we estimate that 79 lives were saved during the 24-month programme.

A health economics analysis suggests every £1 spent will result in approximately £4.50 benefit to the wider health and social economy.

Emergency Laparotomy Collaborative has been identified as one of the highest impact programmes developed by all 15 AHSNs. Following this, we are now in advanced stages of planning for exporting this programme nationwide.



# Delivering better patient experiences

Linked with Patient Safety, this supports national and local improvement aims through the use of evidence, improvement methods and innovation to spread excellence and achieve measurable outcomes for patients.

## Polypharmacy

Following the success of our Phase 1 trial to reduce levels of problematic pharmacy in people aged 65 and over, we have refined and rolled out the project with an additional five Clinical Commissioning Groups (CCG).

The initial six-month trial funded a pharmacist and pharmacy technician to perform Level 3 (holistic face-to-face) medication reviews for patients at risk of medication related harm in care homes and their own homes.

The pilot worked across a range of sectors from GP practices, hospitals, care homes and community pharmacies. It showed that this approach can prevent hospital admissions, offers savings to CCGs prescribing budgets, and is well received by patients and carers.

Phase 2 commenced in October 2017 across five CCGs in Surrey and Sussex, which included around 360 care homes and more than 9,000 patients.

Preliminary results show that, so far, 1,900 patients have undergone level 3 medication reviews, with over 17,800 medications reviewed - approximately nine medications per patient.

These initial findings have found a reduction of between 12-20% of medications per patient, following the medication reviews.

Initial early data also shows potential cost reduction of around £86,300 through prevention of possible hospital admissions as a result of accepted interventions.



# Supporting the evaluation of innovative new technology

We know that the earlier a problem is treated the better, but patients in care homes sometimes have to wait for a consultation with a GP, especially when a home visit is needed.

Working with health and care sector colleagues in East Sussex, technology company AMA Xpert Eye is looking to solve the problem with its 'See what I see' project, which enables GPs to conduct remote clinical assessments using Google glasses.

The idea of using a camera system to provide remote clinicians with real time information is not new. However, with many technologies the users' interaction with the resident or patient is interfered with by the needs to look at a screen to communicate.

AMA's Xpert Eye technology (a head mounted camera system) allows the remote viewer to share the exact point of view of the glasses' wearer, offering freedom of action while keeping the operator's hands free.

Importantly, it also enables continuous interaction with the patient, which is vital with older patients who may have some form of condition related confusion or dementia.

The technology has been tested in care homes in East Sussex, receiving positive feedback. All partners placed a high value on working together and building

relationships across organisations. Care homes reported that the technology could provide a real opportunity for nursing staff to work more collaboratively with GPs when providing care for residents.

For CCGs, the project has been a stimulus to learn more about supporting the needs of care homes and wider healthcare system by developing a process to collect and review data on the number of call outs and admissions to secondary care from care home residents.

Gill Potts, Senior Project Manager at KSS AHSN, said the trial had delivered a range of useful learning.

"The involvement of a patient representative was incredibly valuable for this project," she said.

"It has also been crucial to have a clinical lead who can strengthen engagement with GPs, and we will take all the learning into the next phase of the project."



# Stimulating wealth creation

## Accelerating the uptake of well evidenced beneficial digital technologies and supporting the development of Artificial Intelligence in Health and Care

The AHSN network invests time and resources into working with industry to support and develop value propositions for proven products and services, and to make introductions to the NHS. This helps patients benefit from better products and services faster, and supports economic growth by making it easier for industry to do business with the NHS.

### Bridging the Gap

As well as working as part of a national network to speed up the spread and adoption of innovations that can prove their impact and value, our Bridging the Gap service operates at a regional level.

Working at the interface between the NHS and industry, Bridging the Gap connects the sectors to ensure that patients can benefit from products and services that are evaluated and supported by evidence to connect NHS and industry.

In 2017/18 we provided advice and support to 315 companies. Every company received valuable market insight. Additionally, where their products or services matched an NHS need - and were ready - they were introduced to the NHS.



## A five stage process

Starting with a market insights briefing, each stage of the process builds on the previous. For the later stages we will need to understand in detail how a company's product or service will impact on services, and what the expectations are for the innovation's impact. Only companies with realistic expectations, affordable products or services and a clear market access strategy will be able to progress to the final stages of the services we offer.

- 1 **Market insights**  
✓ health warning
- 2 **Innovation surgeries**  
✓ health check
- 3 **Surgery+**  
✓ developing the offer
- 4 **Validation**  
✓ evaluation in practice
- 5 **Diffusion**  
✓ accelerating adoption

# Accelerating beneficial affordable Medtech

We support the structured development of a wide variety of beneficial and affordable Medtech products at various stages of the Innovation Pathway. This includes helping to deliver the Small Business Research Initiative (SBRI) for Healthcare and working with Small and Medium Enterprises focused on Artificial Intelligence

## Atrial Fibrillation – detect, review, protect

We're working with NHS England and health and care settings across Kent, Surrey and Sussex to reduce the number of people at risk from Atrial Fibrillation (AF) related stroke.

AF is a major cause of severe strokes, but the treatable condition can go undetected – experts estimate that more than 28,000 people may be living with undiagnosed AF in Kent, Surrey and Sussex

The KSS AHSN Alliance for AF aims to reduce the number of people dying or being disabled by AF-related stroke by optimising the use of anticoagulants in line with NICE CG180 guidelines. This includes educating and upskilling primary care around stroke prevention, to sustain the learning and close the Public Health England AF prevalence gap across KSS.

Alliance members provide Primary Care with a variety of interventions and education, to improve the detection of

patients with AF using mobile ECG devices, performing timely anticoagulation reviews and ensuring patients are receiving appropriate care.

The primary target to benefit from this project is the patient.

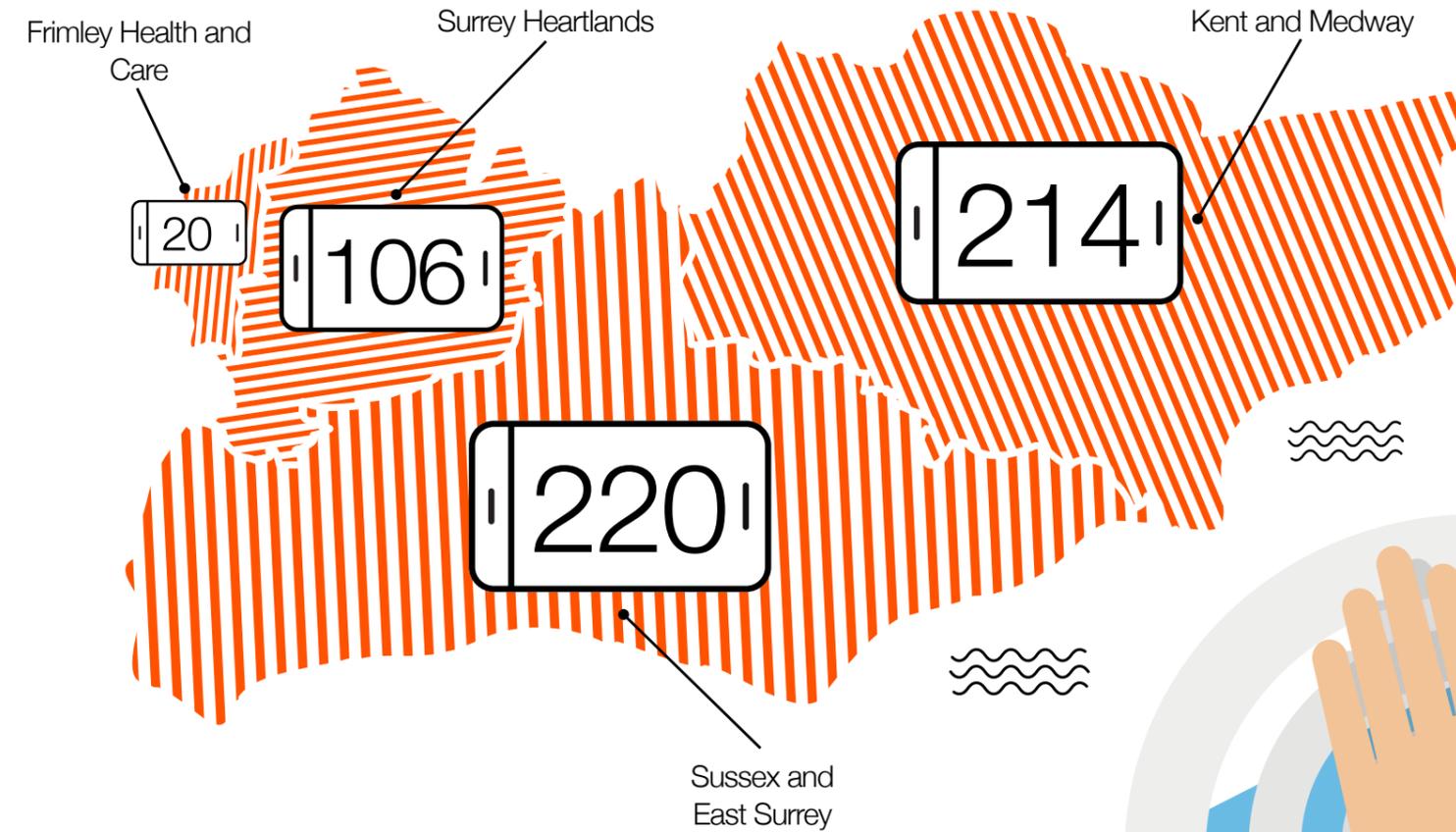
Work is progressing well to mobilise work stream two (reviews), improve the care of those with sub-optimal medication and meet our Return on Investment (ROI) ambitions. We are currently preparing reports for each of the GP practices we previously worked with in conducting pharma sponsored clinical audit reviews to encourage GP practices to act upon the recommendations, and therefore see real benefits and improvements in line with the forecasted figures in our ROI assumptions.

A hugely exciting new chapter in our AF work opened as the financial year closed, with the distribution of 560 1 Lead ECG devices across the region.

The devices are being distributed to practitioners most likely to see and examine patients who are at high risk of AF or AF related stroke and would be able to build single lead ECG checks into their workplans.

Their potential impact is huge, and as the full allocation of devices is distributed during 2018/19 we expect to see ever increasing incidence of the detection of AF.

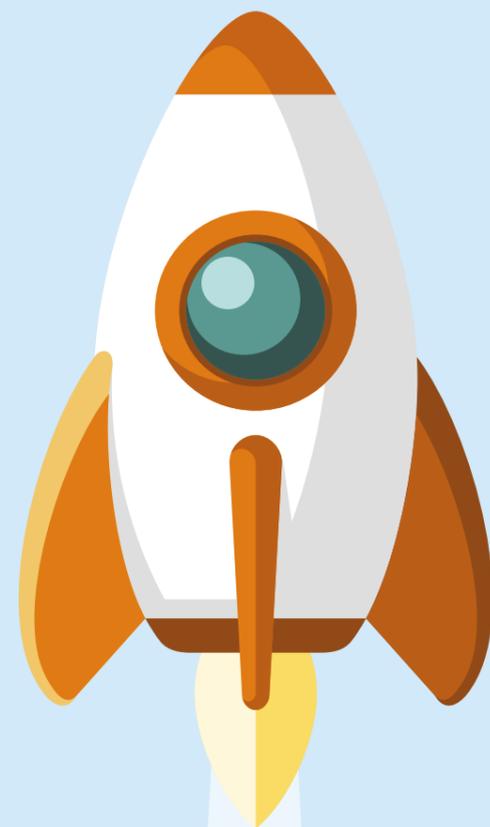
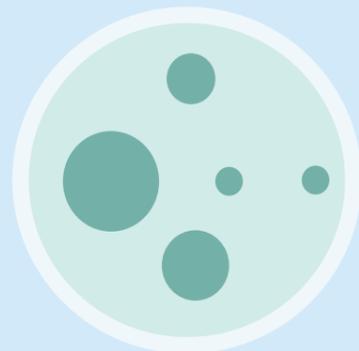
KSS AHSN will be closely monitoring their use, and will receive anonymous data for any checks that indicate possible AF tracings. Statistics showing the usage and impact of the 1 Lead ECG devices are being updated monthly in an interactive map, which can be viewed at KSS AF Visual Impact Report ([tinyurl.com/y8jkb47u](http://tinyurl.com/y8jkb47u)).



# Innovation in action

The AHSN Network simplifies access to expertise for industry and creates the right conditions for new solutions – services, products and technologies – to flourish and spread faster. We collaborate as a national network of 15 to identify what is working best locally and then scale it nationally.

The following three case studies show the range of projects KSS AHSN has supported over the last year.



## SHREWD

Working with 26 CCGs across England, Transforming Systems has developed a simple to understand, real time view of system pressure – SHREWD – that can be implemented quickly across any health and social care system.

For the first time, users can see any changes to their urgent care system as they happen. SHREWD draws data from all providers across health and social care in real time. It presents agreed, diverse, mission critical indicators that identify when, where and why pressure is building.

Using high impact, auditable actions, SHREWD pushes live alerts to front line teams who, using an App, respond with pre-planned actions, leaving a digital audit trail. The aim is to pro-actively tackle the causes of emerging pressure live using preplanned escalation actions.

Colin Rees, CEO and Co-founder of Transforming Systems, thanked KSS AHSN for its support.

“It’s very difficult sometimes, you don’t know what you don’t know, and KSS AHSN was able to join the dots and help us to talk to the right people. That’s really useful help for a company like ours, where we don’t have the resources of the big boys.”

## Beautiful Information

All NHS trusts are now having their daily situation reports (SitRep) automatically collected by NHS Improvement, thanks to an innovative development from Kent-based data solutions provider, Beautiful Information.

SitReps are collected from acute trusts daily, through manual data entry on areas such as A&E closures and diverts, cancelled operations or bed pressures. The new automated data collection system, developed by Beautiful Information and NHS Improvement, will save more than 36,000 hours each year through the transition.

The data collected will also be used in an “emergency care dashboard” that will visualise where bottlenecks are and signal to NHS Improvement where support is needed.

Beautiful Information is a company that has been created by the Kent Surrey Sussex Academic Health Science Network, East Kent University Hospitals NHS Foundation Trust and Ashford and St Peter’s NHS Foundation Trust.

Marc Farr, its founder, said he hoped the technology would provide “more time to develop insight rather than simply reporting data”.

**For more information, please contact [info@beautifulinformation.org](mailto:info@beautifulinformation.org) or visit [www.beautifulinformation.org](http://www.beautifulinformation.org)**

## TIHM

The TIHM trial, which is being conducted with 700 patients with mild to moderate dementia and 700 carers, draws on the University of Surrey’s expertise in emerging IoT (Internet of Things) technology and includes eight device manufacturers.

Electronic engineers within the university’s 5G Innovation Centre have created the complex ‘back end’ system which processes the data being picked up by the devices. Using machine learning algorithms, this then provides ‘alerts’ which appear on screens monitored by a team at the Abraham Cowley Unit in Chertsey, an acute therapy service.

In addition to measuring health indicators such as a patient’s temperature, weight, body mass index and blood pressure, the technology also collects information about their movements around the home, producing an immediate alert if they are wandering too far away or have had a fall.

Combining information from various devices can give an early indication of possible health issues. For example, early indications of a urinary tract infection (which, if untreated, often leads to the person being admitted to hospital) can be detected by combining data from sensors on a bathroom door, measurement of sweat levels on bed sheets, and body temperature.

# Contact

---

 [www.kssahsn.net](http://www.kssahsn.net)

 0300 303 8660

 [enquiries@kssahsn.net](mailto:enquiries@kssahsn.net)

 Follow us @kssahsn

 First Floor, Wentworth House, Crawley Hospital,  
West Green Drive, Crawley, RH11 7DH

