tele vision

Telehealth could help the NHS achieve many of its strategic goals, but it is not widespread. Seamus Ward talks to some of the pioneers and asks if its time has come

Notwithstanding regular entreaties from national NHS leaders and politicians – most recently in the *Five-year forward view* – the adoption of telehealth in the NHS has been patchy. This is despite the fact that a smartphone has the technology to monitor patients at home, offer consultations with clinicians via video link or even receive a text reminding diabetics to test their blood.

In 2011, the whole system demonstrator (WSD), the largest ever randomised control trial of telehealth covering more than 6,000 patients, found that, if delivered properly, telehealth can reduce mortality by 45% and reduce the need for emergency hospital admissions by 20%. However, this was on a low base and equated to just 0.14 fewer admissions per patient over 12 months. There was a reduction in costs but not a significant one.

Many professionals, particularly clinicians, remain unconvinced. In some areas, GPs, newly empowered as commissioners, have turned their backs on the initiative, refusing to recommission services often initiated by their predecessor primary care trusts. Their reasoning is two-fold – the services must be delivered on a large scale to be financially sustainable. And they fear it leads to additional workload, particularly home visits.

However, other local health economies have been eager adopters. Even if the financial case cannot be made, they believe the clinical benefits outweigh financial concerns – for them it's the right thing to do, ensuring patients can live at home and problems can be addressed when they first emerge, rather than when the patient's health has deteriorated to crisis point.

David Cockayne, managing director of the Good Governance Institute, believes telehealth is not a silver bullet solution, but one tool that can be used by the NHS to modernise and refocus its services.

'The key thing for me is that it has to be part of a whole package of care. I think telehealth is a victim of being put on a pedestal, where it was the great hope that would allow change and innovation in the NHS. However, I still believe it has a major role to play.'

Cost-benefit issues

Mr Cockayne, formerly a director of telehealth hardware and software supplier Tunstall, says a cost-benefit analysis of telehealth is difficult. While it may free up clinicians' time, for example, there are other benefits that are more difficult to attach figures to – such as greater patient engagement in their own health. 'Just because we've been trying it for 10 years, doesn't mean it won't work. It would be a real shame if it didn't become part of the system.'

Raguraman Padmanabhan, East London NHS Foundation Trust telehealth team leader, says its service is wide-ranging. This includes a focus on prevention by giving information on a healthy lifestyle, through to monitoring patients' vital signs and telemedicine.

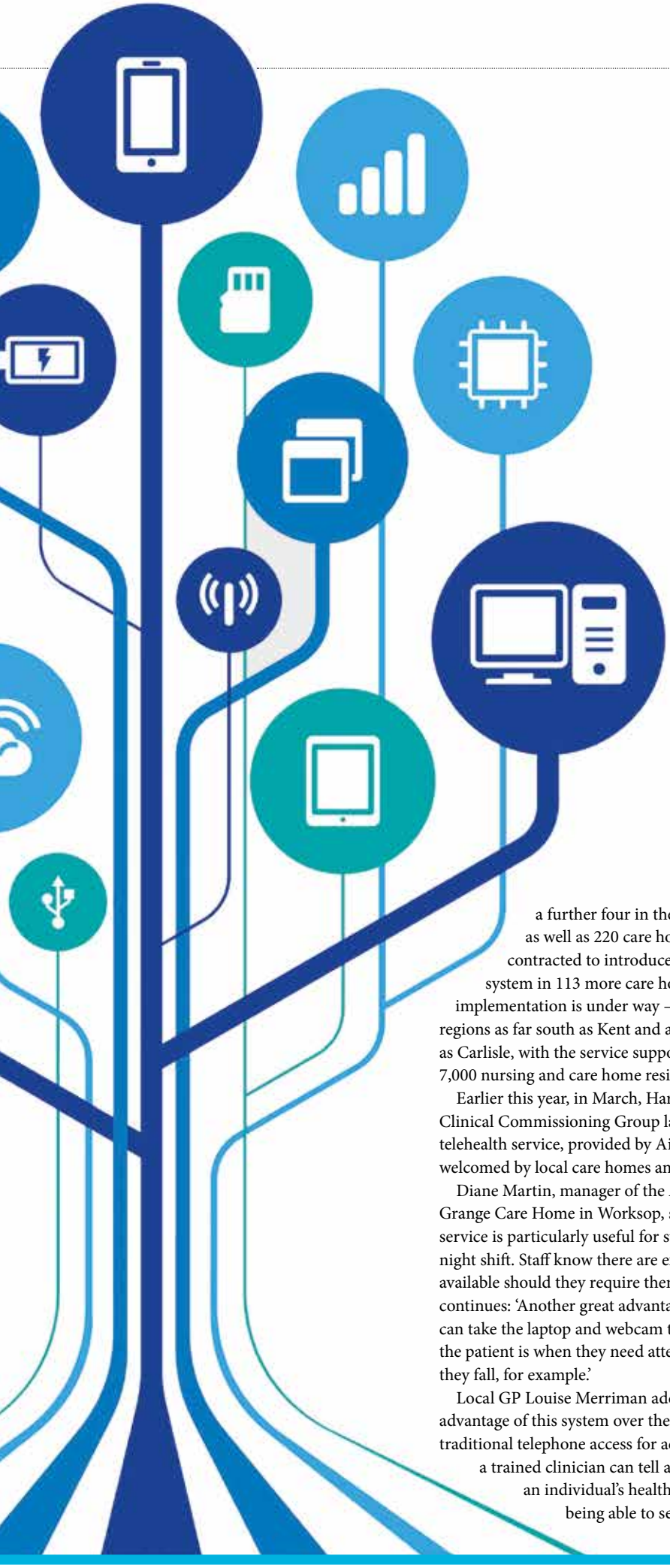
East London was a WSD site, focusing on people with long-term conditions such as diabetes, COPD and heart failure. After the demonstrator ended, the trust decided to make the service mainstream in 2012, as part of the transformation of healthcare delivery locally.

Clients are told that telehealth does not replace any face-to-face contact with clinicians, but is there to facilitate their self care. But any reduction in face-to-face contacts could lead to savings, he adds. Currently, the service cares for about 600 clients. This includes some 300 who use a smartphone app called Florence (or Flo – pictured), through which they can take and text their health readings. Flo can also send messages to patients – for example, to prompt them to send in their blood test readings.

Patients with more complex needs have a TV set-top box installed and maintained by the trust's partner, Philips. Linked to the internet, patients can use the box to send readings, complete questionnaires and watch health education videos through their TV.

'It gives the patient confidence that someone is monitoring their health and at the same time the patient is taking ownership,' Mr Padmanabhan says.

The telehealth service provided by Airedale NHS Foundation Trust through its Immedicare partnership with technology firm Involve, is much bigger. It provides telehealth to 13 prisons, with



a further four in the pipeline, as well as 220 care homes. It is contracted to introduce its telehealth system in 113 more care homes – implementation is under way – serving regions as far south as Kent and as far north as Carlisle, with the service supporting up to 7,000 nursing and care home residents.

Earlier this year, in March, Hardwick Clinical Commissioning Group launched a telehealth service, provided by Airedale. It was welcomed by local care homes and GPs alike.

Diane Martin, manager of the Autumn Grange Care Home in Worksop, says the service is particularly useful for staff during the night shift. Staff know there are extra resources available should they require them. She continues: 'Another great advantage is that you can take the laptop and webcam to wherever the patient is when they need attention – if they fall, for example.'

Local GP Louise Merriman adds: 'The advantage of this system over the more traditional telephone access for advice is that a trained clinician can tell a lot about an individual's health based on being able to see the person. The care home staff can then be supported to carry out further assessment and advise on the best management. This project will promote good-quality care while reducing unnecessary and inappropriate admissions and calls to emergency services.'

In Airedale, the trust serves 31 local nursing and residential homes. It also provides a service for local patients who may be in the last weeks or months of their lives. The end-of life-service, known as Gold Line, began as a project with the Health Foundation. This is coming to an end this summer, but has been commissioned by the local CCG in Airedale, together with both CCGs in Bradford. Numbers of patients cared for under the Gold Line service have increased considerably – from fewer than 600 in May 2014 to almost 1,000 in April this year.

Importance of scale

Rebecca Malin, deputy director of strategy and business development, says scale is vital to make telehealth financially sustainable. 'If the trust was providing the service to just 31 care homes locally, it wouldn't be generating enough return to staff the hub 24/7 with band 6 and 7 nurses,' she says. 'Therein lies the challenge for other areas and why I think it makes sense to share capacity across the nation.

'We have 220 care homes and the caseload for Gold Line is just under 1,000 patients. But it wasn't until last November that we moved to having two nurses on duty. Before then, we only ever had one, but we now need two because we have grown and we have changed some of our engagement strategy with care homes that are new to the service.'

Call volumes have increased from an average of 1.5 per month per care home two years ago, to two to three per month and now between three and five. 'We continue to have people who want to set up their own service coming to talk to us, but we always give them a hefty health warning,' adds Ms Malin. 'It costs a lot

Tele glossary

- **Telehealth** Overarching term covering all electronic means of providing healthcare services
- **Telemedicine** The provision of clinical consultations via secure, encrypted video technology
- **Telemonitoring** The remote capture of clinical information, such as pulse and blood sugar levels. Telemonitoring is sometimes called telehealth

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of money to staff and it takes significant time engaging with the care homes.'

The tariff as it stands remains a barrier to a service that seeks to avoid hospital admissions, she adds. But Ms Malin also acknowledges the service generates income for the trust. 'There is a financial benefit to the trust, but we are doing it because it is the right thing to do.'

The Good Governance Institute's Mr Cockayne adds that it takes times to implement telehealth. It involves changing clinical practice and ensuring the right patients sign up. This means not only choosing patients with the conditions that can be helped or monitored by remote technology, but making sure they are comfortable with it – are they able to operate it? And are they happy to hold consultations with a clinician via a video link?

'If a clinician has a patient in front of them who is likely to benefit from the approach, they should be asking themselves if the person is likely to embrace this approach. I don't think whether they are young or old is relevant as lots of older people have adopted the technology and love it.'

Advocates believe telehealth can help integrate services and help move care out of hospital. In East London, the trust's management of the transition between home and hospital is based on a virtual ward, stepping up and stepping down the levels of care when appropriate. Its telehealth services have a central role in this, Mr Padmanabhan says. 'A key element of the model is support for self care as part of the transition process.'

When a patient who would benefit from the telehealth approach is discharged from hospital, the telehealth team receives a referral. Within two hours a clinician will go to the patient's home, provide them with information on the service and get their consent.

Once consent is given, a holistic assessment of the patient, including their support network and physical and mental health, is carried out. They will then be given either the app or set-top box, informed by their condition.

Monitoring is then tailored to the patient. 'We have a discussion with the GP or consultant to set a baseline so they are not managed by a default setting,' says Mr Padmanabhan. 'This can include baselines for heart rate, blood pressure and blood oxygen saturation.'

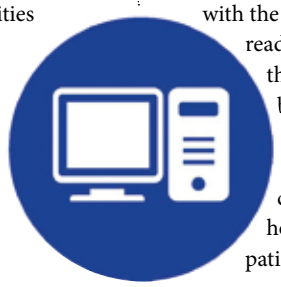
If the readings vary from the baseline, the telehealth workers at the trust can take action, calling them to ensure they are okay or alerting a community-based rapid response team.

Telehealth will also play a big role in integrating services in West Yorkshire and East Lancashire. A local partnership, which includes the Airedale trust telehealth service, was named a vanguard site for enhancing healthcare in care homes across Airedale, Bradford, Craven, East Lancashire and Wharfedale. Telehealth will provide access to advice and diagnosis, where appropriate, as well as supporting independence by focusing on proactive care and linking with the local intermediate care multidisciplinary team.

Despite developments around the country, the big question remains: does telehealth keep people out of hospital and reduce costs? Telehealth sites continue to try to build up an evidence base for their services.

Airedale, Wharfedale and Craven CCG has commissioned an evaluation of the Airedale telehealth project. The study found that over a two-year period following the introduction of telehealth there was a 37% reduction in hospital admissions from care homes and a 45% cut in A&E attendances.

'The challenge in the data is that it is difficult to get a comparator group,' Ms Malin says. 'Take care homes without telemedicine as the comparator, for example – there may be a good reason why they don't have telemedicine. It could be its size or the complexities of the patients. There may also be other interventions going on at the same time [to cut admissions or attendances]. So, we've taken it for what it is, but it is not a randomised control trial.'



However, it is also attempting to build evidence on the worth of telehealth interventions by looking at what happens to the patient in the days following contact with its hub. This is addressing concern that a telehealth intervention might merely delay an admission or trip to A&E. A study has shown this is not the case, she adds.

'If someone is admitted or comes into A&E, we are alerted. Then we consider whether this is something the hub could have supported them on. If so, that's the trigger to deliver more engagement, and perhaps training, with the care home.'

Strategic question

As part of their work on quality, the East London team is looking at how telehealth is preventing unnecessary hospital admissions.

Like Airedale (see box), it is keen to develop new services. For example, the East London team is examining the viability of using its simple telehealth (the mobile app) for patients with pressure ulcers.

The team is piloting a telemedicine service to give clients an alternative to an outpatient appointment. Mr Padmanabhan says: 'A specialist nurse has a Skype appointment with the patient, who has provided their readings. The nurse has access to these to inform the discussion. It's been fantastic.'

The debate about telehealth will continue, but advocates say it can help deliver greater out-of-hospital and integrated care, better patient experience and savings.

Tele triage

Airedale NHS Foundation Trust is rolling out telehealth in the East Lancashire Clinical Commissioning Group area, but in January local GPs decided they wanted to take it further.

'One of the biggest pressures identified by GPs is calls around 8am from care homes requesting home visits,' says Airedale NHS FT's Rebecca Malin. 'The only means they had of triaging was to call the homes and then schedule the visits into their day, so they asked if our telehealth hub could do the triage throughout the day.'

A pilot was launched, initially in two GP practices, allowing the homes to call the hub to request a home visit triage. They are then asked to set up their telemedicine unit and a nurse at the hub will talk to the resident and complete an assessment, provide advice and, depending on the assessment, arrange a community nurse/GP visit.

'GPs report that if the hub requests a visit following triage, they know they really need to do that visit. In the pilot practices, visits have been reduced by around 50%,' says Ms Malin.

One practice had 36 requests for residential home visits in March 2014, making 30 visits. In March 2015, following the introduction of tele triage, it also received 36 requests, but made only 12 visits. Similarly, in the second practice, GPs made 41 visits in March 2014 and 26 a year later. 'We are getting very excited by this and where it might take us,' Ms Malin says.

A GP from one of the practices was even moved to comment on social media: 'Of all the changes in the 15 years I have been working this is the greatest change that has reduced workload I can remember. A big thank you to all involved,' he said.

How NHS Trusts can save millions without paying a penny?

The NHS was one of the biggest topics of the election campaign and even now, almost a month after the result, the future direction of the NHS is still very much up for debate. Recently NHS Trusts in England reported a total NHS deficit of £822million (2014-2015), up £707million from the previous year, causing The Department of Health to comment that Trusts 'need to get better at balancing the books'.

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