

Contrast

NHS

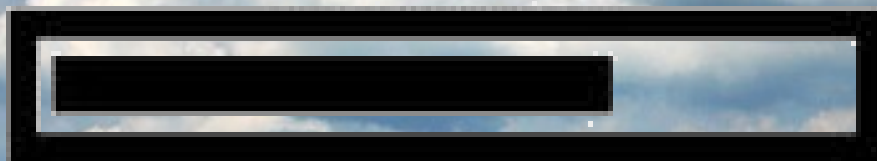
EMRAD

East Midlands Imaging
Network

The newsletter of the East Midlands Imaging Network

Winter 2020/2021

2021



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EMRAD: East Midlands Imaging Network

The East Midlands Imaging Network (EMRAD) aims to deliver timely and expert radiology services to patients across the East Midlands, regardless of where they are being treated.

EMRAD is a partnership of seven NHS trusts:

- Chesterfield Royal Hospital NHS Foundation Trust
- Kettering General Hospital NHS Foundation Trust
- Northampton General Hospital NHS Trust
- Nottingham University Hospitals NHS Trust
- Sherwood Forest Hospitals NHS Foundation Trust
- United Lincolnshire Hospitals NHS Trust
- University Hospitals of Derby and Burton NHS Foundation Trust

These trusts run 11 hospitals, covering more than five million patients.

The network is supported by a small, core

team based at the National Centre for Sports and Exercise Medicine at Loughborough University.

EMRAD launched in 2013 and the East Midlands became the first health community in the UK where NHS hospitals could quickly and easily share diagnostic images. The cloud-based image-sharing system has set the national benchmark for a new model of clinical collaboration within radiology.

The network is now looking to find new ways of solving staffing and recruitment issues in radiology, procuring services in more cost-effective ways, and harnessing the power of artificial intelligence. These advances are aimed at improving the quality and safety of patient services, as well as helping ensure the long-term sustainability of radiology services.

Much has been achieved in but there is still much more to do to realise our vision.

Stay in touch



www.emrad.nhs.uk



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**Andrew Fearn**

*EMRAD
Accountable
Officer*

Reflecting, predicting

Reflecting on 2020, few of us this time last year would have ever predicted the impact of a new virus that was beginning to present in Wuhan City, China. In the last 12 months, Covid19 has had a devastating effect on the whole world. Our lives have been turned upside down. This pandemic has taken friends, relatives and colleagues away from us... some for just a short while; some forever. We work differently as a result. We play differently as a result. We live differently as a result. Even Nostradamus struggled to predict this... so don't beat yourselves up too much if you didn't guess what was going to happen!

Benjamin Disraeli said 'There is no education like adversity'... and boy, have we learned a lot this year! We've learned to Zoom; we've learned to MTeams; we've learned how proud the population of our country is of the NHS; we've learned you don't need to be at work to work, and you don't need to go out to meet people; we've learned to be more respectful and supportive of our friends and colleagues who are struggling; we've learned about those little things that give you joy... such as the cleaner air we breathe because commuting is down and fewer people are flying; we've learned new phrases like 'You're on Mute' and 'Legacy Hand'; we've learned that when they put their minds to it, human beings can develop the vaccine to combat this virus; we've learned that even in adversity, we can laugh and we can smile! I'm immensely proud of the resilience, compassion and inventiveness my colleagues in the EMRAD team have shown this year to not just keep on keeping on, but to thrive.

Looking forward to 2021, that resilience through adversity will pave the way for us to be even stronger. The spirit and the heart that has enabled us to persevere in 2020 will (hopefully) enable us shine brightly as we continue to provide innovative, creative solutions to look after the people we serve across the East Midlands.

Contributors

Andrew Fearn, EMRAD Accountable Officer

Dr James Thomas, EMRAD Medical Director

Penny Storr, EMRAD Programme Director

Amy Quick, Applications Support Lead, CRH

Chris Gregory, Senior Project manager, Wellbeing

Vipul Patel, EMRAD Senior Data Analyst

Simon Harris, EMRAD Senior Project Manager

Veronica Pearson, EMRAD Project Manager

2020: a year in review



- EMRAD launch 'Insourcing Survey' and results shared on the EMRAD website
- The Cancer Alliance fund 25 home reporting work packages as part of the Rapid Diagnostic Centre programme
- EMRAD helped to develop COVID-19 dashboards for GE Healthcare
- HRA & DPIA approval completed and submitted allowing Faculty to create synthetic data from NBSS appointment data to help develop a round-length planning tool as part of the AI in Breast Screening Project
- Chesterfield Royal Hospital need to postpone their PACS Go-Live due to the COVID-19 outbreak

Q1

January- March

Highlights:

- First issue of CONTRAST is launched
- Chesterfield propose May 2020 as their new 'Go-Live' date
- Members of the AI in Breast Screening project team were filmed for BBC Panorama and BBC Click on the use and development of AI in Breast Screening. Delayed due to COVID-19
- As part of the evaluation of the AI in Breast Screening project, TaoHealth carried out surveys of clinicians, service managers and over 4000 women to understand the attitudes and opinions on the use of AI in healthcare & breast screening
- The EMRAD team quickly move to home-working due to national lockdown
- EMRAD Masterclass held at Loughborough

April - June

Q2



2020: a year in review



Highlights:

- Chesterfield Royal Hospital become the next EMRAD Trust to move to the GE PACS Image Sharing solution
- Demonstration by Faculty of Round Length Planning tool to Breast Screening Managers & PHE
- Members of the EMRAD team are co-authors on articles submitted to the BMJ & JMIR
- EMRAD successfully delivered the Innovate UK AI in Breast Screening project
- EMRAD feature as a case study in the GIRFT: Radiology Report

Q3

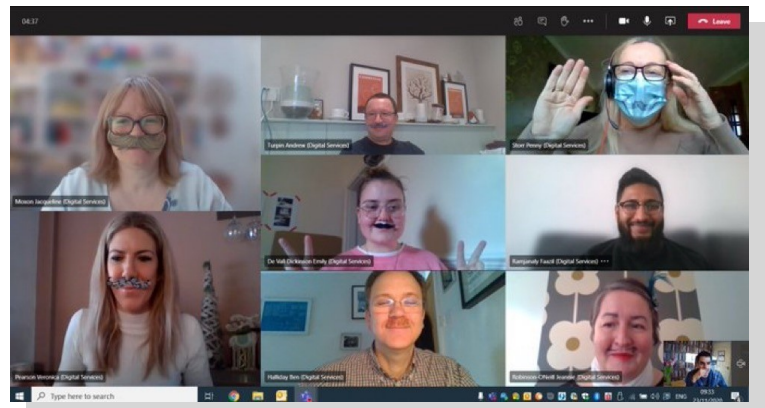
July - September

Highlights:

- The EMRAD Insourcing Programme was relaunched in July
- The 'Any Image' Project went live in August allowing clinicians access to a new cloud-based image sharing system, known as the PACS Portal
- EMRAD was shortlisted in the BMJ 2020 Awards under the diagnostics team category showcasing the success of the EMRAD Insourcing Programme
- EMRAD mobilised, supported and delivered remote reporting workstations to EMRAD Trusts, allowing Radiologists and reporting Radiographers to work from home
- Synthetic Data creation completed and signed off by IG leads. Synthetic data transferred safely to Faculty.

October - December

Q4



Chesterfield Royal Hospital joins the regional shared PACS

Meet the project team who supported the go-live

Amy Quick - Applications Support Lead, CRH

I'm Amy and I'm an Application Support Lead in the IT department here at the Royal Hospital. I'm a Chesterfield girl through and through – grew up in a house just across the road from the hospital, daughter of a hospital porter and have worked here for 10 years now, starting as a lab assistant in biochemistry and haematology and taking the jump to IT around 6 years ago. Just over two years ago, I was lucky enough to get the app support lead role which gave me the task of project manager helping take the EMRAD PACS Live here at the trust.

Now, I can honestly say that when I was given the job, I hardly expected what would happen over the next couple of years. If you had told me that our initial May 2020 Go Live date would have been delayed again by no less than a global pandemic, I would have never believed you. By far, I feel Covid was one of the biggest challenges faced by the project as a whole. It has added a level of complexity onto some of what would feel like easy things to plan – resource, room size and allocation etc – but I suppose in some instances has improved matters, for example, these days we are all more comfortable with supporting from home/virtually.

The lessons learned list for a project like the EMRAD PACS are always quite large – looking back at the point I am at now, I feel there are areas I could have done better or in a different way; from dedicated contacts with

the support team on the ground, like a phone line into the Go Live room to better modality testing. I feel there are things I would take forward as a great idea into other projects though – the virtual Go Live calls I feel worked well and Trello may be making more of an appearance in the

future! I also feel proud of the relationships we've all built between us – supplier, consortium, trust – despite not having that face to face contact very often and I come out of the project with some great new colleagues across all the teams.

Up next for me here at the Royal in the next few months, I am working with Cardiorespiratory and their aims for a new reporting system to marry up the variety of systems already in department and to enable them to make the most of what healthcare systems these days can offer. I'm hoping my experience with the Imaging department will really help here as there are some areas which are very similar in workflow. After that, I'll be getting back into more of an operational role in IT, helping support the huge variety of Apps we have at the trust and all their users – I'm sure at least some of this time will be in Imaging!



CRH go-live (continued)

Meet the project team who supported the go-live

Chris Gregory - *Senior Project Manager, Wellbeing*



I have been working at Wellbeing Software for almost 10 years.

Wellbeing Software supplies hospitals with specialist clinical systems for connected health including our

Radiology Information System - CRIS, which we supply to the East Midlands Imaging Network through our partner GE. We are currently operating in over 700 locations, supporting more than 200,000 users, and handling 25 million imaging events per year.

Chesterfield Royal Hospital (CRH) is a long-time CRIS customer and as part of this project, we needed to migrate and merge its local CRIS records into the centrally hosted and shared EMRAD CRIS system. This ultimately creates a single radiology patient record across all seven of the NHS Trusts, enabling the sharing of diagnostic information.

The project involved the transfer of all radiology patient data as well as conducting system integrations with current PAS, Order Comms and PACS. We carried out complex data mapping to ensure synchronisation with existing EMRAD patient records, enabling them to be migrated safely while maintaining data integrity.

Wellbeing Software has completed similar work for existing EMRAD Trusts, which meant the approach and technical aspects were familiar. However, each project always has its own unique challenges to overcome. One of the challenges was to ensure that all of Chesterfield's data mapped perfectly into the EMRAD system, and that user accounts – especially where users had already worked at different Trusts within the consortium – were correctly consolidated.

Towards the later stages of the project, we also had to manage the risks associated with the COVID-19 pandemic. On-site visits were limited, and all our work had to be completed remotely. Thankfully, our team of technicians are dedicated to their work. Their knowledge, along with the outstanding efforts from the team at CRH and the support from GE colleagues, allowed for a seamless migration and merge of systems.

When we complete complex work of this nature, we always anticipate follow-on issues. The CRH Go-Live went to plan and I am grateful to all involved for supporting and completing such a quality project.

We are proud supporters of EMRAD, and our market-leading RIS in the 11 hospitals, covering more than 5 million patients. I hope CRH and the existing EMRAD Trusts can now reap the benefits of the merge and deliver continued high-quality care to patients.

CRH go-live (continued)

Meet the project team who supported the go-live

Simon Harris - *Senior Project Manager, EMRAD*



My role in the recent EMRAD regional PACS deployment at CRH was to support all the 'go-live' activities at CRH and be the key point of communication for all live EMRAD Trusts. Every time that EMRAD bring a new Trust onto the

shared system, we need to have a period of 'downtime' where all live Trusts stop using their PACS system for about 14 hours whilst all the patient data from the new Trust is migrated over.

This takes careful planning and a huge amount of communications and regular checkpoints to confirm that everything is on track. If something is going wrong or running late, these checkpoint calls are vital in helping them get back on track. I was responsible for running this process and getting confirmation from each of the 5 live Trusts that they were happy to progress to the next stage.

What went well?

Everyone worked so well as a team. All the colleagues at CRH, GE Healthcare, Wellbeing and the Live EMRAD Trusts came together and worked in unison to manage a safe transition over the 'go-live' weekend. I'd like to extend my sincere thanks to everyone who helped make this happen.

What were the challenges?

This was always going to be a more tricky deployment than previous ones. Due to COVID-19, we had to severely restrict the number of staff that could physically be on site at CRH so the vast majority of work/discussions/planning took place via MS Teams. Our GE Project Manager was based in Denmark, our CRH Project Manager was based in the Trust and our EMRAD Project Manager was based in Nottingham. We had GE colleagues throughout Europe and in the USA. Despite these geographical differences, we managed to deploy and the Trust are live with the shared PACS system. We will soon start reaping the benefits of this for patients and services in our region.

Visit emrad.nhs.uk

Remember to visit your EMRAD website for this and all previous editions of Contrast as well as much more. The Members' area is packed full of regional documents, details on the insourcing programme and advice on working from home.

EMRAD virtual events

EMRAD are hosting two virtual events to kick off 2021

Becoming an Imaging Network: What's in it for me?

12th January 2021; 11:00-13:00

We share our seven year journey from PACS Consortium into the Imaging Network for the East Midlands, from the perspectives of key stakeholder groups.

Key Note Speaker

Andy Howlett (Director of Diagnostics, Medicines & Pharmacy Improvement at NHSE/I)

The EMRAD Journey & Establishing the Common Goal

Andrew Fearn (EMRAD Accountable Officer)

Building Strong Relationships – an SRO perspective

Elaine Torr (Divisional General Manager for Diagnostics, Sherwood Forest Hospitals)

Establishing Your Cornerstone & Foundations

Penny Storr (EMRAD Programme Director)

As Safe as Houses – A patient perspective

Michael Prior (Nottingham University Hospitals, Patient & Public Information Representative)

Clinical Collaboration – The Building Blocks for Success

Dr James Thomas (EMRAD Medical Director, Consultant Radiologist, Nottingham University Hospitals)

Paul Clark (Reporting Radiographer & Radiology Services Manager, United Lincolnshire Hospitals)

The EMRAD Advisory Service & Imaging Network Support

Andrew Fearn

Closing Remarks & Looking Ahead

Kevin Turner (Chair of the EMRAD Imaging Operational Board & SRO)

AI in Breast Screening Project: Celebration & Evaluation Event

14th January 2021; 12:30-13:30

After a challenging and rewarding two years and 3 months (or 823 days), the Wave 2 test Bed - EMRAD AI in Breast Screening Project is coming to a close on 31st December 2020. We reflect on the project journey, present some of the evaluation results, and have a panel discussion on the outcomes of the project.

Welcome & Project Overview

Andrew Fearn (EMRAD Accountable Officer)

Project Reflections

Simon Harris, Jacqueline Moxon & Veronica Pearson (EMRAD Project Management Team)

Ian Groves (Innovate UK Monitoring Officer)

David Railton (Engagement Manager, Faculty)

Dee Dinneen (Senior Partnerships Manager, Kheiron)

Project Evaluation

Dr Niamh Lennox-Chhugani (Founder & Research Director, TaoHealth)

Panel Discussion

Facilitator: Dr Niamh Lennox-Chhugani (Founder & Research Director, TaoHealth)

Dr Jonathan James (Consultant Breast Radiologist, Nottingham Breast Institute)

Elaine Torr (Project Executive, Divisional General Manager for Diagnostics & Outpatients, Sherwood Forest Hospitals NHS Foundation Trust)

Liz O'Riordan (Patient & Public Representative)

Leanne Calderwood (Radiography Services Manager, Nottingham Breast Institute)

Looking Ahead

Andrew Fearn (EMRAD Accountable Officer)

Contact veronica.pearson@nuh.nhs.uk

Network financial benefits

What have trusts got for the investment in EMRAD?

Our mission is to make a positive difference to patients of the East Midlands, and Radiology departments which serve them. We thought that this would be a good moment to take stock of the financial value of being part of the network. The highlights are shown below. Every trust has seen a remarkable return on investment (ROI). If you would like more details on this or any of the maths behind it, please speak to your EMRAD SRO.

Nottingham University Hospitals NHS Trust

Our inaugural Trust to deploy the regional PACS. A large teaching hospital who are significant users of GE's Edison Datologue Connect (formerly called C360).

**751%
ROI**



Sherwood Forest Hospitals NHS Foundation Trust

Next to deploy the technical solution, SFH have made great progress with the functionality that it offers.

**537%
ROI**



Northampton General Hospital NHS Trust

NGH is the southern most Trust within EMRAD. They have made significant use of the Business Intelligence tool that we have within our network.

**403%
ROI**



Kettering General Hospital NHS Foundation Trust

KGH were one of the early adopters of our insourcing model. This prevented radiology images having to be expensively outsourced.

**693%
ROI**



United Lincolnshire Hospitals NHS Trust

The Radiographers at ULH cleared the entire backlog of plain film reporting in another EMRAD Trust. They did this via our insourcing programme

**285%
ROI**



Chesterfield Royal Hospital NHS Foundation Trust

The newest member of the EMRAD family, with us since the beginning but deployed the technical solution in November 2020, they are already reaping the patient and financial benefits

**277%
ROI**



Looking back, looking forward



Penny Storr

EMRAD

Programme Director

Looking back to 2020, it is a year I will not remember fondly. I would like to thank everyone for their support pulling together as team NHS over the past year and look forward to our continued efforts in helping people on the journey towards a brighter 2021. It has been a difficult year for all the EMRAD Trusts but it is testament of the strength and compassion of the NHS to work tirelessly to support all our patients in the East Midlands.

There are positives we can take from the way we are all working now compared with the pre COVID-19 world. The EMRAD team will embrace these new ways and shape the way we will work in 2021.

There was one particular shining beacon of positivity and that was Chesterfield's 'Go-live' in November 2020. Where many projects were stalling, delaying, postponing.....Chesterfield's project "kept calm and carried on". There were so many positive people who decided to make this Go-live happen, that sheer determination triumphed in the face of adversity. Over the weekend of the 7th November 2020, where large numbers of people would normally be onsite, only a few key people would be with over 40 people remote and on MS Teams throughout the weekend with people from the UK, Europe and USA represented and each there to support.

I am looking forward to 2021 and what the future holds for EMRAD. I am particularly enthused about the EMRAD Advisory Service; this is a great opportunity for EMRAD to share its 7 year journey from PACS consortium to Imaging Network to the new emerging imaging networks across the NHS. We are happy to share the good, the bad, warts and all to help speed up the process for all those who are following. I am also excited about the early stages of the EMRAD workforce plan, and in particular for the Radiographer recruitment proposal. If successful, this model could be used across other workforces in the EMRAD Radiology arena and further.

And finally, as I was thinking about resilience and innovation, in 2021 there are 6 planned space missions to look forward to. Martian rover landings, missions to flyby asteroids and scout near-earth asteroids, to the launch of Hubble's "successor". I am also sure there will be more Space X/NASA missions to the International Space Station and further testing of the Starship developed by Elon Musk's private space company to carry humans and 100 tons of cargo on future missions to the moon and Mars to also look forward too. After the year we have all endured it is truly exciting to see space exploration and the perseverance through this pandemic.

My favourite year...

2020 was pretty rubbish for most of us so we asked “what was your favourite year?”

Bruna Silva, plain film radiographer, NUH



I can see how everyone will finish the year and say that it has been horrible, but I do see a lot of good things that came from it! All of us are

closer, we care

more about each other and we value more all of our loved ones. Being apart from my family for so long as been the worst thing I

have been through in my life, but I had a good team at NUH that supported me all the way through.

My favourite year has to be 2018. This was the time I graduated from university in Portugal which was a proud milestone for myself and my family. As well as this, I joined the NUH for my first job as a radiographer and I loved every moment of it. My colleagues in plain film have helped me transform into an independent and inquisitive individual and they have been like a family to me.

Rajiv Karia, consultant radiologist, CRH

The year 2000. This was the year where vision of technology and innovation changed almost overnight. Although this led to the dot-com boom and bust, the euphoria created visionaries to change the way we live. The problems of the year 2000 “millennium bug” passed by, but the interest and investment that had built up in technologies continued. Everything technologically related we take for granted today, probably had some origins during the dot-com era. All the speculative human behaviour that created the bubble, together

with over investment at the time, particularly in infrastructure, has left a long legacy. Whether it be cloud computing, high speed internet, tablets, online shopping, artificial intelligence or even home working (so crucial today), the development of these things were accelerated in the era of the technology boom at the turn of the millennium.

Some of us lost money during the dot-com era, some of us made a lot of money; however we as society today are all much richer thanks to the year 2000.

My favourite year (continued)

Aiasha Hussain, administration supervisor, NUH

My most memorable and favourite year would be 2016, the year I got married. The preparation and build up during the first half of the year was probably my most favourite part. Organising and deciding on décor, colour schemes, outfit choices and food options with the help of both our families was very exciting. Asian wedding consists of several days of celebrations over the course of a few weeks so we had a lot to think about and plan. Everything fell into place beautifully just in time for our August wedding. A lovely, hot summers day at Newark's Kelham hall with both of our

families and lots of friends! The day went exactly as we planned, as we had always envisioned a very large wedding full of happy guests enjoying each other's company. I appreciate these times even more because the wedding we had, would have been impossible in the current circumstances. What made this year and occasion extra special is having the opportunity to invite my work colleagues from Radiology whom I only met a few months prior. Having recently celebrated our four year anniversary, looking back at 2016 fills me with so much happiness.

Horea Craciun, radiology registrar

"I'm on a roller coaster that only goes up, my friend!" - that is what the writer John Green equates our journey through life to. And for many of us this is true. Watching and listening to people every day it has become clear to me that a considerable number of them will describe 2020 as one of those downslopes in the rollercoaster. Of course not every day is a success, not every year is a success but you have to celebrate the good things in every year. Looking back today, for me 2020 was one of those years where I've learned valuable lessons that have made life as a whole much easier and happier and I've made

choices that pushed me out my comfort zone. Professionally I've gained more experience and confidence in my abilities, whilst on a personal level I've gotten engaged, reached a few goals in my fitness journey, made new friends and strengthen the friendships I already have. So despite the recent state of the world and contrary to public opinion I can say 2020 is one of my favourite years.



Marita Harris, radiology secretary, NUH

1999! The music was good, had good friends and good times. No social media—we had to physically go and meet our friends. Made life more simple. I remember recording my top 40 hits on a Sunday and making sure I didn't get the talking bits!

My favourite year (continued)

Michael Prior, patient representative

The year I've chosen is 1983. At the start of the year I moved to Nottingham to work as an R&D chemist in what was then Boot's pharmaceutical division: my first 'proper' job after university.

A year and a half earlier I had been diagnosed with a large inoperable abdominal tumour. This diagnosis came after I'd been unwell and under investigation for 2 years while doing research for a chemistry PhD at Oxford. I was eventually sent to Bristol for a CT scan – the nearest hospital at the time that could do such a test. All the other tests done before had been inconclusive, and it was only the scan that led to the diagnosis. I then went through a programme of heavy radiotherapy and chemotherapy treatment. This was long and arduous, and for many months things looked extremely bleak. Thanks to the care of a fantastic hospital consultant, plus the support of my college, family and friends, I managed to get through.



The real highlight of 1983 was returning to university in the Spring that year to have my PhD examination (called a viva). The viva was an amazing experience: I was examined by two of the leading academics in the field and who I held in high esteem. It lasted nearly three hours which seemed to pass by in a flash. It's hard to describe all my emotions when the examiners told me at the end that I was successful, but the feeling of satisfaction after was immense.

Andy Cachaldora, general manager Europe, GE

2020 has been my favourite year despite the challenges with COVID. I've never seen the NHS more unified now than in the past, and the adoption of innovation is now the default that will impact health outcomes long term. Despite our families being separated, it has allowed us to stop and think for once, and appreciate the smaller

things in life "our loved ones". More personal time with immediate family has been appreciated and changed the way we spend time together in the future. I've never been more proud to work with the NHS. My thoughts are to those who have lost loved ones in this pandemic.

My favourite year (continued)

Emily Limb, unit coordinator, NUH



For me my favourite year has to be 2019, throughout the year I achieved both personal and work related milestones. I began the year by enrolling in a Foundation Degree for Leadership and Management, this has given me the

opportunity to learn and develop my skills. In August I went through the process of buying my first house, whilst this was a stressful experience it is also something that I am proud of and I enjoy the independence this has given me. At the end of the year I took 2 months off to backpack around Asia, this gave me the chance to explore other cultures and offered another level of independence by stepping out of my comfort zone.

Mike Bennett, consultant anaesthetist, SRO, NUH

I don't think I want to talk about a favourite year.

But what I could share is this: it's never too late to learn new tricks. I've always hated cooking and never had an interest but very recently I started to wonder if I could make a loaf of bread.

My first attempt is below. But I kept going and can now reliably turn out a wholemeal

loaf which compares favourably with something you might buy from a baker's. This last weekend I baked my first ever ciabatta loaf (a more challenging technique than a standard loaf) and this is the second picture below

So the take home message is to stay open to trying new things and if at first you don't succeed...etc.



My favourite year (continued)

Stephanie Hart, senior one radiographer, IR, NUH

Singling out one year as the best is a difficult proposition and I suppose because of the way this year has gone it has me looking back at 2019 with slightly rose tinted glasses. Though when I really consider it I think it was one of my best years for several reasons. There were the gigs at Rock City, there was the great walking holiday in northern Spain and most importantly there were the two very different weddings that I got to go to.

The first was a Ghanaian and Nigerian collaboration that was full of singing, dancing and pure joy quite unlike any ceremony that I've ever been to before. The sense of happiness was so evident that you couldn't help but smile and the musicality was truly impressive. When the bride gets handed her own microphone to lead the choir you know this isn't an ordinary event! It was beautiful to see and one of those opportunities to catch up with friends you've not seen for years in some cases.

The second was friends who decided to decamp to Liverpool for the occasion and to keep as much secret as they could. We

arrived at the allotted bar and at the appointed time were escorted through the streets the short distance to the venue. We were at a church, but one that had been bombed in World War Two and left standing as a shell in memorial to those that had lost their lives. With beautiful weather, a marquee, pizza oven and bar, not to mention an extremely well employed dancefloor it was a perfect celebration. With excellent company, a pub quiz and Mr & Mrs Caterpillar wedding cakes, what's not to love? I'll never forget the tour bus stopping the traffic so the photographer could get the group shot or my friend's husband who, despite being a terrible influence, still didn't have a hangover the next morning...

Maybe it's because these kinds of things have been taken away from us this year, or because I'm getting nostalgic in my old age, but I look back on those days with a smile. We all have a friend who loves to dance or sing or persuade us to have just one more and one day soon at another wedding I look forward to doing just that again.

Carl Ratcliffe, divisional clinical lead, ULH

It has to be 1989as a keen cyclist I will never forget being sat around a small portable TV watching Greg Lemond ride what was the fastest ever time trial to beat Laurent Fignon by 8 seconds in the Tour De France which was crazy given it takes place over 2000 miles.

My favourite year (continued)

Penny Storr, EMRAD programme director

My favourite year is 1984, nothing to do with George Orwell's book 1984 but more about - Torville and Dean winning a gold medal at the Sarajevo Winter Olympics, Los Angeles Olympics where Sebastian Coe, Daley Thompson, Tessa Sanderson, Steve Redgrave all win gold for Team GB Band Aid's charity single Christmas number one and finally George Michael's 'Careless Whisper'... and my love of George throughout my life. There's a theme sport, music, my family and this was a perfect year.



Siew Tsang, PACS manager, NGH

2019 is my favourite year where we were all blissfully unaware of what was to come in 2020. My family and I spent a few memorable weeks travelling to Singapore, Malaysia and Hong Kong.

Mohsen Alkmeshi, radiology registrar

This is a really hard question, and I have given it some thought. I know you asked for a Favourite Year, but It is very difficult to decide which year was more favourable than the other.

I would say 2010 was one of the best years of life where I met my wife for the first time and also passed my final year exams of

medical school.

The year 2015 was also one of the best , this year I had my first son 'Adam', I still remember that feeling which is second to none.

I had few other significant events in my life but nothing like the year 2010 and 2015.

Adarsh Thatuskar, consultant radiologist, ULH

It is really hard to pick a favourite year; there were memorable moments in many years. Although 2020 has been a tiring year so far- it has taught me the value of family, friends, colleagues and the society as a whole. The unique challenges this year meant adapting to newer lifestyle and ethics. I had some hard times, but learnt through those experiences and hopefully am a better person as a result.

My favourite year (continued)

Aija Teibe, consultant radiologist, ULH



My favourite (recent) year would be: **2017**

Why: All seemed to go better.....

2016 was very difficult professionally, for 8 months was working alone due to long term sickness of my

colleague, and joining EMRAD (July 2016) was with so many difficulties for me, with majority problems solved by December! 2017 was just getting better and better!

In 2017 my son finished primary school with good results and started grammar school and was very happy there (me too).

Enjoyed local holidays with my family: spent a week in London in Lego and Star Wars atmosphere; spent a week in

Scotland and learned to love Single malt Scottish whiskey.

Went home for the Summer holiday (I am from Latvia) which was fantastic as always...

But the most memorable was a trip to Lapland just before Christmas. You might think it is holiday for kids... yes, but turned out that every one of us (does not matter how old we are) seems we need to let our inner child to play outside! It was so wonderful to fall into a snow (more than a 1m deep), enjoy sledging and more adult fun – snowmobiling! To feel the cold air in your face (-8 ~ -15 degrees C) and enjoy hot drink with ginger biscuits! To be away from the city lights and to see so many stars in the northern dark sky...you really feel closer to stars yourself. Just magical! Only one thing we did not see – Northern lights.

Fantastic year for me – 2017!

Amy Quick, application support lead, CRH

if I had to pick a year It would be 2018. I suppose it may sound a bit predictable but it's the year my son was born (in the August) and the year I landed my current job here at the Royal. The entire beginning of the year was spent in jittery (nauseous) anticipation of how much my life was about to get turned upside down by the impending baby. Then in June I was successful in the interview for the application support lead role. It just felt like it was all working out right. Add on top that my sister, to whom I am very close, had her first child only 5 days before my son was born and I had the perfect maternity leave companion ready made. Haven't looked back since (to be honest, with a toddler and an EMRAD Go Live to look after, I haven't had time to anyway!!)

My favourite year (continued)

Neela Armugam, radiology registrar

At the start of 2020 Australia was on fire.

16 million hectares burnt to the ground.
Migrants dying crossing the channel.
Coronavirus. George Floyd. Gyms closing.
Trump...

But for me, 2020 has also brought about positivity.

We've connected with our families, spent hours video-chatting to our grandparents' foreheads, taught the elderly to order on amazon, cheered for Captain Tom and welcomed back Mr Motivator.

Either through the hypnotic properties of those colourful lycra leggings, or though embarrassment that a 100 year old war veteran had a better cardiovascular reserve than me, I took up long distance running in the neighbourhood. Couch to 5K style.

It was not a pretty sight to begin with. Mr Motivator looks a lot better in lycra than I do. But as I puffed my way round the estate, embarrassingly having to stop to puff my asthma inhaler, a sudden iridescent shimmer of red sparkles hit the corner of my eye.

And that moment was magical.

From afar my (less than) 20/20 vision was stunned to see the most beautiful, most vibrant and most glittery A3 rainbow I had ever seen. Underneath, in wax Crayola, were the words *"Thank you NHS for keeping us safe. I love you. From Maisy (aged 4)"*.

Such a simple message, from the heart, was so beautiful to see. And Maisy had made that for **me**.

But it wasn't just Maisy - Ben, Emanuel, Emma, Laura, Karl, Ishaan, Georgie.... I dropped my inhaler as I ran past house after house, window after window each with an artist's words of encouragement and thanks. I never felt so proud to be part of the NHS and I never thought I'd run another 2 miles without a break.

No 2020 wasn't all bad:

Koalas have been saved, a vaccine is on the way and the gyms are re-opening. But in that moment, 3 miles from home I decided I'd stick to running outside... Until I realised I had to run all the way back!

Simon Harris, senior project manager, EMRAD

My favourite year isn't so much a year, but a brief period of time in my life where I discovered my love for dance music. So it would have to be 1998 – 2001. Some of the most iconic tunes and happiest memories I have of listening to them took place at that time. It's when I learnt how to DJ and performed warm-up sets at gigs for some of the biggest names in the industry at the time: Faithless, Judge Jules, Paul Oakenfold, Scratch Perverts, Seb Fontaine and Fatboy Slim. Happy days!

My favourite year (continued)

Susan Johnson, radiographer, NUH

I don't have a favourite year. They're all good and not so great.

2018 was great, I love being a radiographer, I don't always enjoy being in a dark cupboard.

I started going out more and working a bit less. Joined several walking groups, and a running club, I volunteered for all sort of marshalling events, and I did my first 'Tough Mudder' – awesome do it !! Out of my bike, getting fit, losing a bit of weight Went on holiday abroad on my own. Got a new car. I met my Mr Right.

Started preceptor groups – a listening forum for our newbie radiographers.

2018 was horrid, I ended up in hospital for 2 weeks with a random infection. I'm still not fully recovered.

Ended up going on holiday on my own, not as planned with friend. Disastrous car hire events.

Still 2018 was OK, I survived, the memories are mostly fun.

2019 A tough year, only highlights being holidays with Mr Right. Cheap and cheerful Castles in Wales, brilliant.

2019 and another hospital stay. Lots of trouble with some research I tried.

New battery for the new car, car not under warranty L.

House purchase falls through, back to square one, or was it square 951 ?

Still 2019 was Ok, we survived, there was a bit of learning in the process.

2020 was great : we got married, had a honeymoon, moved house

2020 was rubbish : Covid 19, L, 2 family bereavements, not the wedding we planned.

Couldn't get the house surveyed or risk losing the sale. Can't ride the bike as so much stuff propped in front of it. Husband has anaphylactic shock 2 weeks after wedding. House needs a lot more work than we'd planned or could afford. New clutch in the car, first new clutch I've ever had replaced in 30 years of driving, really what next!

Husband is one of the many 'exclusions' to Government support packages, no work, no money. L

2020 was great, its nearly over. We've survived so far, vaccinations are in sight and maybe I'm a natural at social distancing, I still love being a radiographer and I get to go home to Mr Right. We have a new hobby, collecting freebies advertised on line. Rebuilding the house brick by brick. We bought at the right time. Roll on 2021.

My favourite year (continued)

Barbara Worts, radiographer, NUH

When you have been around a while choosing 'My favourite year' is not easy – there were a few contenders, thank goodness, but I have decided to choose 2007.

I have to own up to the fact that it was the year of my 50th birthday and something out of the ordinary was required. The result was that I left my husband with 3 children (one aged 11 and twins of 9) at home for 3 weeks whilst I went on a 3 week trip to Western Australia with my two oldest and dearest friends. We all met at Grammar school the age of 12 so were all having a big year. We toured the West Coast of Australia, starting in Perth where one of my friends was living at the time, and what a wonderful time we had.

From cycling around Rottnest Island to find Quokkas, to feeding Dolphins on the beach at Monkey Mia. Boat trip with Dugongs – incredible looking animals and I haven't even mentioned the Koalas, Kangaroos and

Emus I expected to see and the red colour of the outback and the incredible distances between civilisation. I also have to admit to sampling great food and wine and visiting the odd vineyard. The most memorable of which was Vasse Felix in Margaret River - I highly recommend their Cabernet Sauvignon -and still remember the waiter laughing when we suggested he left the cork in case we didn't drink the whole bottle with lunch – he left it - we didn't need it. Ah the pleasures of 3 weeks with very few day to day responsibilities

It was an amazing trip that totally reset me for the next phase in life by rediscovering the younger lighter-in-spirit me. My family all survived, were even pleased to have me back , they had had their own adventures but I did have to smile at the fact that the bathroom towels had not been washed in 3 weeks and I could tell as soon as I walked in the house!

Writing this definitely has me planning.

Liz Bowness, CT radiographer, NUH

I think because we cannot travel at the moment I am going for 2001. I managed a personal ambition of summitting Kilimanjaro.

The trek takes several days , the final summit attempt starts at midnight. Just before the summit you sit down, drink tea and watch the sun rise over the Masai Mara from the highest point in Africa. A sight I will never forget .

You then push on to the summit . A great experience.

My favourite year (continued)

Anabela Gaidao, radiographer, NUH

It is at the end of the year that we all make an insight into the 365 days that are about to come to an end. We reflect on past moments: we create memories of the good ones and learn life lessons from the bad ones. It is also when we ask ourselves whether we have fulfilled all the wishes and promises on our list of New Year's resolutions.

2018 was the year that I felt most accomplished after this intimate and reflective analysis of my actions. I finished my degree and started working. This allowed me to become independent. I moved not only from my parents' house but also from my country. This was the greatest achievement of my life. A new language, different culture, first work experience. It was a big change, but it allowed me to grow a lot and become the person I am today. Fortunately I was not

alone! I moved with my boyfriend, from Portugal to England and together we started to build a new life. In the beginning it was not easy to combat homesickness, the missing family, food and even the weather. But I can say that I have always felt welcome everywhere and by everyone. It was also a year that I travelled a lot. I love getting to know new countries and different cultures. Best of all, I started working in the field I chose to study. I still wasn't sure if radiology was what I wanted. But it was in 2018 that I had the proof that I love being Radiographer.

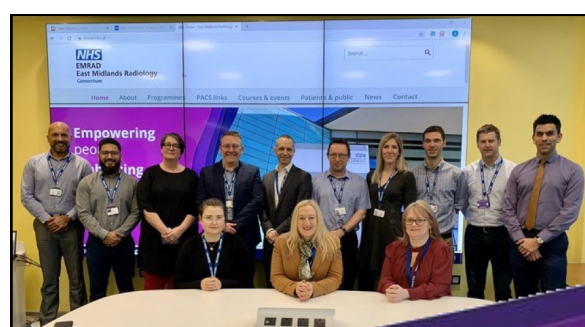
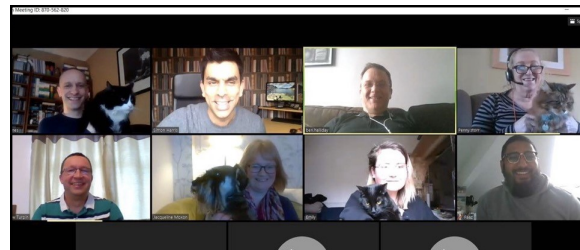
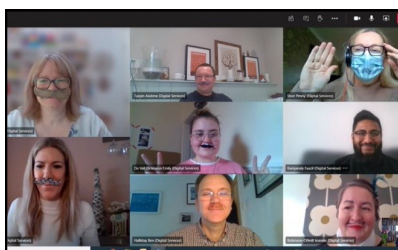
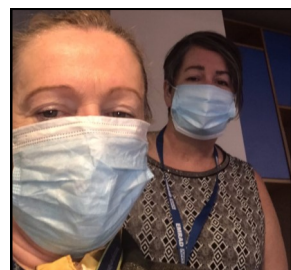
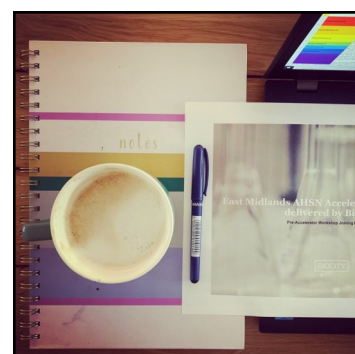
Every year, we go through some ups and down moments. To define whether it was a good year or a bad year we have to focus not only on the quantity but also the quality of the good times. So I can say with certainty that 2018 was my favourite year.

And the final word goes to....

Andrew Fearn, accountable officer, EMRAD

My favourite year is always going to be the next one... I love history and spend a lot of time reflecting on how we've become who we are; what's gone well and what didn't; what gave me a buzz and what battered me relentlessly... but the joy of history is that it can give you an insight into the future; it can spur you on to do even more with the life you've been given. I'm a lucky soul... every year of my life has been better than the last (for some reason or another), so of course I will look forward with anticipation to the next year... and the next... and the next.

2020 in twitter pictures



Losing our RAG in 2021



Dr James Thomas

EMRAD

Medical Director

For lots of us, 2020 was all about diversity and, as a result, I and many others have vowed that 2021 will be about inclusion.

We watched the results of overt racial discrimination in the US and elsewhere. We witnessed the inequalities in our own society—between ethnic groups, between socioeconomic groups and between age groups—magnified and exaggerated by the COVID pandemic. And we've vowed to do better. So, let's start the year by making a step towards inclusion: join me in abolishing 'traffic light' ratings. What am I talking about? This...

Colour blindness affects about 1 in 12 men and 1 in 200 women. That's about 8% of the population. I have known 3 colleagues with the condition, 2 of them Radiologists.

The most common is red/green colour blindness or 'deuteranopia'. It can be simulated by replacing red shades with green. This renders our NHS rainbow quite different:



NHS rainbow as seen by those with full colour vision (left) and simulated red/green colour blindness (right)

This can clearly be quite an issue if you need to understand what an image is telling you based on red vs green. So surely in our enlightened society we wouldn't do that? Surely we wouldn't publish data using colours that 8% couldn't understand? And yet we see 'traffic light' colour coding time and again. 'RAG' ratings (red/amber/green) for project management, for rota availability, for lockdown tiers.... not to forget for managing traffic!

Global issues of diversity can seem bewilderingly large and our input small - but for this issue, we can all make a difference in ending discrimination **today**.

These issues around 'hidden' diversity can be overlooked but creating a level playing field here is no less important than acting on any other type of discrimination. We can do better and we can do so easily. Make 2021 the year we lose our 'RAG'!

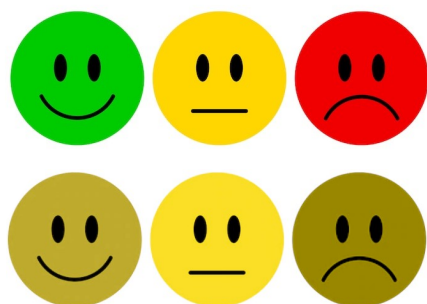
Design for colour blindness

Aesthetic integrity need not suffer when designing for accessibility, says **James Thomas**

Generally, elements that are favourable for colour blind readers are actually considered to be good design practices. If your documents, your rota, your website is well designed, it should already be accessible to all users. Here are 3 things to focus on:

Use colour and symbols

Don't rely on colour alone if possible. Add words or symbols to make things clearer. Consider the examples below:



Adding a symbol makes the coding readable when simulating colour blindness (below)

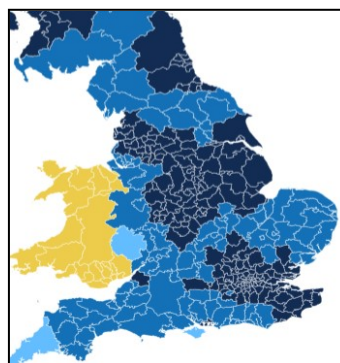
Use fewer colours

The fewer colours in your design, the less chance of confusion. Shades of a single colour are a good option. Blue is particularly good as it can be seen by all. You may have noticed that this newsletter quite deliberately uses a purple pallet throughout and the colour choices on pages 3 and 4 are accessible. I don't think anyone could argue that the result is not aesthetically pleasing.

Use RAG-alternatives

There are lots of useful contrasting colour combinations. This is one thing the government have done well—their COVID maps and graphs are all carefully colour-blind accessible.

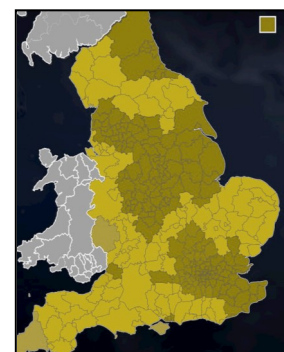
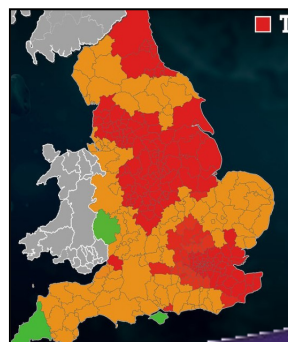
Some news outlets have done well too. Here's Sky News choosing a perfect blue coding for lockdown tiers:



Sky News tier map

Sadly, others remain not so aware. The Daily Mail chose a 'RAG' scheme for their map which is unreadable if you have red/green colourblindness.

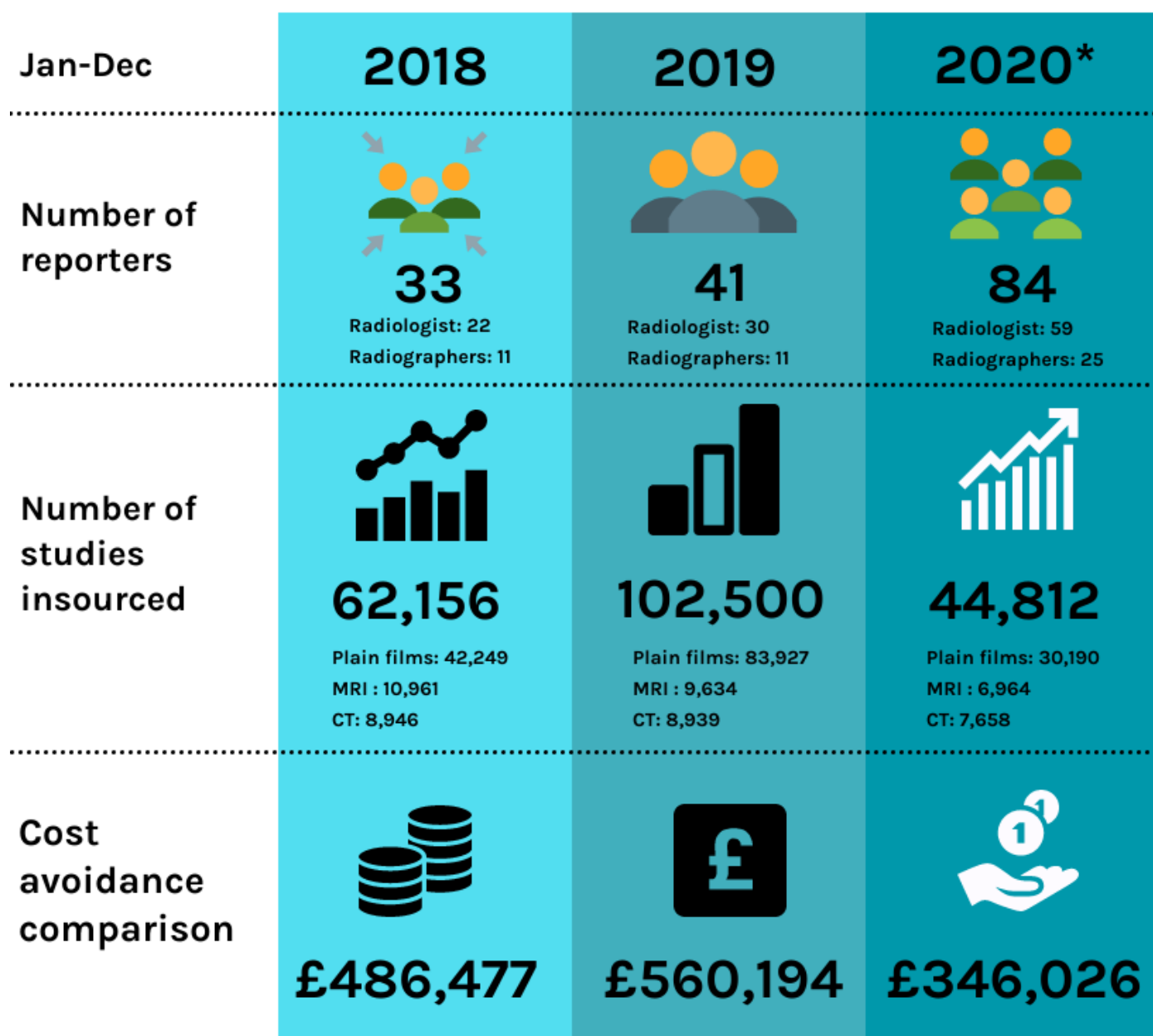
Daily Mail (below) and simulating colour blindness (right)



Insourcing programme

We finish our reflection on 2020 with an update on insourcing. The network-wide programme was paused and relaunched in the summer with a new payment structure and new user agreements. Since then, we've seen an astonished uptake in reporters and a renewed enthusiasm for the collective effort.

If you're not yet signed up, but would like to be, please have a look at the documentation in the members' area of the EMRAD website and/or drop a line to the James Thomas, the EMRAD Medical Director at james.thomas3@nuh.nhs.uk



Please note the figure for Year 2020 is only from Jan-Oct. Also due to Covid-19 the insourcing programme was on hold from March - June.

AI in breast screening project

The national Innovate UK project to develop and test artificial intelligence in breast screening, which EMRAD let from October 2018 to December 2020, has come to a close.

Independent evaluation reports have been written by TaoHealth and are available on the EMRAD website and by clicking the links below.

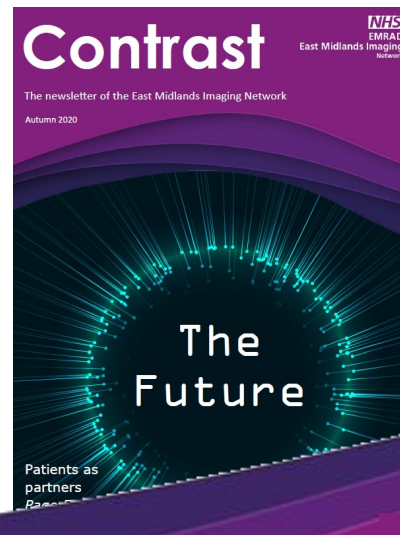
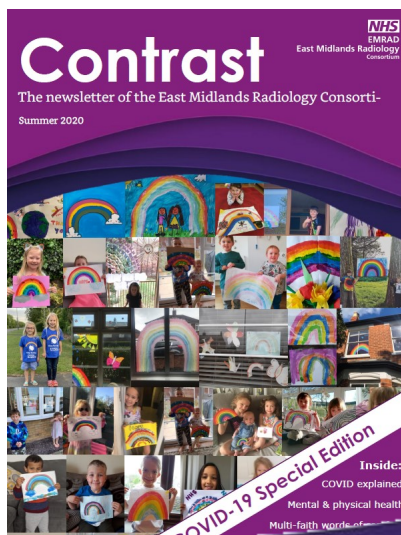


[Summary Report](#)

[Full Technical Report](#)

‘Contrast’ back issues

If you are enjoying this newsletter, you might be interested in our previous issues including our ‘COVID special edition’ from the summer of 2020 and our ‘look to the future’ from the autumn. All are available to view and download on the EMRAD website at www.emrad.nhs.uk



Abbreviations

CRH: Chesterfield Royal Hospital
KGH: Kettering General Hospital
NGH: Northampton General Hospital
NUH: Nottingham University Hospitals
SFH: Sherwood Forest Hospitals
ULH: United Lincolnshire Hospitals
UHDB: University Hospitals of Derby and Burton
GE: General Electric

Network Directory

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Dr James Thomas, EMRAD	Dr Mike Bennett, NUH
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Elaine Torr, SFH	

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Alan Salt, SFH	Dr Aija Teibe ULH
Dr Ranjeet Jagdale, SFH	Michael Prior, Patient Representative
Mike Barnard, UHDB	

RIS/PACS Forum

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Daniel Moulding, NUH	Jodie Farr, KGH
Jonathan Ashley, NUH	Amy Quick, CRH
Richard Jordan, NUH	Sachin Patel, CRH
Siew Tsang, NGH	Michael Boyne, GE
Natalie Hill, NGH	Louis Wilkinson, Wellbeing
Janice Bell, UHDB	