THE NEUROLOGY OF COVID-19
How it impacts on brain and thinking!

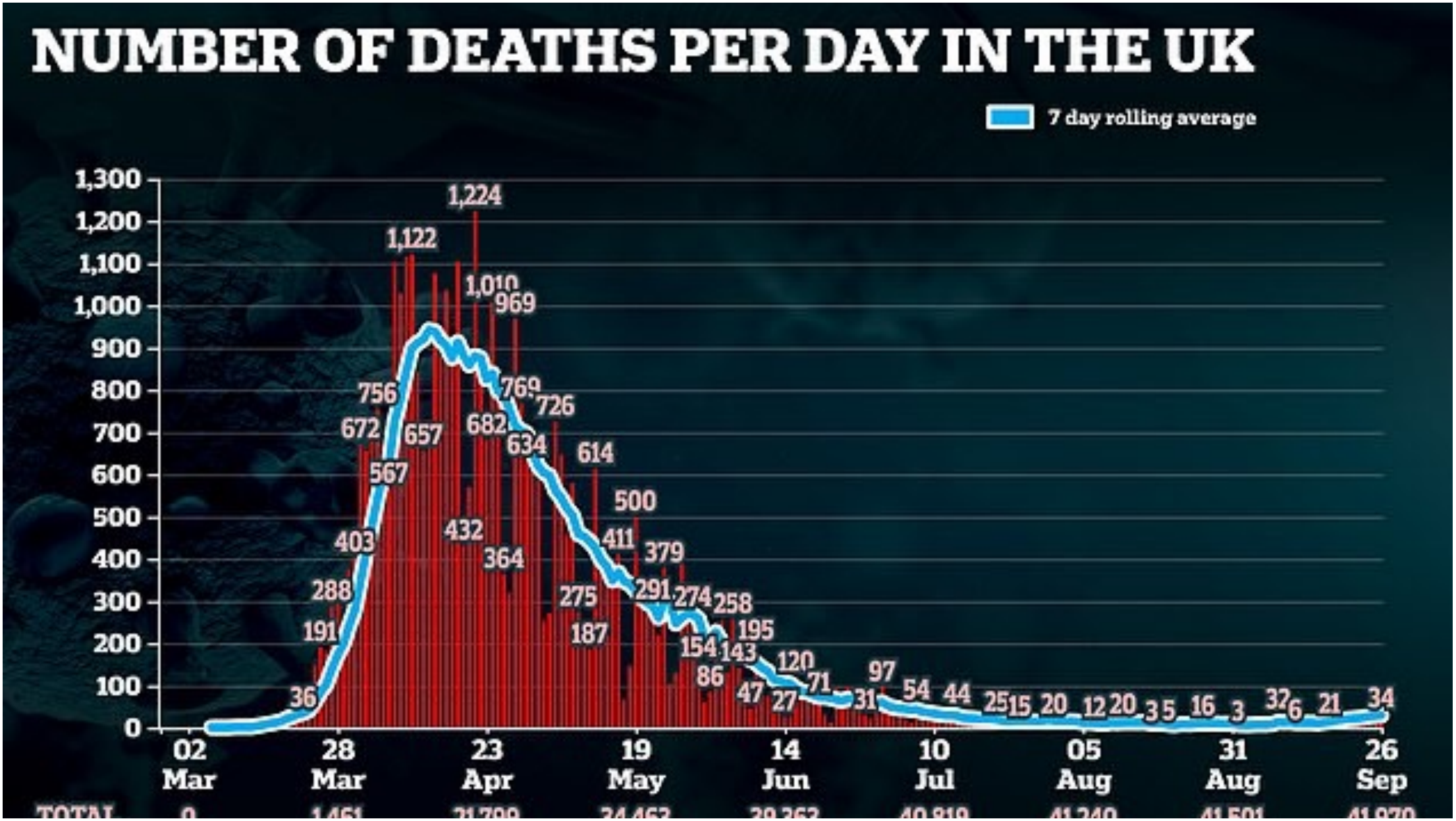
Dr Michael Gross
Consultant Neurologist
The Body Factory Rehabilitation Centre, Harrow

50 years and counting

- I have no conflicts to report, other than my view that if an individual trusts me to give opinion and help, I remain their advocate until instructed by them to the contrary.

- I am grateful to all those colleagues and patients who have trusted me to give opinion over so many years.

- I am particularly grateful to the members of the FNRG who have provided so much academic stimulation.


NUMBER OF DEATHS PER DAY IN THE UK
7 day rolling average
1,300
1,200
1,100
1,000
900
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700
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0
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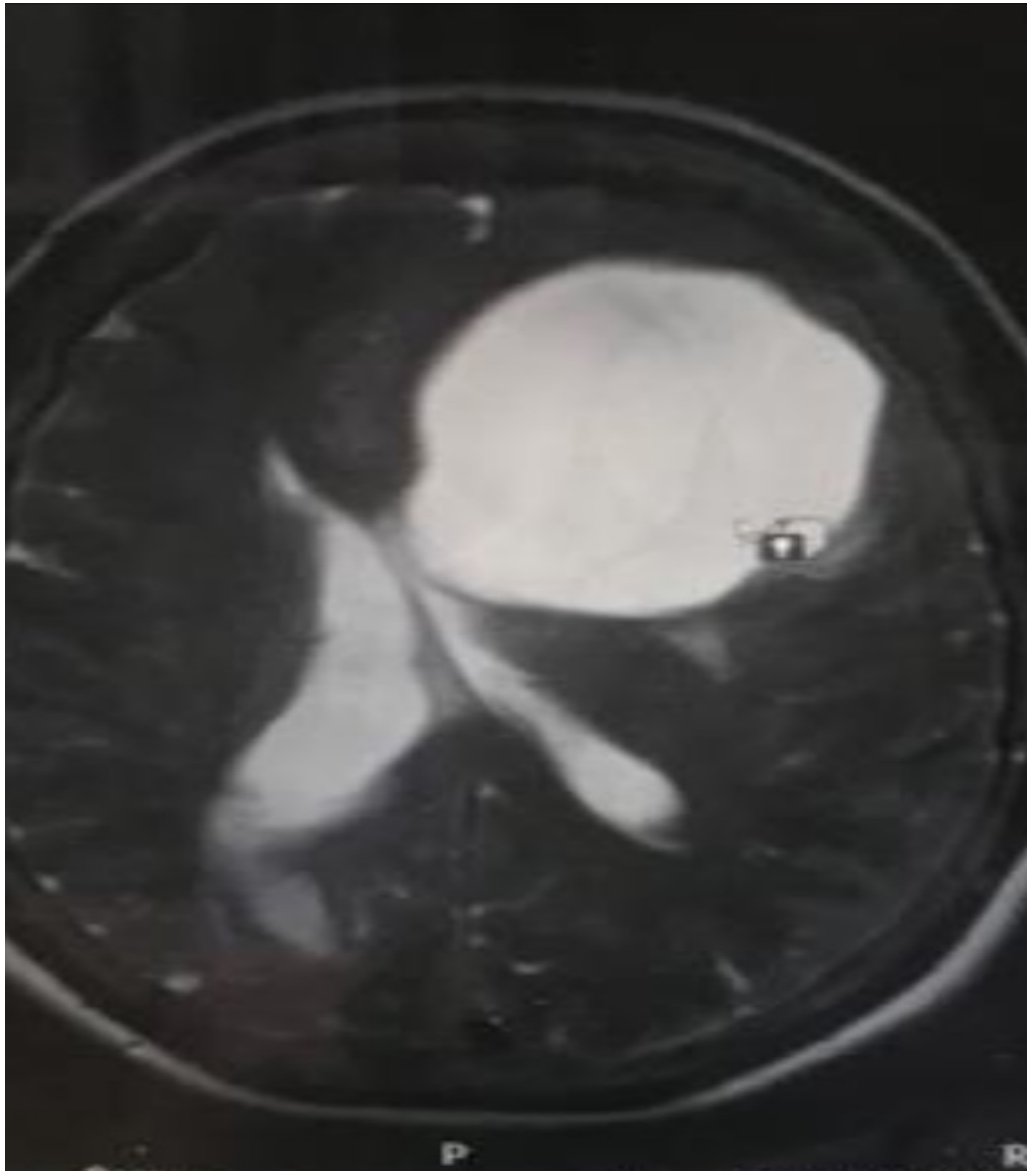
02 Mar
28 Mar
23 Apr
19 May
14 Jun
10 Jul
05 Aug
31 Aug
26 Sep

Person 1

- Age 60 – 4/52 lying in bed mute
- Family told psychological reaction to Covid
- No medical visit
- Multiple consultants refused domiciliary
- Colleague attended and called me from bedroom.
- DD. Frontal pathology need urgent scan
- Took 5 days to find scan unit prepared to do it.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Person 2

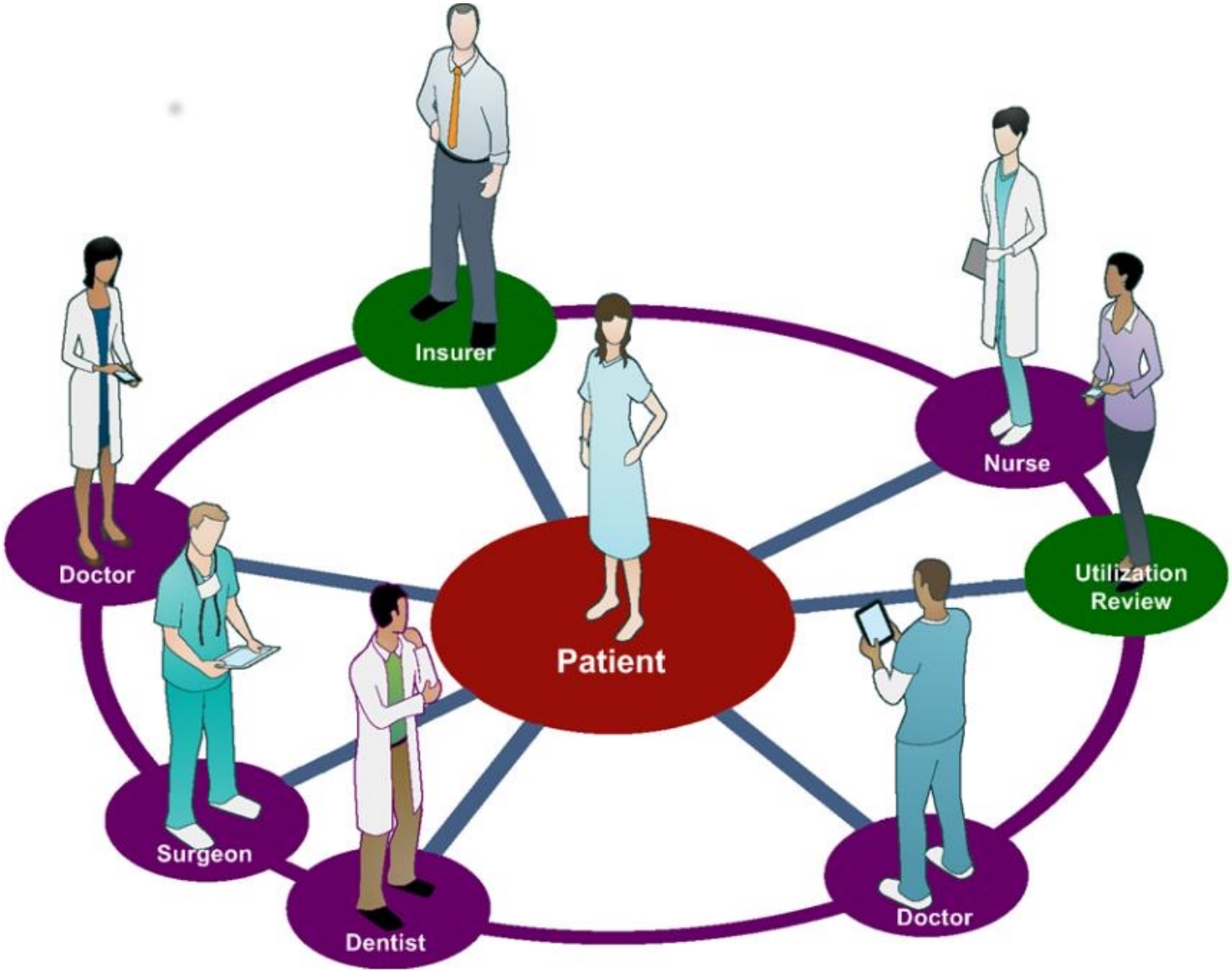
- Local GP's, spouse 72
- 3 months loss of reading and writing ability
- Large left temporal meningioma
- Oedema, 7 mm shift of midline
- Uncal herniation
- Obvious simple urgent referral to Central London neurosurgeons

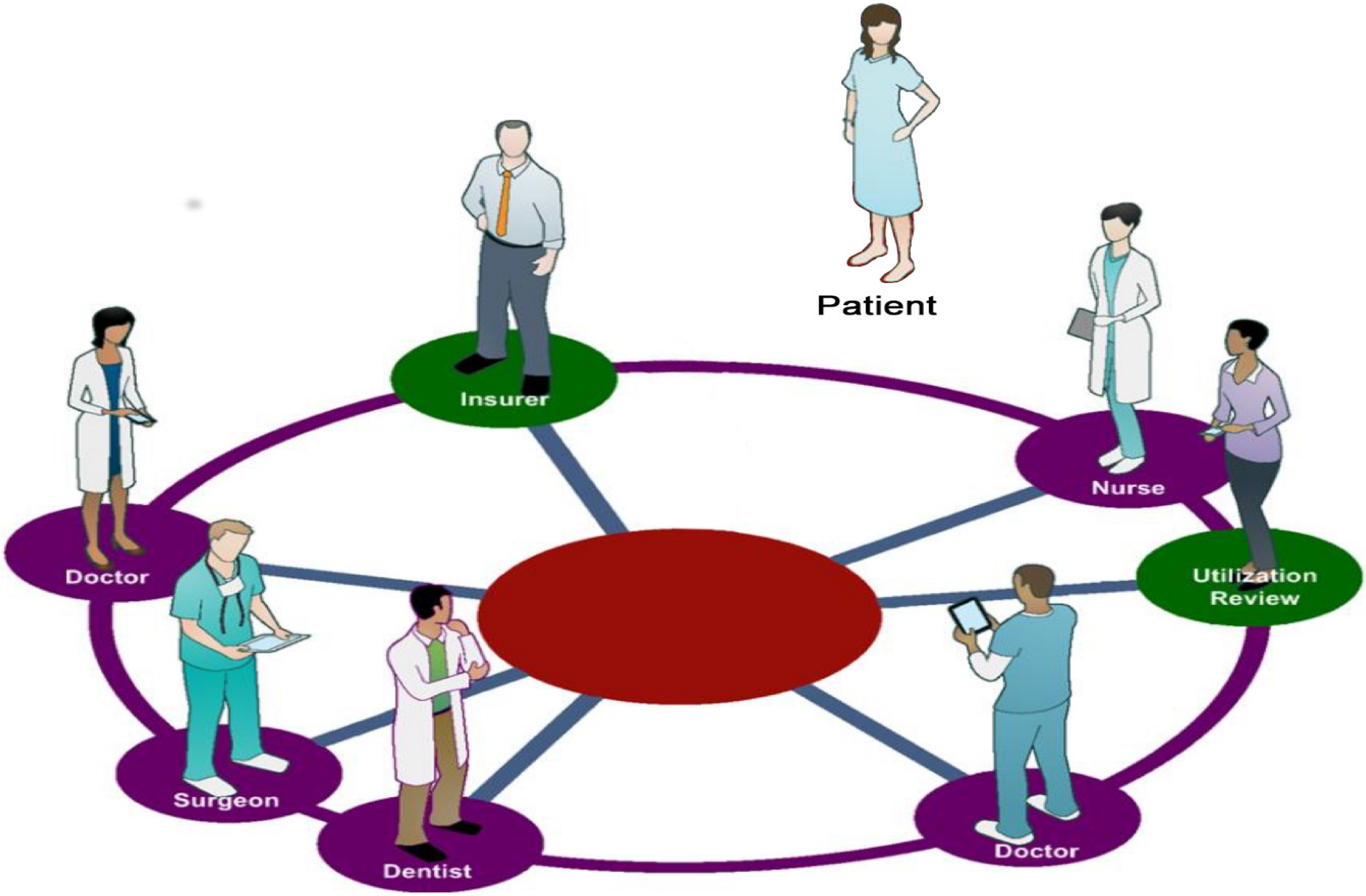
Person 3

- Age 50 Mega-earner
- Acute onset, ataxia, slurred speech, confused
- Attends local A & E, no-one allowed in with patient
- Dx – alcohol intoxication
- Sees me same pm with spouse, history as above + teetotal
- Obvious cerebellar infarction/s
- Urgent MRI confirms multiple emboli
- ECG / 24 hr – PAF.

Person 4

- Age 40
- Covid +ve – mild illness
- Unwell following – told Long-Covid,
- Appts GP and x2 L-C clinic, video and F2F
- Social discussion, I ask about symptoms of L-C
- Barn door angina
- Emergency private cardiac appt
- Severe CAD, angio cannot resolve
- 5 vessel bypass grafts – my son-in-law now dx and doing well.


Insurer
Nurse
Doctor
Utilization Review
Patient
Surgeon
Dentist
Doctor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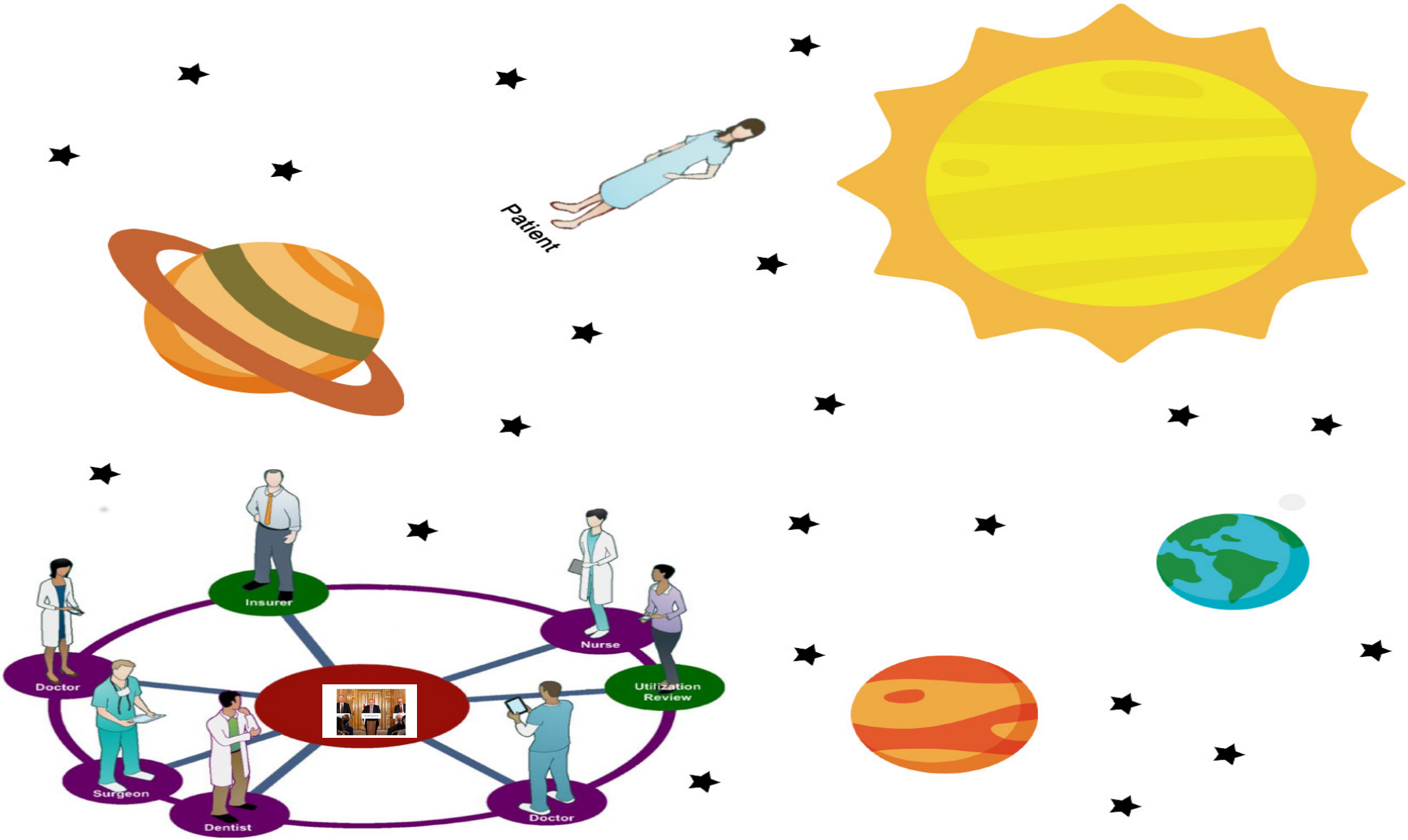
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March 24th 2020

- I write to MPS, GMC, BMA, President of RCP, President of ABN, The Neurological Alliance and the Patients Association

- Only one question : “Are we as Doctors the advocates of our patients or do we now have a greater responsibility to society and government?”

- No response: we will return to this and it was the question raised with the invitation to join this meeting.

“Are we as Doctors the advocates of our patients or do we now have a greater responsibility to society and government?”

Dr Michael Gross (March 2020)

I think this may be the most important medical point that has arisen.

The 4 Pillars of Philosophy; Aristotle 3, de Polanco 5

- Epistemology: Knowledge and truth
- Metaphysics: Reality and being
- Logic: Argumentation and logic
- Axiology: Aesthetics and ethics
- Political philosophy: State and government

Philosophy of healthcare decisions :Knowledge and Reason

- **Knowledge**

- Facts, information and skills acquired through experience or education of the theoretical understanding of a subject

- **Reason**

- A statement offered in explanation or justification on a rational ground or motive.

Suspicion and superstition

- **Suspicion**

- A feeling or thought that something is possible likely or true.

- **Superstition**

- Belief or practice considered to be irrational or supernatural, attributed to fate or magic.

Belief and faith

- **Belief**

- An acceptance that something exists and is true without proof.

- **Faith**

- Complete trust or confidence in someone or something showing belief in the doctrine of a religion based on spiritual conviction not proof.
- And sadly **Lies**

SAGE

- 86 members, 53 professors, hard task to find all CV's
- Many significant political associations (some left of left!)

- **Government science adviser says coronavirus lockdowns will only 'defer the problem' rather than solve it, as he warns it is 'entirely possible' there will be a third wave of infections next year (anon)**

- Alternative SAGE, a few counter voice journalists, more than balanced by negative social media.

Thou shall not:

- Visit a hospital with a spouse even to hear they have dreaded disease.
- Attend the death of your loved one
- Attend an antenatal appointment, scan or labour
- You have 30 minutes after birth to bond.
- You cannot visit a care home where your demented parent thinks they are abandoned
- Have dental treatment
- Visit your grandchildren
- Expect medical care, investigation and treatment
- Socialise, tennis, golf etc etc

Covid and societal subsections

Human rights

Politics, SNP, left wing, remainers

Conspiracy theorists, 5G masts

BMA, GMC, NMC, CSP

Private hospitals

Education

Exchequer, pensions!

Masks & control

Vaccination, anti-vaxers

XR & climate

BLM

Cheats and scammers £1.4 bill

Dr JOHN LEE: This cure is worse than the disease

Prof of Pathology: Sept 25th 2020

- extra 30,000 deaths from cancers currently going undiagnosed.
- **Chris Whitty's background is in public health, a wide discipline, yet the only thing he has talked about in public for seven months is one disease**
- Stroke and heart attack victims are going untreated, diabetics are not being properly monitored, all to slow the advance of a virus that is currently killing fewer than 40 of the 1,600 - 2000 people who die every day in the UK.

The challenges we probably all know

- 25,472 excess deaths in homes Jan-Sept 2020
- 25% increase in deaths from heart failure
- 75% increase in deaths from Alzheimer's and all cause dementia
- Echocardiograms fell 60% up to June 2020, 40% by Nov 2020
- Heart failure admissions fell 66% (Apr/May cf Feb 2020)
- 50,000 fewer diagnoses of cancer cf 2019, now known for each month delay in diagnosis survival decreases by 5-13%
- Now 6.5 million on waiting lists

Mid March 2020 to Sept 2020

- Private sector nationalised – but between 10 & 30 % of whole popn privately insured, so all thrown back onto NHS
- These people pay £6.5 billion pounds in premiums every year.
- Face to face GP apptments went down 90%, now improved but……
- Figure for OP / A&E / Cancer / Cardiac / stroke / physio markedly reduced
- Harefield – “never had so many people dying on table”
- My two local private hosps closed – 200 beds, 12 op th’s, 50 op rooms and 5 scanners

Nationalisation of private sector.

- Private sector took £440 million to become nationalised
- BMI and Spire given debt waiver.
- Amount of work minimal for months. My own area!!!
- Over 6 months Spire group published 110,000 cases. Statement to LSE last year, 820,000 cases / yr.
- Rumoured any private work 85% to go to NHS.

carrying only fresh air," one executive said of some of his franchise's services.

Another operator said that although there had been only a handful of positive tests for Covid-19 among its workforce, up to 20 per cent of drivers

members of their households.

Yet the freight train network is as busy as normal, with the west coast main line linking London, the Midlands cargo hubs and the northwest and Scotland continuing

segme freight Peak F Derbys 40,000 aggreg quarri tonnes from A on to t from th ports o and Lo biomas Liverp Drax p North running

Spire given debt waiver after it supports NHS

Alex Ralph

One of Britain's biggest private healthcare chains has agreed a covenant waiver on its debts and has cancelled its dividend after it made its hospitals available to the NHS during the coronavirus crisis.

Spire Healthcare said that its banks had waived the next two tests for its £425 million senior facility at the end of both June and December.

Last week Spire made its 35 private hospitals in England available to the NHS and it will support the service for a minimum of 14 weeks.

Spire will recover the costs for its services and is paid weekly in advance. It said yesterday that the arrangement and an undrawn £100 million revolving credit facility, with no covenants, provided it with enough cash and financial stability.

However, it also said that because of the uncertainties stemming from Covid-19 and because of its new partnership with the NHS, "it would be prudent … to suspend dividend payments until the current crisis is over".

It had planned to pay a final dividend of 2½p per share, worth £10 million, but will no longer put this forward for approval at its annual shareholder meeting. Shares in Spire were little-changed, however, at 77¾p.

Spire operates thirty-nine private hospitals and eight clinics in England, Wales and Scotland. It works with 7,300 consultants and cared for 810,000 in-patients and day-case patients last year.

Analysts at Numis, Spire's house broker, said that the group "is likely to be well placed, once this has passed, to respond to likely pent-up demand arising from a period of elective suspension across both the NHS and private sector".

Sept 2020

- 88% of all deaths in Europe 0ver 65 (World 94% over 60)
- Average age of death 82.4 years
- Worldwide >50% all deaths in care homes
- Tony Abbott (former PM of Australia) “How much is a life worth?”
- If Australia had locked down completely and saved 150,000 predicted deaths, the $300 billion cost would have worked out at $2 million dollars per life saved or $200,000 per year if people had a 10 year life expectancy.
- A figure far in excess of what government think reasonable (NICE approx. £35,000 per qualy)

“Intensive care beds lay empty while over-60’s died at home” Sunday Times 25/10/20

- 1. The News2 score for admission raised from 5 to 6
- 2. Happy hypoxia
- 3. Cardiac arrests ++
- 4. April 10th guidance changed for News 2, grades 3-5 needed admission
- 5. All non-urgent and medically fit people to be discharged (30,000)
- 6. The score of 8. > 8, sentenced to death
- 7. Over 80 scored 9, irrespective of fitness! (capital punishment only for non-criminals)

A weeping nurse said, “They are all going to die – no one is doing anything about it” Sunday Times 25/10/20

- 1. Fewer intensive care beds than other countries
- 2. Controversial decisions on who should receive treatment
- 3. Veil of secrecy on hospitals
- 4. 26000 excess deaths in care homes and 25000 in own homes
- 5. People never tested and other conditions
- 6. Ambulance service, admission teams and GP’s told not to admit
- 7. Identify the frail, exclude the elderly
- 8. Vast majority died without proper care
- 9. Only 1 in 9 received the care they needed.

Complex questions

- In UK 170,548 beds
- Nov 2020 – 10,344 Covid in hospital, 989 ventilator beds
- In London 982 in hospital, 514 in ventilator beds
- ? Was there a triage tool – over 80 score 9, 8 to admit
- Why so many died at home and of what,

when ITU beds empty?

Why many on ITU with CPAP and / or oxygen nasal cannulae (evidence many press photos)

May 3rd 2022 ref The Times and Pulse

- 1/3 of all GP appointments on hold
- Very difficult to get face to face appts in many practices
- Our local NHS and private hospitals still had no visiting or accompanying rules
- Local private practices - not
- Also extra 3.1million patients in UK since 2017, number of GP's fell by 1343. Patient lists increased from 2007 to 2217 and in Blackburn 3004.

Rod Liddle: May 29th 2022

- “People were wearing plastic bags on feet, tied over trainers because of the superstition that the virus has predilection for soles of feet and then leap up into the mouth and then you die”
- Drinks down the pub – fine, visit dying grandma banned!
- John’s Hopkins tudies suggest all the lockdowns in Europe and US saved 10,000 lives
- Will we cling on to hand sanitising and masks
- Fomites; surface transmission 1 in 10000
- “Like the use of mercury as a laxative; the cure was far more deadly than the disease” !!

Society and medicine

- Stay away vs don't stay away, cancer, heart, stroke, diabetes etc
- Discharge elderly to care homes (why not family as government paying many to furlough?)
- PPE, not enough but have you checked use-by dates? How much would we be prepared to throw away every three years?
- As doctors / nurses are we scared of infection? Are soldiers scared of guns? Can professionalism assist?
- What about only allowing patient to be seen in surgery, OP, IP, care home? – Capacity Act, Equality Act.

The aftermath of infection: Long-Covid for patients and medical personnel

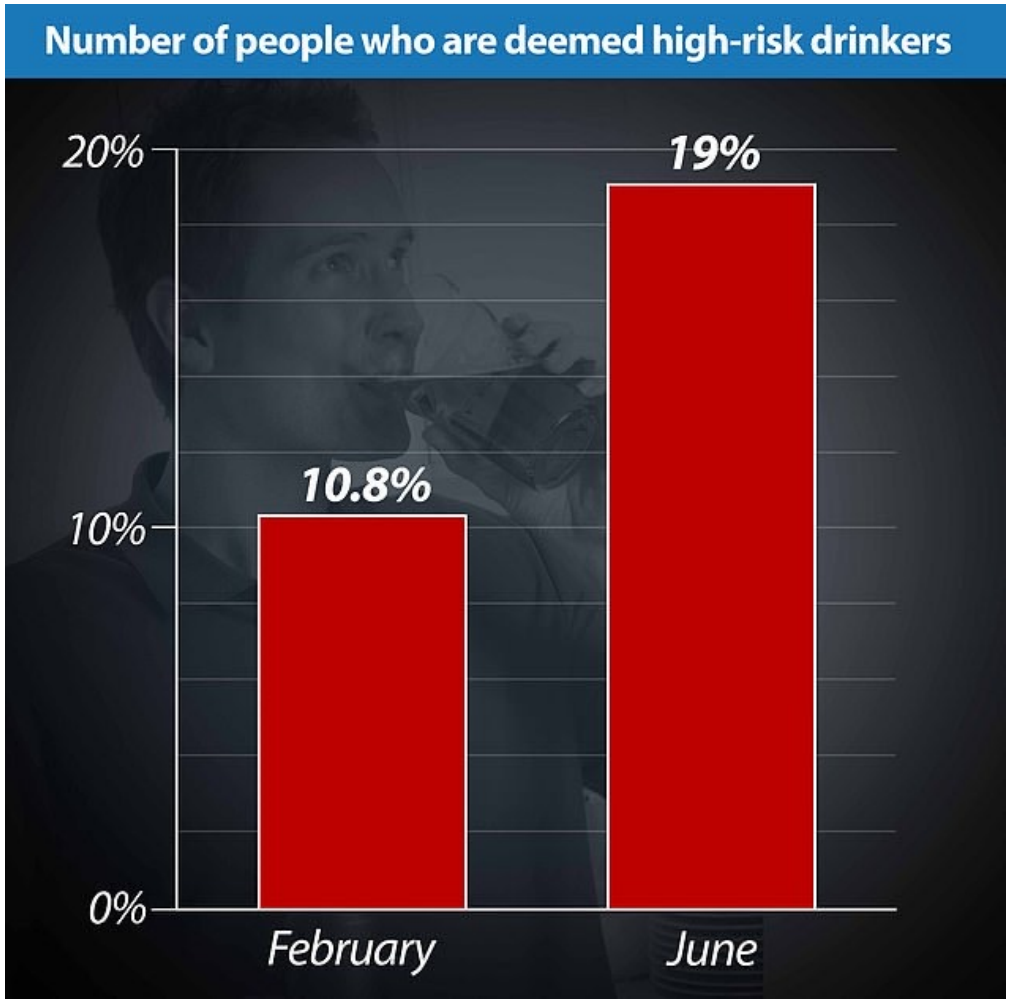
- Is this any different to post-viral / infection fatigue syndrome
- Long term cough, fatigue and brain fog.
- How do you separate out from the psychological consequences.
- 20% of hospital admissions psych disorders
- Professional burn out
- Are video consultations more tiring? And masks?
- Public anxiety is palpable
- Complex behaviour of people; the bad get worse in crises
- Sick people, worsened by limiting contacts, psych problems of bereaved etc

Cancer Care

- 37% of 1 million cancer sufferers diagnosed in A & E in England
- Death rate in 12 months increased x2
- 326,000 fewer people got urgent referral for diagnostic tests.
- Worst groups, liver, lung, ovary, pancreas and over 75
- Early diagnosis rate 54%

Potpourri

- Puppy mania
- Children losing face recognition
- Children under exercising, increased gaming etc – Bristol study, only 36% reaching minimal guidelines, only 46% exercise at weekends.
- £757 m spent on quarantine hotels, taxpayer funded £400 m, no idea if they helped
- Working from home, even this Zoom meeting
- Passport, airline, DVLA chaos
- Lack of medical student and doctor training



Alcohol Consumption: 2020

UK faces 'looming addiction crisis' because of lockdown with number drinking at high-risk levels doubling to 8.5million since February

The Mental Health of the Nation

- 8 students commit suicide in one uni in one week in October
- Professor Ferguson – the purveyor of ultimate doom (he of 500,000 deaths)
- Falling birth rates, people staying single,
- Female normality challenged, re looking after children, careers, home education, multiple children, high rise home without balcony
- Limited access to psych services, most of which on-line and less effective.
- Treatment delay, leading to major psych consequences and deaths.

Medical and care staff

- Exhaustion, mainly due to working conditions and staff illness
- The psychology of so much politics
- PPE, who really got it wrong
- The BMA and its anti-government missives and now very questionable report – worth reading, only to see how so much could have been achieved to support the profession as opposed to try and bring down a government.

Care homes

- Failure? What about other countries?
- Much quoted S Korea in 2001: 128 care homes looking after 7,864
- In 2008: 4079 care homes looking after 103,973
- UK has 17,600 care homes (391,000)
- ?Furlough and family care?
- No doubt care and nursing homes had significant mortality worldwide but only 21 countries produced usable data and had different levels of testing and diagnosis. Australia and S Korea said no deaths!

Political point scoring

- Remember Theodore Dalrymple:

- “ The NHS has two purposes, 1. to employ 1 million people
  2. to win votes”

So many people knew better ps look up CV’s of SAGE members

Political point scoring: Oct 20 – Oct 21

- Sir KS (May 21) “We have worst death toll in Europe. Families who have lost loved ones need answers”
- AR (May 21) “ BJ was too slow to introduce 3 lockdowns, which left us with the worst death toll in Europe”
- PKG (Jan 21) “Too slow, highest deathrate, amongst worst in the world and combination with economic downturn of any major economy”
- RB (Oct 21) “Our death toll is 3x that of France, Germany. Italy and Spain”
- Dr RA-K (much quoted A&E doc & labour MP) “It wasn’t inevitable that we have one of the worst death rates in the world”

The Guardian (The Grauniad) 7/10/2021

- Why is England doing worse against Covid than its European neighbours?
- *Christina Pagel and Martin McKee*
- Instead of relying on vaccines alone, countries such as France and Germany are using extra measures to keep cases and deaths low, (and Spain and Portugal)

Sweeping Statements:

- Dr Sourya Swaminathan: WHO chief scientist
- “for the future make sure we have the PPE”
- Obvious – or is it?

May 6th 2022 - WHO

- Probably first date when truths emerge, everything before this ? Suspicion ? Falsehoods
- WHO – Governments around the world have massively under reported deaths (euphemism for lying)
- Estimated 15 million more deaths than reported
- Excess mortality key – but still a political figure
- UK figures stood out as being accurate
- ? Any benefit politically with honesty.

The truth, the whole truth and nothing but the truth According to WHO May 2022

- Excess death rate in Europe 170 / 100k ; UK 109.
- Spain, Germany and Italy all worse.
- Sweden (No-lockdown) 56
- “Rates in Britain had been exaggerated by some, trying to score political points by misleading people and alarming them”
- Britain ranked 139 / 194 countries and many of the lowest hardly believable. (note UK 3rd most populated island in world)
- We were told Germany a paragon of virtue
- And New Zealand! 10% bigger than UK with popn of 5.6 million.

The criticism in relation to PPE

- Our PPE has 3 year use by date
- If fully stocked and stored since say 2006, 4 complete sets would have been thrown away at a cost of £60 billion and amounting to 64,000 tons of waste. (est 16,000 tons this year)
- Wrong masks from overseas
- Public wearing FFP3 masks (valve)
- Reliance on China for PPE and much else
- Poor quality goods panic purchased, how were contracts awarded?

PPE

Fomites vs aerosol transmission

- April 2021, 3.4 billion face masks being thrown away every day
- >16.5 billion items purchased in UK (Jan 22). £300m out of date. Cost £13 B.
- 16,000 tonnes disposed in UK +++++ not biodegradable
- 50% of PPE bought not used (NAO). Costing £10m / month to store.
- Suggestion PPE being available from 2006, maths genius not needed.
- Billions of pounds spent on surface cleaning, time, energy, toxic to environment.

Masks: 1

- March 2022: est 26,000 tonnes entered our oceans
- University of Portsmouth study showed mask litter increased by 9000% in the first 7 months, and thought to have increased spread of Covid.
- What masks, did you object to ITU valve masks being worn by patients coming to see you? (cared only about themselves?)
- My own unscientific study showed >90% of people touched front of mask >4x in short period of observation.
- Did they change their masks x4 / day, and sanitise hands as recommended.

Masks:2 Lock down and education

- Communication skills impaired
- Babies baffled by facial expression
- Children not responding, not taking turns or listen
- Learning and personal development hindered
- Attendance, wellbeing and behaviour deteriorated
- Limited vocabulary, speech and language development leading to non-socialising and antisocial action
- Children refused mental health access (Stem4: GP survey -1000)

April 2020; The Children's Enquiry by Cole and Kingsley

- Uncovered SAGE report
- Increased risks to 30,000 vulnerable children
- De facto underclass
- March 18th – 24,000 schools closed, remained longer than Europe
- 1 million referrals to child mental health services (inc 15%)
- 46% of children entering reception not ready
- Staggering increase in speech and language difficulty
- Obesity increased from 21% to 25.5%
- Primary standards fell 25%
- GOS reported 1,500% increase in abusive head trauma in one month
- When reopened room temps as low as 10 deg reported. Etc etc

Testing

- Someone please show me the evidence that widespread testing achieved anything.
- Why are people literally screaming for more testing?
- See BMA report May 2022 – when free testing was costing £2 billion per month

Financial pain: David Smith, Sun Times 1st May 2022

- £450 billion cost so far
- Once debt at 40% of GDP was safe
- Public sector debt > £2.3 trillion or 96.2% of GDP
- But - cf 2ndWW increase from 137% to 252% of GDP, then fell to 22% over next 45 years
- Debt interest will be £83 billion this year, £69.9 B last year.
- Unemployment figures very good.
- Australia best cost analysis, each life saved cost >$1.1M; x11 usual allowance for health intervention (UK £30,000)

Lockdown v finance : the moving target

- June 2020 – lockdown saving millions of lives
- Feb 2021 – policies might result in more life years lost than saved
- May 2022: Johns Hopkins study: Lockdowns saved 3.2% lives (6000 in Europe and 4000 in US)
- Ferguson model suggested US deaths at 1.7-2.2 million. (500k for UK)
- Restrictions to stay at home and not travel 2%, masks 18.7% (only 3 studies)
- UK cost between £0.5-1.0 trillion. US cost est $16trillion, world cost ??. If figures right each saved life £166m in UK

The Elderly

- All focus on young, but loss of two + years when 75 or older!
- Care homes
- Loneliness, ostracised from family and friends
- Deconditioning
- Mrs M “Confidence top sliced”
- Phone contact went ……..

All?

- Weight gain, apparently women > men
- Disruption of daily routine
- Reduced healthy eating, emotional eating
- Lack of exercise
- Reduced fitness

Vaccination: Sustar AB et al BMJ2022;377:e069317

- Impact of vaccination on popn mortality & other parameters
- 48 states, 2558 counties, 80% of US popn
- Between Dec 2020 and Dec 2021 > 30m cases and 400,000 deaths
- Mortality reduced by 60%, 75% & 81% in low, med and high vac.
- Improvement when v low to low or low to medium (15-20%)
- Study concluded many lives could have been saved by vac now and in future.
- Every parameter improved by vaccination

So

- Do we perceive medicine has handled this crisis well?
- Do you agree people should have attended appointments unaccompanied? (Mental Capacity Act, Equality Act considerations).
- Did people get the medical care they needed and if not why not? – what about now?

“Are we still the advocates of our patients or are we now more responsible to government and society?”

Dr Michael Gross (March 2020)

The answer from the MPS

but in fairness no other organisation replied

- Not binary
- Responsible to patients
- Have to do the greater good for the most, ie do the most for the most
- Responsible to government
- Responsible to society

Where does, dementia, mental handicap, congenital abnormality sit in that thinking? If we are not their advocates, who is?

My thoughts

- Government terrified of Ferguson 500,000 death model and early scenes in Italy
- Government little idea of how to run anything takes advice from SAGE who are 86 in number inc 53 Professors.
- Difficult to find CV's but worth doing, "member of Communist Party" and activist written about destruction of our society.
- PPE organisation and purchasing needed to be given to military
- Vast amounts of money thrown at the virus without a global co-ordinated plan
- Did medicine really run away cf "Black Death"
- We do mourn the 46 doctors who died of / with COVID

My answers

- Medicine needs to look in on itself
- Government took dubious advice, politics vs knowledge and reason
- Why in March can lowly pensioned neurologist forecast the future when 86 scientists could not?
- Private sector should have been opened fully for non-Covid. NHS using one area for uncertain until negative etc My 2 hospitals, 200 beds 50 OP rooms and 5 scanners, 12 operating theatres. All facility open 24 hrs to reduce patient flow and push through tests.
- The 35000 retd volunteers, trained to take over non-Covid OP and ward work (only 1500 taken up, mainly doing tel answering). Current trained staff retrained to take on more sophisticated or Nightingale Work.
- Closure of religious institutions and schools??
- Did lockdowns achieve anything after the first wave?

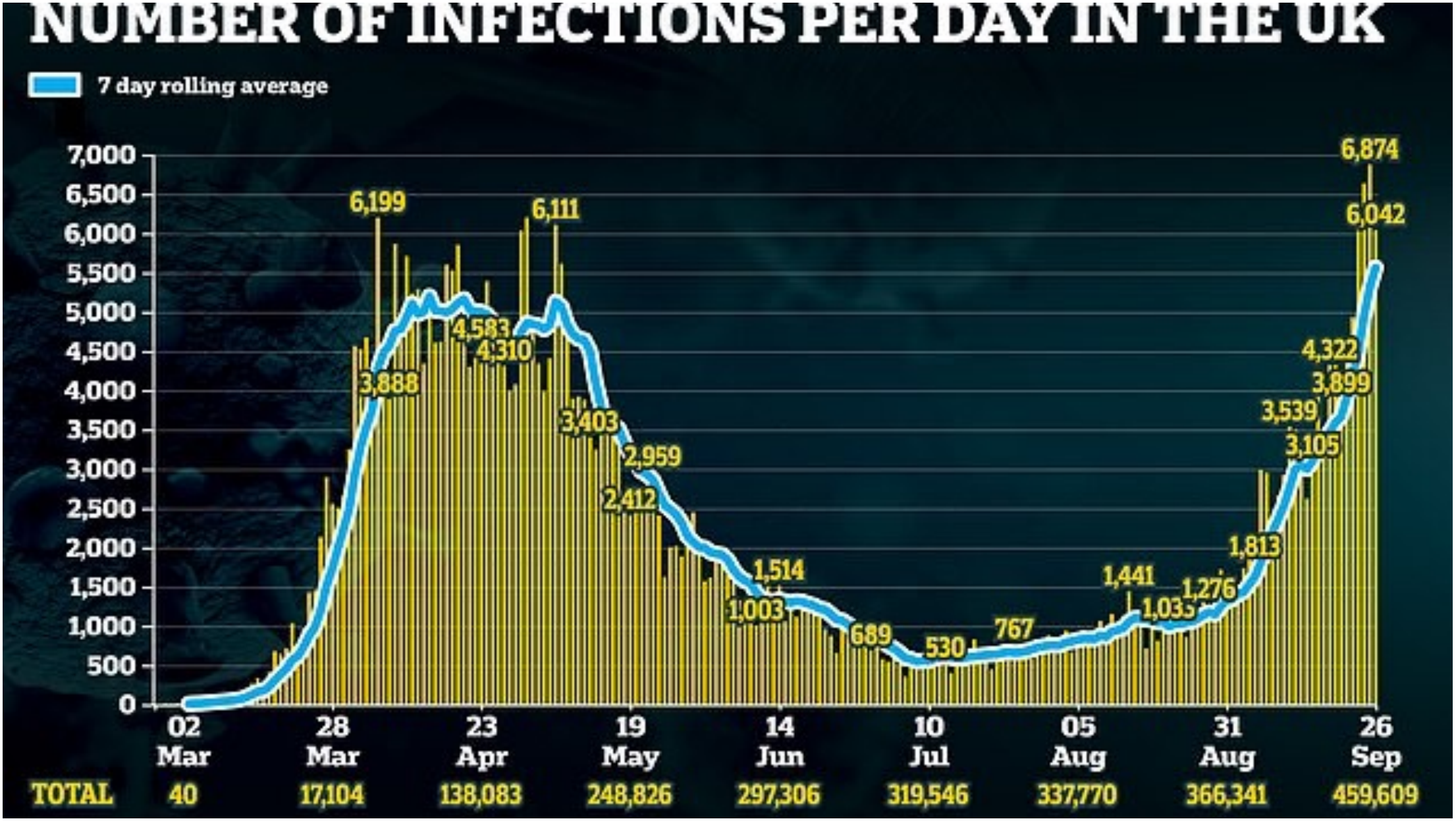
Dr Michael Gross

The Body Factory Rehabilitation Centre, Harrow

www.neurologyclinic.org.uk

www.bodyfactory.org.uk

02088611555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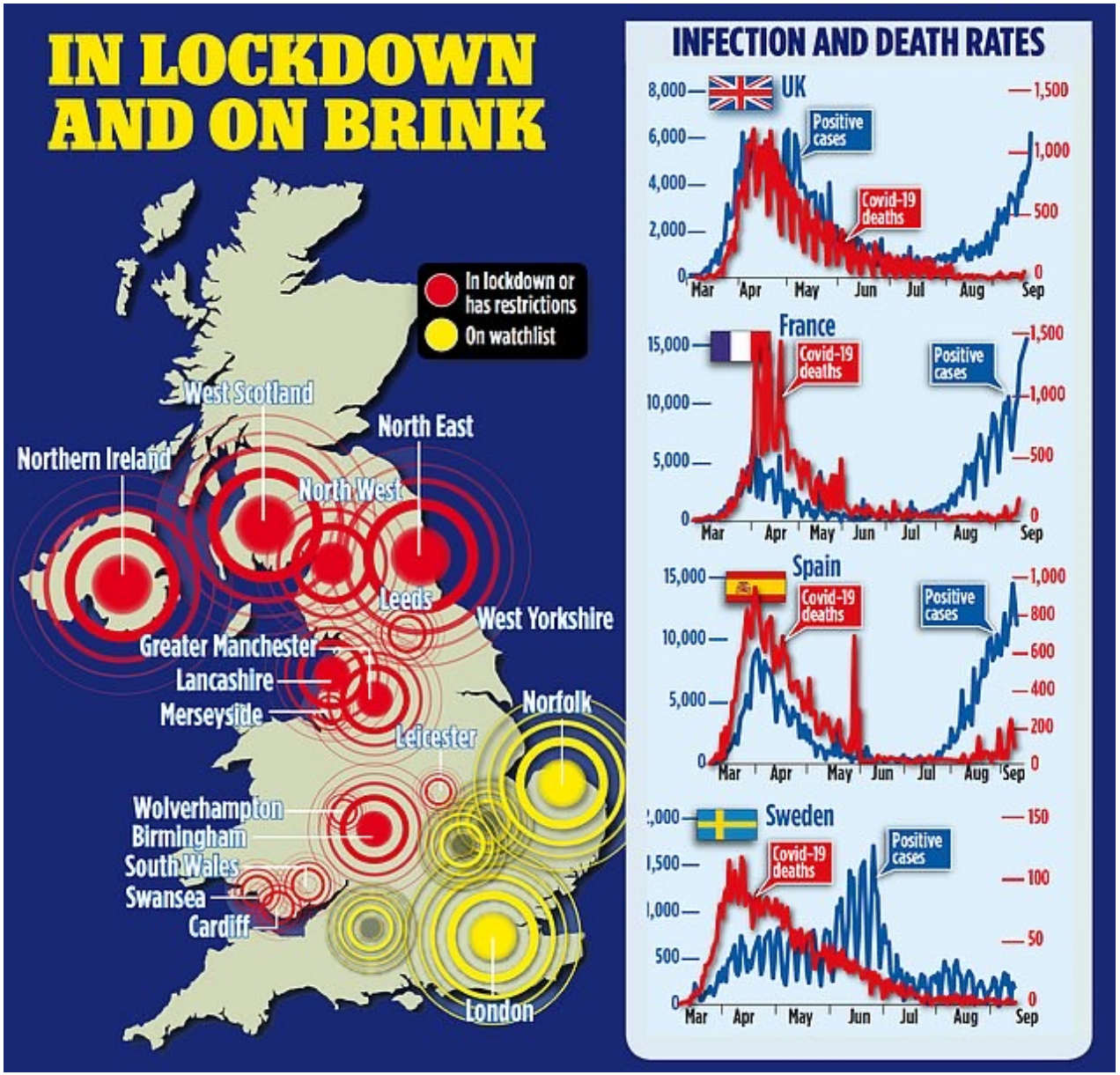
IN LOCKDOWN AND ON BRINK
In lockdown or has restrictions
On watchlist
West Scotland
North East
Northern Ireland
North West
Leeds
West Yorkshire
Greater Manchester
Lancashire
Merseyside
Norfolk
Leicester
Wolverhampton
Birmingham
South Wales
Swansea
Cardiff
London
INFECTION AND DEATH RATES
UK
Positive cases
Covid-19 deaths
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Sep
Sweden
Covid-19 deaths
Positive cases
1,500
1,000
500
0
150
100
50
0
Mar
Apr
May
Jun
Jul
Aug
Sep

Clinical Features Ellul et al (2020, Liverpool) & Paterson et al (56) (2020, Queen Square)

- Direct effect of virus
- Para-infectious
- Post infectious, immune mediated
- Neurological complications of the systemic effects
- Stroke / thromboses / vasculitis

The Neurological Associations of Covid-19

- Up to July 2020 – 901 cases of neuro complications reported
- CNS and PNS disease
- Guillain-Barre to encephalopathy
- Even three cases of myasthenia gravis (www.acpjournals.org/doi/10.7326/L20-0845)
- Low percentage, but absolute numbers high of neuro
- Stroke 2 – 6 % of hospitalised patients
- Complex in setting of multi-organ failure

Coronaviruses and neuro complications

- All corona and influenza viruses can damage the CNS and PNS
- Study of 22 children with prob CNS disease showed Corona IgM in serum, CSF or both. All made full recovery.
- H1N1 influenza outbreak in 2009 1-2 / 100000 had neuro comps
- The 1918 H1N1 pandemic associated with encephalitis lethargica??
- Scale of Covid-19 infection will give much larger numbers of neuro sufferers.
- No idea of incidence yet and the thrombotic complications were under recognised initially.

COVID-19 and Neuro Complications (125 cases)

- Altered mental state (31%)
- Encephalopathy (13%)
- Encephalitis (6%)
- Neuropsych diagnosis (18%) inc psychosis 10%, dementia like 5%, affective disorder 3%. Pre-existing dementia doubles risk
- 62% had stroke event.

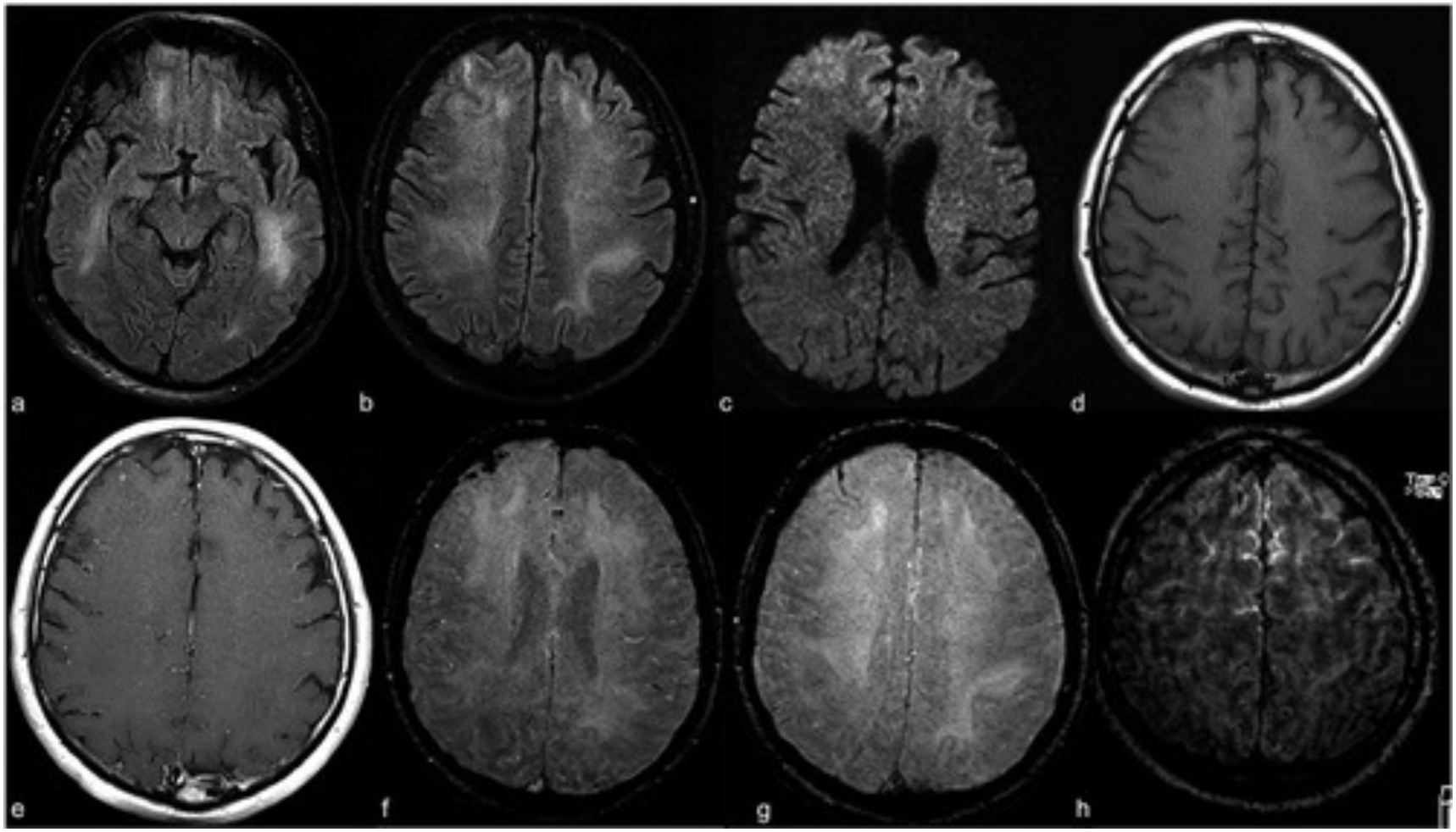
Regretfully poor quality of data collection. It is the stroke complication that is the unusual feature of this viral disease.

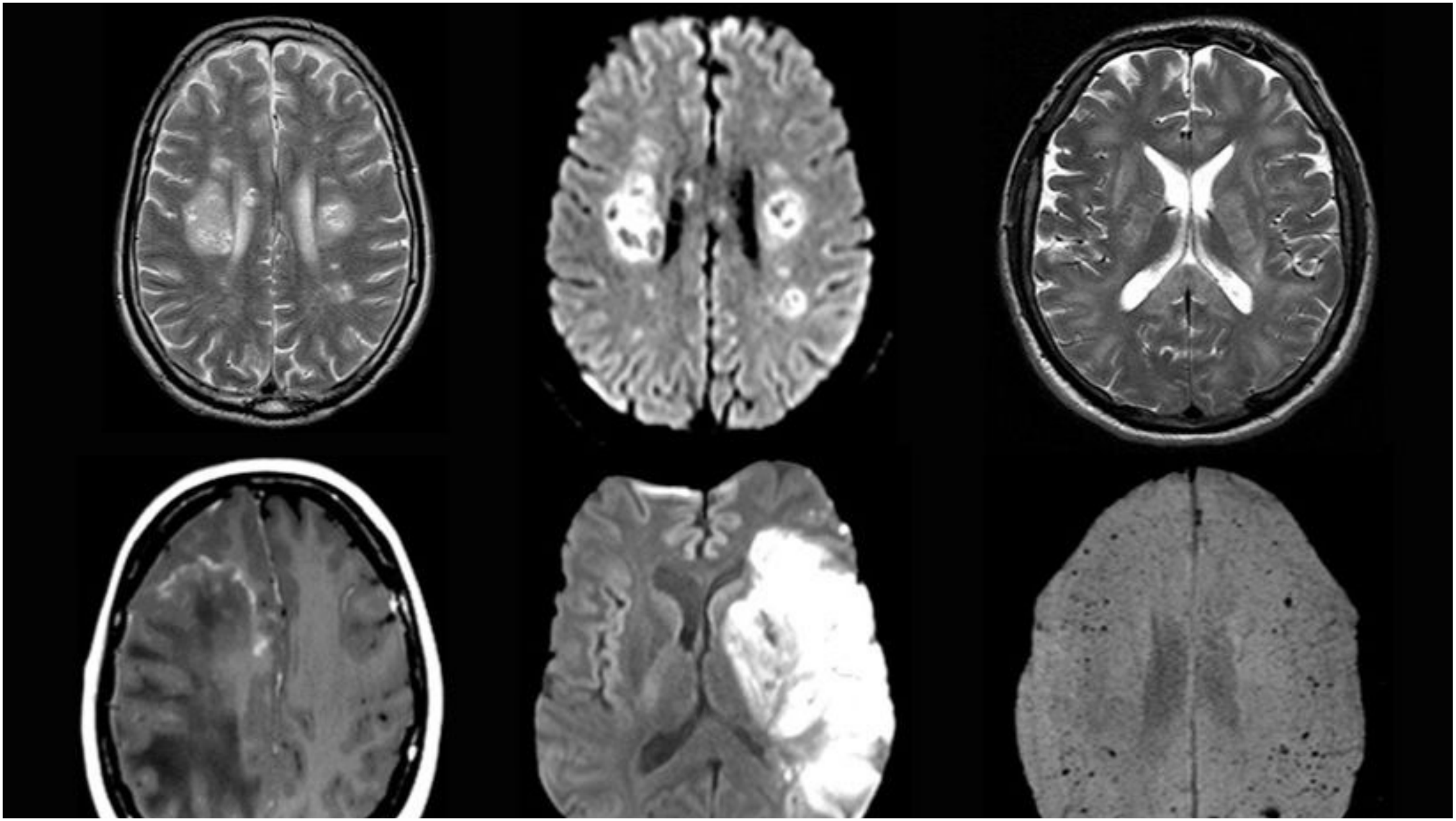
Stroked associated with Covid-19 (SARS-CoV-2)

- **Probable association**
- Either SARS-CoV-2 detected in CSF or other sample or evidence of specific antibody in serum suggesting acute infection and no other known cardiovascular risk factors.

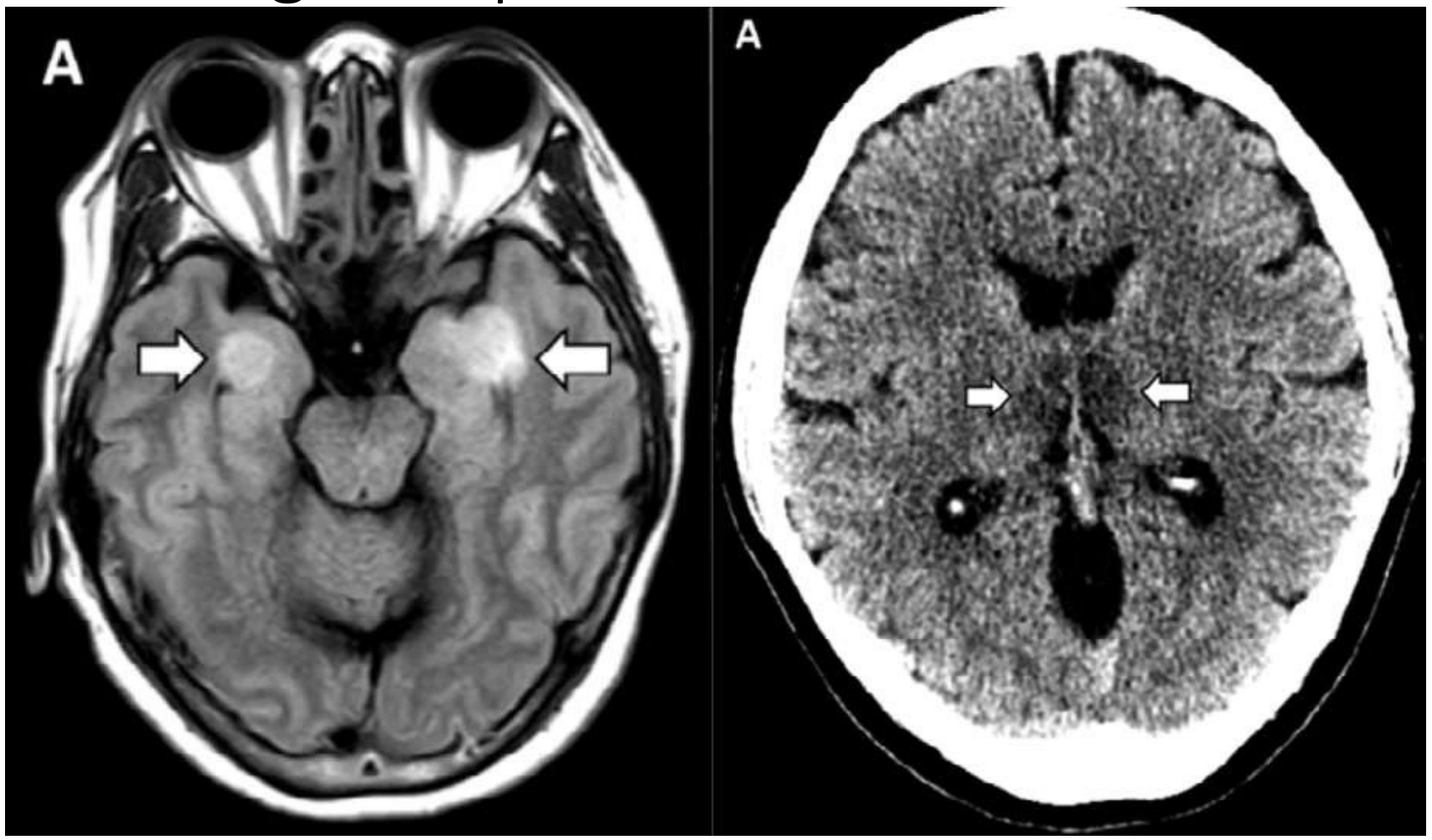
- **Possible association**
- As above but patient has other traditional cardiovascular risk factors.

ITU PATIENTS: 50% Brain Swelling

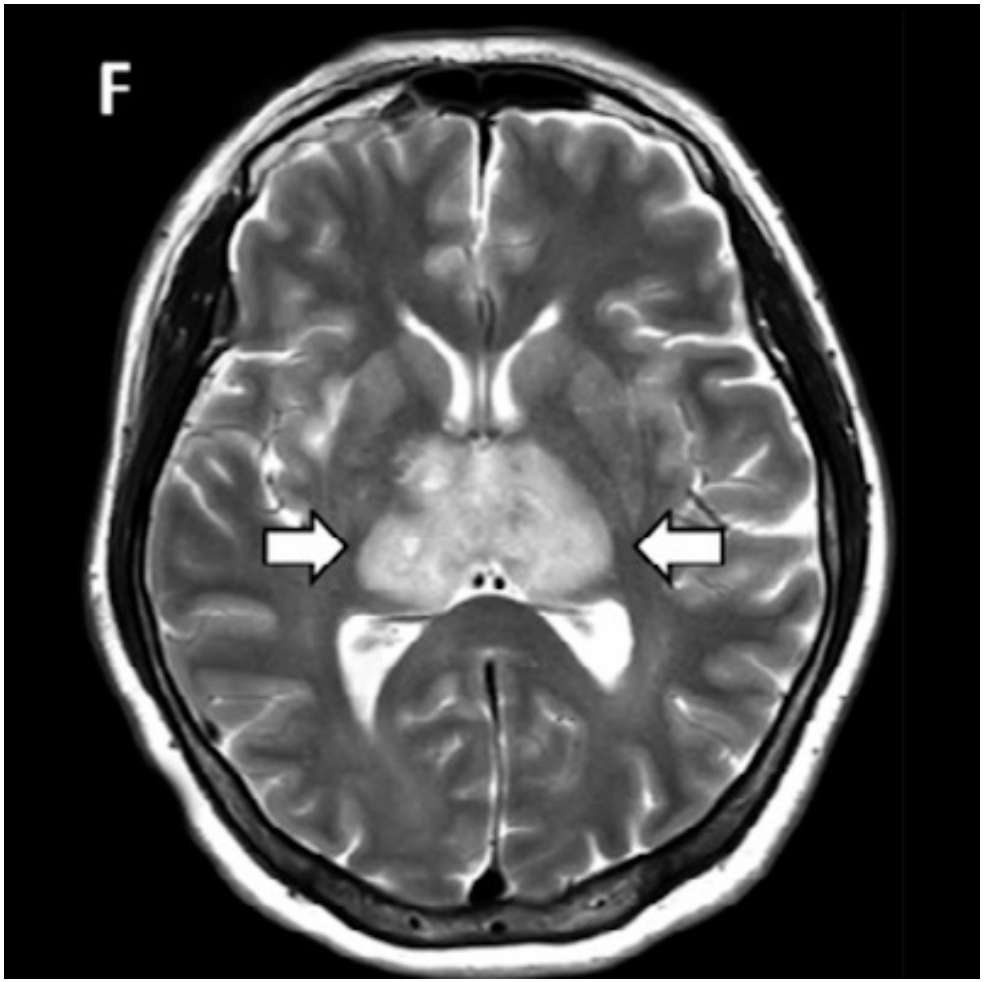




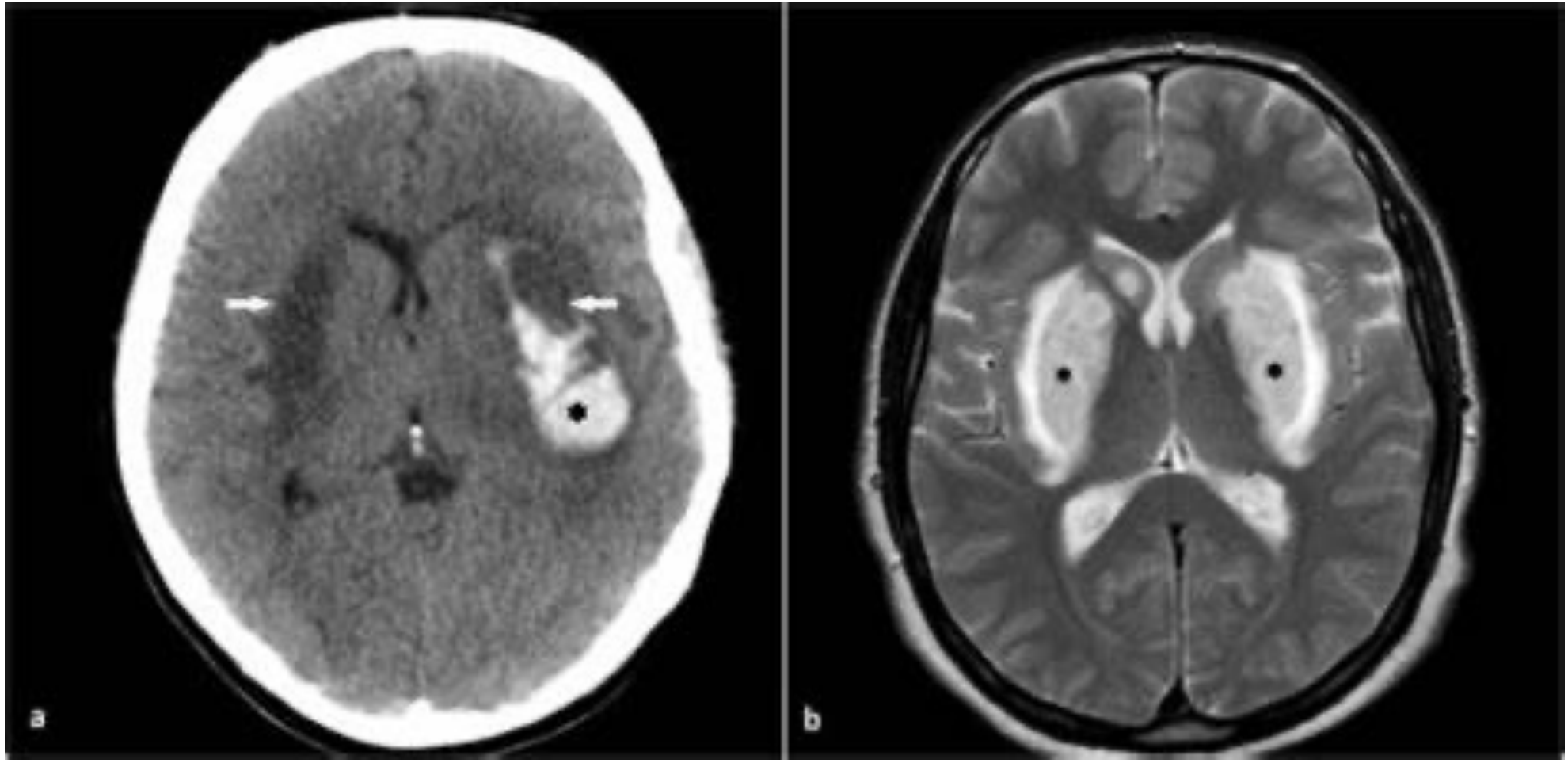
Necrotizing Encephalitis: Covid-19



Brain Scan concurrent with cytokine storm



Brain Scan of Methanol Poisoning: India



Conclusions: The Disease

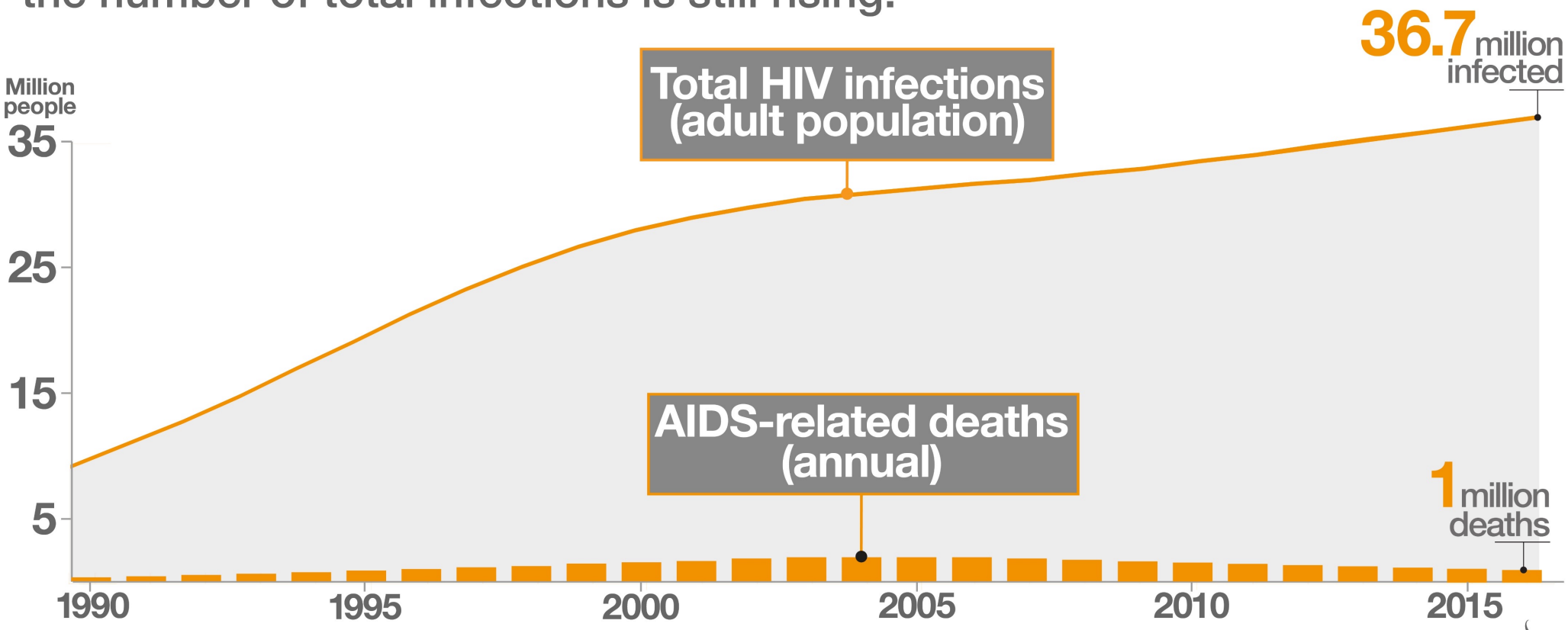
- New information on every aspect of this infection emerging on a daily basis
- Why have so many people died in the early time line?
- Elderly, infirm, concurrent disease and some ethnic groups vulnerable?
- Although initially thought to be pulmonary disease this is not correct as multi-organ involvement leads to mortality
- “auto-immune” and thrombotic elements seem to decide ultimate outcome.
- Neurological complications may arise weeks later (not surprising)

PART 2 : How has Covid affected the brain and thinking?

- Societal / Political
- Patient and family.
- Doctor / medical professional /paramedical and support members

HIV/AIDS: Infections and deaths

Although the number of AIDS-related deaths has decreased over the years, the number of total infections is still rising.



CAUSE OF DEATH	WLD(RNK)	WLD(DEATHS)
Coronary Heart Disease	1	9,405,008
Stroke	2	5,765,313
Lung Disease	3	3,032,444
Influenza and Pneumonia	4	2,947,050


STAY HOME
PROTECT THE NHS
SAVE LIVES
NHS
CORONAVIRUS
ANYONE CAN GET IT
ANYONE CAN SPREAD IT
STAY HOME • PROTECT THE NHS • SAVE LIVES
IF YOU GO OUT,
YOU CAN SPREAD IT.
PEOPLE WILL DIE.
STAY HOME • PROTECT THE NHS • SAVE LIVES


STAY ALERT
CONTROL
THE VIRUS
SAVE LIVES
GOV.UK


HM Governm
Level
Description
Action
5
As level 4 and there is a material risk of healthcare services being overwhelmed
Social distancing measures increase from today's level
4
A COVID-19 epidemic is in general circulation; transmission is high or rising exponentially
Current social distancing measures and restrictions
3
A COVID-19 epidemic is in general circulation
Gradual relaxing of restrictions and social distancing measures
2
COVID-19 is present in the UK, but the number of cases and transmission is low
No or minimal social distancing measures; enhanced testing, tracing, monitoring and scre
1
COVID-19 is not known to be present in the UK
Routine international monitoring
STAY ALERT › CONTROL THE VIRUS › SAVE LIVES

Manufactured or not?

SARS-CoV-2 has a receptor binding domain specifically designed for the human angiotensin converting enzyme-2 receptor (ACE2) found in lungs, kidneys, intestines and blood vessels.

In addition, SARS-CoV-2 has a furin polybasic cleavage site not found in any closely-related bat coronaviruses as well as other artificially inserted charged amino acids that enhance the virus' ability to bind to and enter human cells by forming "salt bridges" between the virus and the cell

- Scientific consensus denying this view published. Just a pity China not co-operated with external investigations.

Random v Manufactured: or all false?

- Dr Li fled to USA confirms virus man made in Wuhan lab.
- Was it an accidental or deliberate release?
- Why has so much of Far East had low mortality? – genetic selection?
- Italy reports ab's Sept 2019
- China still refusing WHO access, only its own people can investigate
- Certainly been politicised
- Was it weaponised?

Revealed: how elderly paid price of protecting NHS from Covid

▶Over-80s were denied intensive care

▶Drastic steps to stop wards being overrun

INSIGHT

Elderly people were excluded from hospitals and intensive care during the height of the pandemic's first wave as part of efforts to stop the NHS being overrun, an Insight investigation can reveal.

Documents drawn up at the request of Chris Whitty, England's chief medical officer, devised guidelines – called a "triage tool" – that were later used to prevent many elderly Covid-19 patients from receiving ventilation in intensive care. One of the documents advised medics that anyone over the age of 80 should be excluded.

Intensive care doctors say the triage criteria set out in the documents – which gave a score for age, frailty and illness – were used in hospitals in Manchester, Liverpool, London, the Midlands and the southeast.

The Department of Health and Social Care insists the guidance was never formally published, but numerous sources say it was widely circulated and used by hospitals and doctors. One intensive care doctor said the triage tool stopped so many elderly patients being admitted to intensive care in his hospital that many critical care beds were empty. Instead, patients were left to die on the wards.

NHS data obtained by Insight reveals stark differences in the way

INVESTIGATION

PAGES 7-11

intensive care was used for different age groups.

Patients over the age of 80 made up 60% of the total deaths from the virus, but only 2.5% of that age group who were treated in hospital were given access to intensive care. However, many of the small minority of those in that group who did go into intensive care would later be discharged alive.

The figures suggest that only one in nine people who died of Covid-19 had been given intensive care treatment. They also show that the proportion of those admitted to hospital aged over 60 who were receiving intensive care treatment halved as the pressure grew during the height of the pandemic.

The new findings undermine claims by Matt Hancock, the health secretary, that "everybody who needed care was able to get that care" during the first wave.

As part of a three-month investigation into the government's handling of the crisis during lockdown, The Sunday Times has spoken to more than 50 witnesses, including doctors, bereaved families, care home workers, politicians and government advisers.

Our inquiries unearthed evidence that a variety of steps were taken which kept people from going into hospital:

- In some regions GPs were asked to identify their frail elderly patients who would be left at home even if they were seriously ill with the virus. The local trusts provided lists of patients for doctors to consider excluding
- NHS England issued guidance to health authorities setting out groups of elderly people, including all care home residents and those who had asked not to be resuscitated, who should not ordinarily be conveyed to hospital without the permission of a senior doctor
- Ambulance and admission teams were told to be more selective about who to take into hospital. One paramedic reported visiting case after case where people had died from heart attacks after being left too long in their homes while suffering from the virus
- Care home owners expressed frustration that their residents

Continued on page 2→

JOEL GOODMAN

Maria Berry, left, with daughter Rebecca McAllister, lost father Brian Noon, whose picture is on the table, to Covid-19 after they were told he would not be admitted to hospital even if his condition worsened

Conclusions

- A novel coronavirus having worldwide health and economic consequences. Significant worries how it emerged.
- Not surprising with so many infected people that every possible neurological complication has been reported.
- We still do not know if so called post Covid or long Covid syndrome is an actual pathophysiological process or what?
- Has medical practice now changed forever?
- Are we the advocates of our patients still or responsible to society?
- What is the future role of General Practice?

Conclusions: The Aftermath

- The late diagnoses
- DNR and Human Rights: abuse of the same?
- Why so many deaths in care homes > hospital deaths ++, when ITU's empty and wards 40% full
- Is video here to stay; is this the end of old style General Practice?
- PPE supply for future
- Unemployment, debt £2trillion and counting
- Do we perceive our representatives have been helpful to:

a. The profession: b. Our patients: c. Government

Where does future viral attack (big brother) cf global warming, feeding 12 billion by 2050, sunspot activity, giant volcano, etc?

When did you last assess Capacity before consulting? And Powers of Attorney

- https://www.nhs.uk/.../making-decisions-for-someone-else/mental-capacity-act
- The Mental Capacity Act (MCA) is **designed to protect and empower people who may lack the mental capacity to make their own decisions about their care and treatment**. It applies to people aged 16 and over. It covers decisions about day-to-day things like what to wear or what to buy for the weekly shop, or serious life-changing decisions like whether to move into a care home or have major surgery.

And in case anyone forgot!! – The Equality Act

- https://www.workingwise.co.uk/your-guide-to-the-equality-act-2010
- 30/09/2019 · **The Equality Act** 2010 brought together anti-discrimination law relating to areas such as race, gender, disability, religious belief, sexual orientation and age as well as the Equal Pay **Act** 1970. In total, over 100 separate discrimination measures were brought together under the umbrella of the **Act**.

- Or “do I want a visitor”?

- Ps New GMC regs released this am!!

The Human Rights Act: Article 2

- Right to Life
- The guarantee that life is protected by law
- No-one to be deprived of life intentionally, other than in defence of an unlawful act.

- Case law: Pretty v United Kingdom 2002 – sought to protect husband if she needed his help to end her life.
- Held against as right to life does not encompass a right to choose death rather than life

The Human Rights Act; Article 3

- Freedom from torture and inhuman and degrading treatment
- Mental or physical
- Inhuman or degrading treatment or punishment
- Includes serious physical or psychological abuse in a health or care setting
- Degrading means treatment that is extremely humiliating and undignified
- The principle of dignity
- A public authority can never use lack of resources as a defence against an accusation that it has treated someone in an inhuman or degrading way.

The Human Rights Act
Article 3 : THE BUT

- Authority has to show that action is lawful to protect public safety, protect health
- The action has to be proportionate when appropriate

The Human Rights Act: Article 8

- Respect for your private and family life, your home and all communication.
- The right to private life without government interference
- Includes your right to control who sees and touches your body
- Public authorities cannot do things like leave you undressed on a busy ward or take blood without permission.
- Personal identity, forge friendships
- Right to participate in economic, social, cultural and leisure activity
- Right to enjoy family relationship without interference
- The right to live with family or if not the right to regular contact

Case 2

- Age 70 – PH Cervical cord compression and surgery
- 2/52 increasing ataxia, hardly able to walk
- On examination: ataxia, areflexia, pl extensor
- All NHS and private neurophysiology stopped
- New centre established in March
- NCS showed severe demyelinating neuropathy and scans high signal in cord
- Likely mixed CNS and PNS demyelination

Case 2

- ? Miller-Fisher, ? Dyck, Thomas Disease or something new.
- Took 5 hrs of non-stop tel calls to find a hospital prepared to take
- Eventually just sent to RFH
- No-one allowed in with patient.
- Subsequent Covid +ve (no-one informed me, or colleagues who investigated)
- Family not allowed to visit in spite of increasing confusion
- Slow recovery

Case 3

- Age 64 Unable to speak x 2 for 30 mins
- Called 111, taken to A & E, no family member allowed
- Assessed, no diagnosis, no investigation after CT brain normal
- “one of those things” advised book an NHS appointment to see neurologist, w/l 52 weeks.
- PMH: CAD and stenting
- Finds me!

Case 3

- MRI brain, multiple areas of infarction – likely embolic
- 24hr ECG – PAF
- Cardiac opinion etc
- Anti-coagulation

- Have further patient 55. Neuro symptoms, CVA 6 years ago, sent away from A & E. NO diagnosis. MR shows new stroke event. Bubble ECHO shows large PFO, Rx apixaban, Closure of PFO (current) and now 2nd patient 30's.

Cases 4-6

- Three people with blackout/s seen in 7 day window
- One age 17 (seen by me as parent desperation, no-one else!)
- All taken to A & E all refused family member to accompany
- All discharged with either no proper history, no or wrong diagnosis, none advised re: driving, all told needed NHS apptment to be sent in post!
- My own NHS GP practice just had all referrals to NWP from Jan 2020 returned with instruction to reassess, rerefer and w/l likely >52 weeks.

Case X

- Age 70, six weeks post hip replacement
- Presents one evening SOB
- 111 confirm need for ambulance, attends, suggests ?Covid, take wait and see approach.
- Dead by morning
- Probably included in Covid figures as I suspect much heart failure, influenza pneumonia, COPD, pulmonary embolism (the somewhat obvious diagnosis in case X)

GPs miss 'soft signs' of illness in online checks

Katie Gibbons

Senior doctors have warned that online consultations mean GPs are unable to detect "soft signs" of some physical and mental health issues.

The chairman of the Royal College of General Practitioners said patients and clinicians were calling for more face-to-face appointments, having initially embraced remote technology at the start of the pandemic.

Martin Marshall, who has a practice in east London, said: "There's been a shift as the pandemic has moved through, we are hearing more from patients that don't like [video consultation], they feel they don't get a proper assessment." While recognising there was far more that could be done remotely than was previously thought, he said doctors were "potentially taking risks by not seeing people face to face".

"It's not just about being able to physically examine someone. It's

Two-year cancer backlog

Katie Gibbons

It will take two years for NHS cancer services to deal with a backlog of more than 50,000 cases left undiagnosed during the pandemic, a leading charity warned.

Macmillan Cancer Support has estimated that tens of thousands of people are yet to be diagnosed with cancer. As many as 50,000 people in the UK have cancer that has not yet been diagnosed due to disruption caused by Covid-19, it said in a new report titled *The Forgotten C? The impact of Covid-19 on cancer care.*

The NHS has urged people not to sit on symptoms but reports suggest many are delaying seeking

takes to support people with cancer and our exhausted NHS staff but we need more. Governments need to promise every person with cancer that they won't be forgotten and ensure cancer services are protected — come what may."

The health service in England said that Macmillan's findings were "flawed", saying that "thanks to the hard work of NHS staff, cancer treatments are actually back to pre-pandemic levels.

"The majority of people who have not been diagnosed are people who have not come forward for checks and so our message is clear — if you have worrying symptoms

the local connections, the local relationships, are held by public health teams," he said. "If they had been given probably a small proportion of the money that has gone into the test and trace system, then possibly we would be in a better place now. I think that the test and trace system now understands that and is engaging with public health much more than it was in the early days, so we're getting there."

There was an "ongoing discussion" about the role of general practice in a vaccine programme, he said, adding: "My feeling is if general practice is properly resourced, if it's supported with staff, then using our infrastructure, using our expertise, using the confidence that our populations have in us, I think could all deliver a phenomenal Covid programme. But it does have to be properly resourced. There's

Covid is not the only killer — I should know

Let the vulnerable shield and the rest go free before missed cancers (as mine might have been) and lost jobs ruin more lives

Libby Purves

@LIB_THINKS

Maybe there will be a vaccine. Maybe it will work. Maybe instant spit-tests will moonshot into reality, so that every workplace, café and venue can guard its doors. Maybe Baroness Harding will actually succeed at something. To hope for all this is sensible but to trust it is not. It is time for laypeople, non-scientists, to ask simple questions.

Faced with such uncertainty, does it make sense to cling to a single, visibly enfeebling tactic? Is it logical to fiddle with restrictions on liberty every few weeks, treating a country like a faulty wifi router to switch off and on again? How humane is it to reduce (temporarily) the circulation of one virus by causing unemployment and ruin and mental stress, impoverishing national culture and confidence? Is it even medically clever, once you've built vast new hospitals, to sideline other death-dealing illnesses? Where's the virtue in cancelling ordinary operations and screening, and creating psychological and practical barriers to primary care?

I shudder at that last effect because — small example — last November a particularly alert GP took interest in a small lump by my ear. I had dismissed it as a swollen gland but obediently if grumblingly reported for biopsy. Thence, surprised but grateful, to 18 weeks' intense chemotherapy for a rapid aggressive lymphoma that would have finished me off. I'm clear. I might not have been, in Covid-world; many people with diagnosed cancers have had their treatment delayed months, and some have died. Even now, plenty of dutiful citizens will be reluctant to "pester" their GP for online triage, still less insist on being examined. Some will "protect the NHS" and wait too long.

> Loneliness has its own ways of killing, and so does financial dread

Consider too the mental state of a nation cavalierly told of at least another six months' restriction. Domestic violence calls have grown, families have become alienated, livelihoods have been destroyed. Eight million people live alone, many working at home. Loneliness has its own ways of killing, and so does agonising financial dread. Expect suicides. Past experience threatens other dark things: an intense and unnatural online life, with few workaday human contacts, is fertile ground for terrorist delusions: hard right, Islamist or plain mad.

All this economic and personal damage is insufficiently challenged. Only a few brave scientists are willing to be sneered at on *Channel 4 News* or *Today* as stooges to "hard-right billionaires" for signing the Great Barrington declaration, the most overt challenge to the mantra of restriction. Yet the virus has shown its limitations as well as its undoubted nastiness: medicine has better treatments than in March, and understands the need to monitor blood-oxygen levels early. The mortality rate is around 0.5 per cent, mostly among the very old. The average victim is 82.4 years old: only months apart from normal life expectancy. Even over-80s are more likely to recover than to die, and elsewhere the disease is most often mild or without symptoms. Whenever there's a rise in positive tests (often because of a local student influx) some sage from Sage will call it "grim" but nobody mentions that plenty of those "cases" are never ill at all and only one in a thousand seriously so. Rather there is chin-stroking about the globally tiny minority whose weariness lasts some time after recovery and is fashionably defined — before any rigorous analysis — as "long Covid". TV newsmen hang out in PPE near the beds of the sickest, and interview the most stressed NHS workers they can find, as if it were the March peak. It isn't: as of last week there were 5,608 Covid-19 patients in UK hospitals, just over a tenth of them on ventilation.

> People forget that if the economy really tanks there won't be an NHS

Any death is a deep sadness but it does not help to shudder and cower, afraid and compliant, or to stoke up indignation as if government held the key to immortality. Hate me for this but if we have any real care for the mass of fellow countrymen we need a chip of icy realism in our hearts. I am 70, moving towards the universal endgame and technically "vulnerable". Losses and deathbed vigils are not unfamiliar to me. I love or revere some very old people and will gladly mask and distance for their sake. But I reject sentimental wails of "Don't you care about my Granny?" from those who think it is OK for well-padded authorities (and their equally secure bleeding-heart cheerleaders) to close down normal life, trash precarious livelihoods and deny the healthy human thirst for occupation and travel and assembly. Besides, they forget that if the economy really tanks there won't be much of an NHS anyway.

Freedom is precious to the young with lives to build and things to learn, to the middle-aged who need security and a home for their children, but also to some who, elderly or frail, prefer not to spend their last years "shielding". If they do want to hide while "herd immunity" slowly builds, fine. The lockers-down claim it is unfeasible to help them but if the rest of us resumed (with a bit more handwashing) our previous work, hospitality, arts, sports, travel and friendships, then public money would be saved and more returned through taxes. Redirect that to generously housing, feeding and supporting those who do want to shield. Subsidise willing family carers and tested volunteers to shelter alongside them if needed. Is that impossible? A year ago we'd have thought it impossible for the state to pay millions of people to do nothing and stay in all day. But look how horribly easy that proved.

Second wave is bringing a mental health crisis

Fear and uncertainty abound while ministers pay too little attention to the alarm bells sounded by hospitals and charities

Alice Thomson

@ALICETTIMES

Michelle Obama summed it up as low-grade depression: the growing sense of anxiety and concern during the pandemic. Most people seem to feel like this. It's impossible to be spontaneous any more but no one can plan ahead. Everyone is stuck waiting. This endless indecision — the constant changing of rules, lack of structure and fear of the future — is debilitating.

During the first lockdown, in a heatwave, the majority coped with the six-week internment. They learnt hobbies, bonded with their families and often felt a sense of gratitude if they weren't struggling with any symptoms of Covid-19. Some were relieved at being able to slow down and watch spring arrive. There was a belief that, by playing their part, they could help to control the virus. Almost ten million people volunteered in their communities. Celebrities whinged at their lack of profile, the least well-off suffered disproportionately and everyone was in shock, but there was a coherence to the nation's response and a surprising sense of calm and resilience.

Months later it's a different story. The rain doesn't help. Few can face soul-destroying Zoom parties or the DIY projects they didn't get around to during the last lockdown. It's hard to look forward to a truncated Christmas without a sense of dread. Everyone seems more tetchy and there is anger on all sides. The nation is more divided than it was over Brexit, politically and geographically, and there is a sickening feeling of a lack of control,

> People are concerned about the mental state of their elderly relatives

vital to wellbeing. According to the latest YouGov poll, 43 per cent said that the pandemic was having a negative impact on their mental health; only 5 per cent felt more positive. Some GPs note that half their appointments were about mental health issues.

The Office for National Statistics found that rates of depression have almost doubled, from one in ten to one in five this year. "It's really sad to see how many people who wouldn't otherwise be coming to someone like me are feeling the need to seek support," says Natasha Bijlani, a clinical psychologist at the Priory Hospital in Roehampton, southwest London. Paul Farmer, chief executive of the mental health charity Mind, warns: "The worst is yet to come; the impact on mental health of unemployment, financial difficulties and housing issues will grow as government-led emergency support measures come to an end and recession bites."

Rachel Chin, a consultant clinical psychologist at the Pennine Care NHS Foundation Trust, is worried about the country's increasingly poor coping mechanisms, with gambling, smoking, drugs, drink and cyberbullying on the rise. In June the Institute for Alcohol Studies reported that almost a third of people had been drinking more. The British Liver Trust has seen a sixfold increase in calls to its helpline.

Key workers in the NHS, low-income families, cancer patients and the disabled have been disproportionately affected but the mental health of the elderly has also plummeted in care homes, as those who had to contend with stifling loneliness during the first lockdown are now expected to hibernate again. The Relatives & Residents Association, a care charity, said that at least half of calls to its helpline were from people worried about the mental fragility of elderly relatives

constantly changing demands of the exam system, disrupted school hours and mindless screen time. Teenagers are struggling to forge new

Father's warning as student with severe anxiety dies

Ben Ellery

Finn Kitson had "severe anxiety", his father revealed

The father of a student who was found dead in his halls of residence has warned of the impact of campus lockdowns.

Finn Kitson, 19, whose father is a leading Cambridge academic, was found on October 8 in his accommodation at the University of Manchester. His father revealed that his son had "severe anxiety" before he died.

Officials have said that the death of Mr Kitson, who lived at the Fallowfield campus, was not related to Covid-19. Police are not treating it as suspicious.

His father, Michael, an economist at the Cambridge Judge Business School, tweeted: "If you lockdown young people because of Covid-19 with little support, then you should expect that they suffer severe anxiety. The student referred to is our son — and we love and miss him so much." Mr Kitson was responding on Twitter to a now-deleted post by a local radio news source, which had tweeted that the student's death was not related to Covid-19.

The teenager had played for the Cambridge City FC youth team. Players held a minute's silence at their ground.

A university spokesman confirmed a student had died. He said: "We are providing all possible support to their family and friends and our utmost sympathies go out to them."

For confidential support, call the Samaritans on 116 123 or visit a local branch. See www.samaritans.org.

Lockdown v shielding is the wrong debate

Rather than feud over strategies with unknowable outcomes, we should prepare for the likelihood that neither will work

Daniel Finkelstein

@DANNYTHEFINK

When she was 26 years old Annie Duke, a cognitive psychologist, National Science Foundation fellow, on the academic fast track, had a change of career. She became a professional poker player.

Starting in the basement of a bar in Billings, Montana, the original idea was to earn a little money to support a return to university teaching. The career diversion lasted 20 years, during which time she won $4 million and a World Series of Poker gold bracelet. And at the end of it she realised she hadn't really changed track after all.

What Duke came to appreciate is that all she had been doing was practising decision-making in a new environment. This insight has led to two books, the bestselling *Thinking in Bets* and now *How to Decide*, published last week.

The core insight of Duke's books is really quite simple. You can't be certain of the outcome of your decisions in advance, since the result depends upon luck as well as skill. So the right test of a good decision is not whether it ends well but whether it is made in a disciplined fashion, applying good judgment given the facts you know.

A further complication is that you don't know all the facts and will be forced to estimate many of them given the incomplete data you have. But this need not stop you making decisions.

So how can Duke's new book help with the big decision now in front of us? Should we press on with the strategy of placing restrictions on the general population, hoping to control Covid until there is a vaccine or treatment? Or, as some suggest, move to a strategy of opening the economy while shielding the most vulnerable?

Duke describes a variety of techniques to help decision-making, but on Covid I found the most useful to be the pre mortem, an idea originally developed by Gary Klein, the decision theorist.

The pre mortem asks you to imagine that you are at a point in the future where the outcome of your decision has become clear and the outcome has been a disappointment. Then you examine how this disappointing result came about.

The best one can do is make a rough attempt to estimate probabilities

Let's conduct a pre mortem on the shielding idea. How might it go wrong and what would it look like if it did?

Well, obviously it could prove impossible to shield vulnerable people. After all, many of them live with people who wouldn't be shielding and those who live alone are often reliant on others. If this happened, the NHS may quickly be overwhelmed and large numbers of people would die, both of Covid and non-Covid illnesses, since the hospitals would be too full to deal with them.

The hope of the shielding strategy is that we would relatively rapidly achieve something close to herd immunity, but a pre mortem would imagine that not working. We may have a very high death rate for fairly limited progress on immunity.

And finally, in these circumstances the economy may not recover, despite restrictions being removed. People would stay at home to avoid the virus, knowing that if they or their relatives or friends became ill, the NHS wouldn't be able to cope.

What though of the other idea? What would a pre mortem of the strategy of general control — the tiers or circuit-breaker policies — look like?

The most likely reasons for such a strategy to fail are twofold. One is that people don't comply, the virus spreads anyway and the NHS is overwhelmed. The other is that people do comply but the resulting damage to the economy is so great that the restrictions kill more people than they save.

A pre mortem would imagine the government waiting for an effective vaccine, only to find that it doesn't come. Eventually the policy of control has to be abandoned and we have made no progress towards herd immunity. Despite all the damage to the economy and social life, we are no further forward.

Using the pre mortem helped me understand three things about the correct strategy towards Covid.

The first is that the widespread confidence, including mine, that one knows which policy to support is astonishing and unjustified. The best one can do is to make a very rough attempt to estimate the probability of different outcomes. And even if one gets those right, a probability is only a probability. It doesn't tell you how things will turn out.

If restrictions continue, people may soon become less likely to comply

My inclination is to support the policy of general restrictions over shielding because, using one of Duke's educated guesses, I think the chance of making shielding work is very low and I think we are a long way from herd immunity.

However — and this is the second thing that struck me from the pre mortems — my position relies to some extent on payoffs and probabilities that I haven't the information to calculate with great accuracy. How sensible the general restriction policy is depends a great deal on how likely we are to get a vaccine and I don't think the publicly available information is sufficient to make this judgment properly.

Nor do we have much to help us on the economic calculation. What modelling has been done on the possible impacts of the strategies on the economy and, crucially, on what that means for mortality, life expectancy and quality of life? We can't really have a sensible public debate without this being at its centre.

These are not, however, the most important lessons of the pre mortems. While I was looking for the contrasts between the two strategies to pick between them, I was missing the point. What the pre mortems show is not so much the differences between shielding and general restrictions as the similarity between them.

Both paths are likely to fail and the NHS would be swamped

The point is that they are both highly likely to fail. It is highly likely that shielding won't work, highly likely that herd immunity is far into the distance and unreliable, highly likely restrictions won't work because compliance stops (we can see it happening now) and highly likely we won't get a vaccine for a long time. In all cases of failure the NHS would be overwhelmed.

So alongside our national debate about which strategy works we should be having one about whether we are prepared for neither to work. Which means a debate about whether we can get our test infrastructure working and prepare the NHS for what may be about to come.

It would certainly be better to do that now than wait for a post mortem to tell us that's what we ought to have done.

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Last week July 2020

- Covid-19 deaths 173
- Influenza deaths + pneumonia 993

Last year same week influenza + pneumonia deaths 1400

Why not keep all controls in place for ever to save 400 influenza deaths every month at least.

Training: medicine

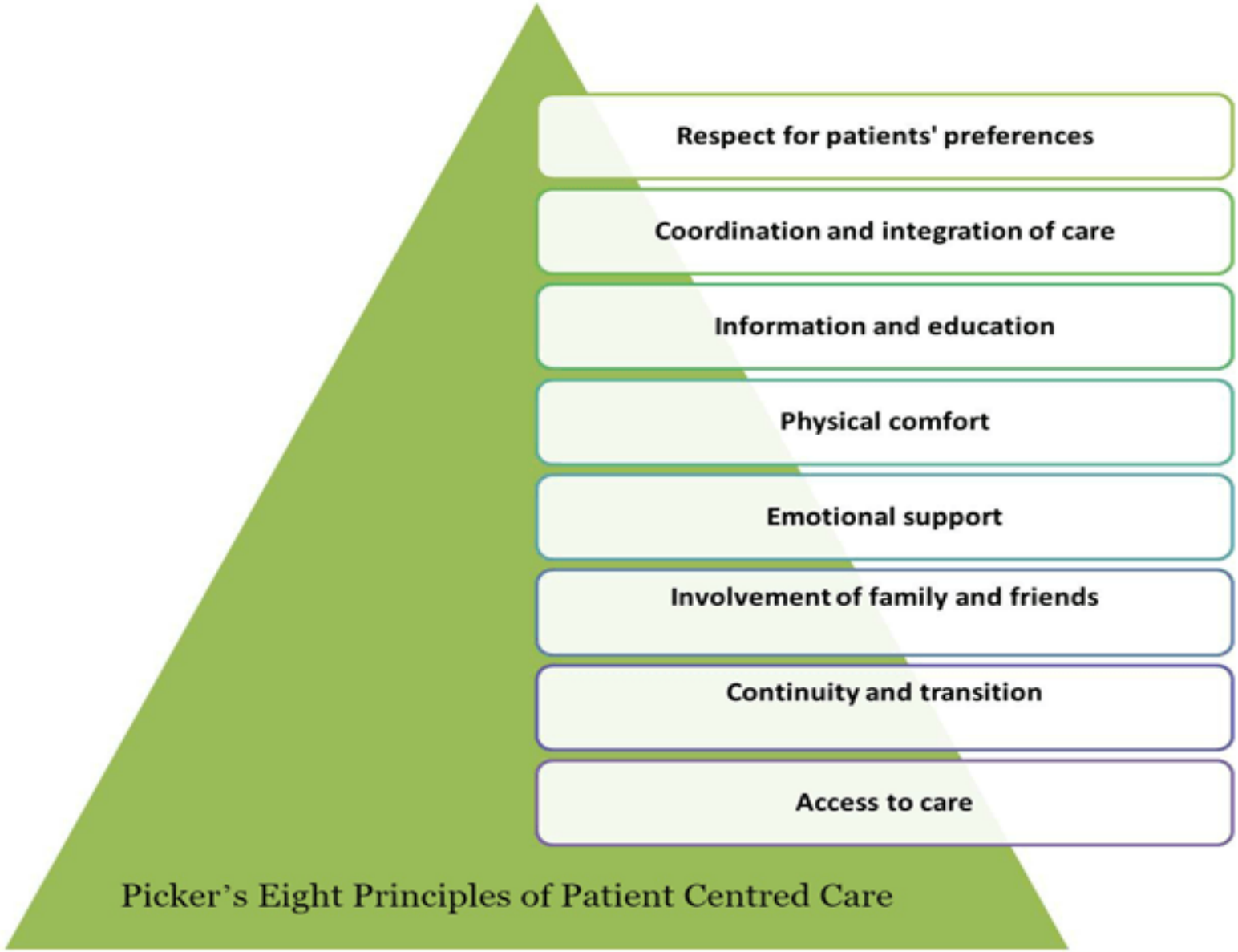
- Video – is it the same?
- Lack of other conditions
- Reduced teaching/experience
- Reduced professional interaction
- Greater “stress” or resilience
- Negative influence for the future

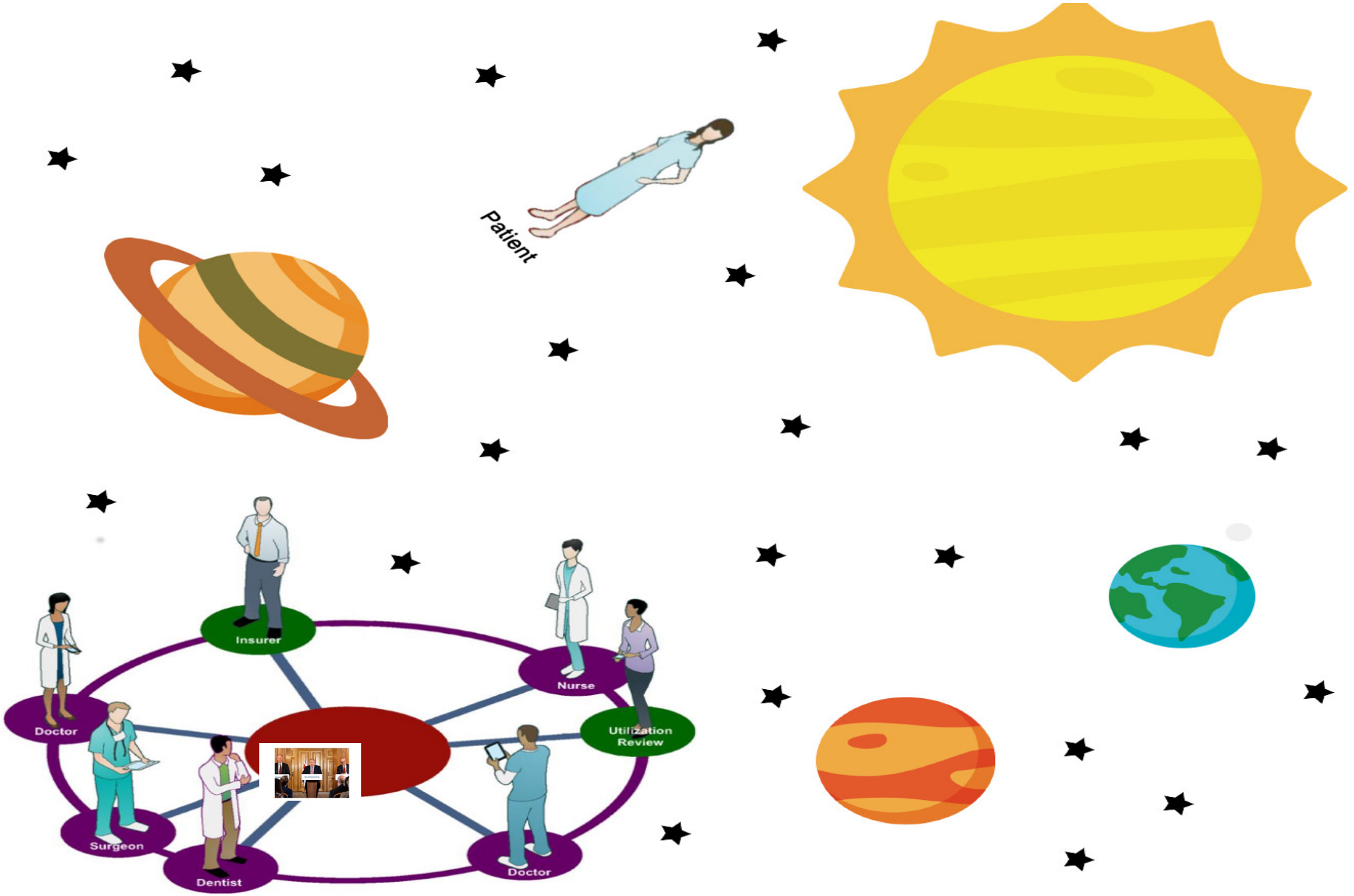
The Big Questions: Matthew Paris, The Times 31/10/2020

- 1. What is immunity?, all or nothing, some or all?
- 2. Is immunity just antibodies, or is cellular important?
- 3. How long does immunity last?
- 4. Explain London, compliance poorest, vulnerable popn, but less second wave?
- 5. Will vaccine immunity if it works , last?
- 6. With vaccine will virus die out or just “skulk”?
- 7. How do we protect the vulnerable from the skulking virus?
- 8. What is the mode of transmission?
- 9. How effective are masks?
- 10. Does super-spreading occur by human type or activity?
- 11. Why have countries like France, Spain, Germany had huge second wave having gone into earlier lockdown?

“Are we still the advocates of our patients or are we now more responsible to government and society?”

For me this single question overwhelms all else that I have discussed, and obviates how ever terrible this pandemic has proved to be.


Respect for patients' preferences
Coordination and integration of care
Information and education
Physical comfort
Emotional support
Involvement of family and friends
Continuity and transition
Access to care
Picker's Eight Principles of Patient Centred Care


Patient
Insurer
Nurse
Doctor
Utilization Review
Surgeon
Dentist
Doctor

Political point scoring: The knowledge

The Greek Alphabet: The Variants

- Omnicrom

Fears for surgery as 'slow-burn' second wave hits hospitals

Kat Lay Health Correspondent

Slowly rising admissions of Covid-19 patients to intensive care suggest the country is undergoing a "slow burn" rather than a second wave, a senior doctor has said, although hospitals may yet have to scale back planned surgery.

Data from the Intensive Care National Audit and Research Centre showed that admissions were increasing at a far slower rate than during the start of the pandemic.

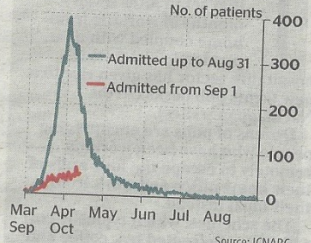
Rupert Pearse, a professor of intensive care medicine at Queen Mary, University of London, wrote on Twitter: "This could make the vital difference to how well the NHS copes through the winter. This slower rise does not mean we will see fewer cases overall in the pandemic second phase. But it does mean we will see fewer cases at any one time. NHS hospitals are like a flood wall: things are OK until the waters reach the top. But when they do we have a major crisis.

"The most effective strategy is not to build a higher flood wall (open more beds) but to slow the flood wave. We still see the same volume of water (patients) but spread over a longer time. The high watermark never tops our defences. We maintain good quality patient care."

Another senior doctor said that planned surgery would have to be reduced if Britain failed to get on top of rising cases of Covid-19.

Alison Pittard, dean of the Faculty of Intensive Care Medicine, said: "We're trying to make sure that we have safe pathways for patients with Covid and those without Covid so that we can continue to treat everybody who needs to come to hospital. But unfortunately, if Covid continues to rise in terms of community transmission that is by definition going to translate into more patients in hospital and more patients in critical care and therefore the only way we can do that is by stopping non-urgent care."

Intensive care admissions



Source: ICNARC

Dr Pittard told *Sophy Ridge on Sunday* on Sky News that higher rates of Covid-19 could have an impact "on people who have chronic ill health, who need to have surveillance", or mean that pregnant women in need of antenatal care became "scared to come forward because they don't want to risk either becoming infected or they don't want to over-burden the NHS".

Research by the healthcare analysts Dr Foster found that during lockdown hospital admissions for [illegible] conditions fell by up to 90 per cent. Those for prostate cancer, the most common type in men, fell by 64 per cent.

At the height of the first wave in April large numbers of operations and appointments were cancelled as the NHS converted operating theatres into makeshift intensive care units and redeployed staff to Covid-19 wards.

NHS England has said that it wants to avoid similar moves this winter, with hospitals facing fines if they fail to get care up to 90 per cent of pre-pandemic levels by the end of the month.

However, hospitals in several badly hit areas, or facing staff shortages because of self-isolation requirements, have started reducing levels of planned care, including in Liverpool, Plymouth and Swansea.

Dr Pittard said that patients admitted to intensive care had "a much better chance of surviving now" than at the start of the crisis. She said that this was partly because of improvements in treatment but added: "As the pandemic went through its course and we look at mortality towards the middle to end of July, most intensive care units would have been back to their normal staffing ratio which meant we were better able to provide the same standard of care that we normally do.

"There is no doubt that if you become sick with Covid… you have a much better chance of surviving now than you did at the beginning of the year".

Shortage of senior doctors, page 14
Covid is not the only killer — I should

Case Y

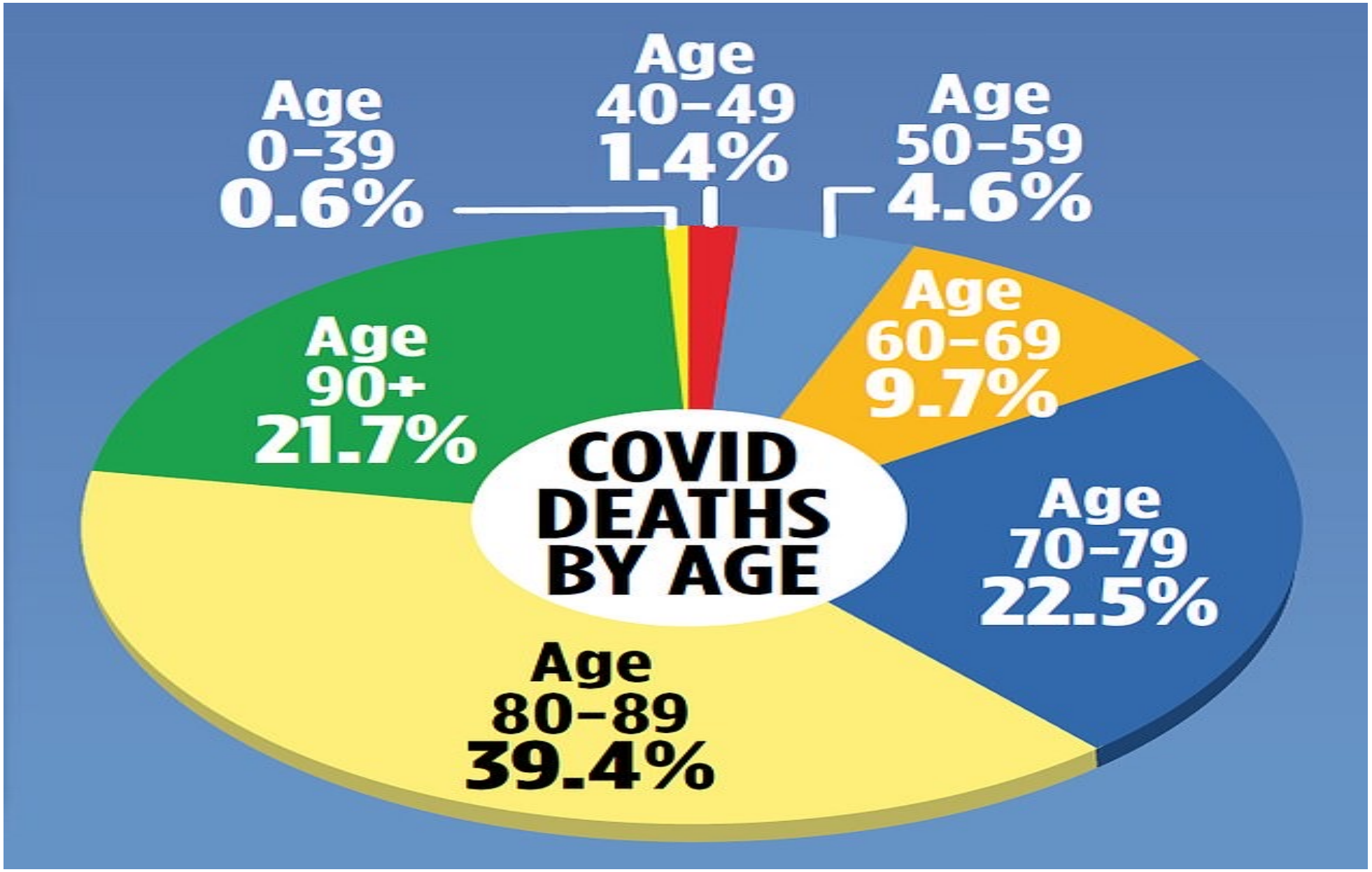
- Age 15, mother leading med neg lawyer, with whom I have been in conference with leading counsel concerning human rights breaches.
- Jan 2020 – presents with testicular mass.
- GP – exemplary – likely hydrocoele but needs u/s
- Appt for late March 2020
- Cancelled not re-arranged due to lockdown
- Review Aug 2020
- Rereferred

Case Y: 2

- U/S shows testicular tumour
- Request to chief exec as to how apptment was cancelled and by whom?
- Guess the answer?

SARS & MERS

- Numbers small for disease and only low % with neuro involvement
- Encephalopathy, motor neuropathy, myopathy or both in SARS
- MERS had 2 cases of ADEM, 2 stroke and 1 brain stem encephalitis
- Neuropathy in 3.
- Human coronavirus (OC43) also can cause in immune compromised
- Children may get a meningitic type illness
- Influenza causes range of neuro illness, partic with gene mutations
- Estimated neuro complications in 1-2 / 100000 (influenza)

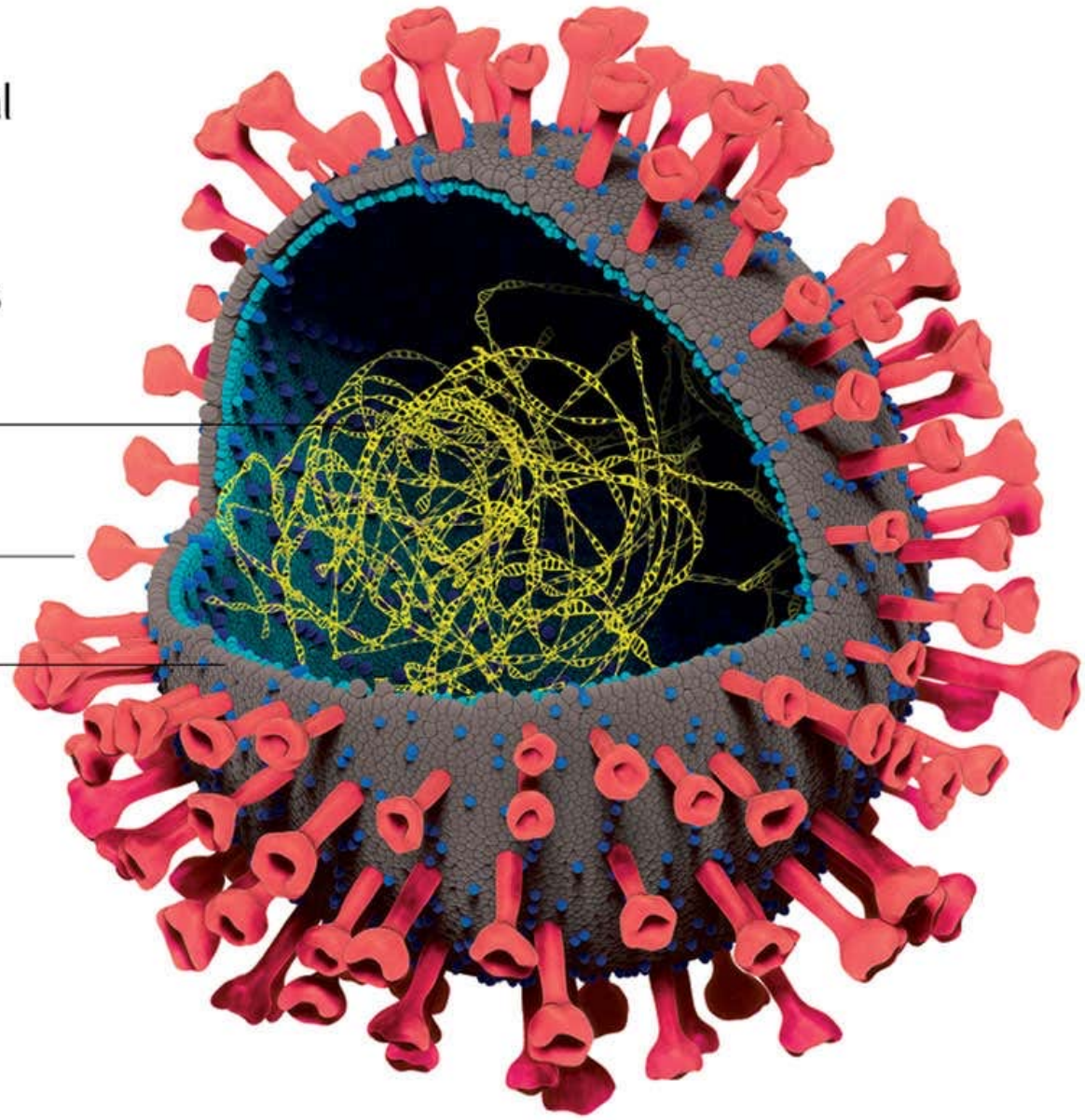

Age
0–39
0.6%
Age
40–49
1.4%
Age
50–59
4.6%
Age
60–69
9.7%
Age
70–79
22.5%
Age
80–89
39.4%
Age
90+
21.7%
COVID
DEATHS
BY AGE

Knowledge v Suspicion

- 15 million excess deaths worldwide, against 5.4 m official, so many countries under reported
- “We emote over a single child but when it comes to children as whole Britain doesn’t care enough” (James Kirkup Apr 2022)
- School closed in March 2020. Unions backed stay at home policies
- Even when pubs and restaurants reopened
- Adults induced with public money to “Eat out to help out” children were “Shut out”
- Children dropped off the radar of children’s services
- After I year of lockdown 25.5% left primary school obese.

Anatomy of a virus

The covid-19 virus has several features we may be able to target with drugs to break it down and stop it entering cells



What is this organism?

- A coronavirus 2 (SARS-CoV-2): Covid-19 : 120nm particle
- Officially since Dec 2019, 552 million infected ++
- At least 15 million dead and prob far more. (officially much fewer)
- Initially, fever, dry cough, smell and taste lost.
- Then every possible viral symptom, inc skin rash, bowel disurbance, muscle pain and fatigue
- Largest pandemic since influenza 1918 (ignoring HIV – 36 million dead and approx. 1 million died in 2018)

Evidence of other viruses

- This is 7th coronavirus, known to infect humans
- Four cause seasonal, mainly mild respiratory illness
- Two have severe sequelae: Severe acute respiratory syndrome (SARS)
- SARS caused by SARS-CoV in 2002-2003
- Middle East Respiratory Syndrome (MERS), by Mers-CoV in 2012
- Both SARS and MERS, had occasional CNS and PNS syndromes.