Enacting the GP-patient relationship in a digital/AI era

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British Computer Society Primary Health Care Specialist Group Conference 2025
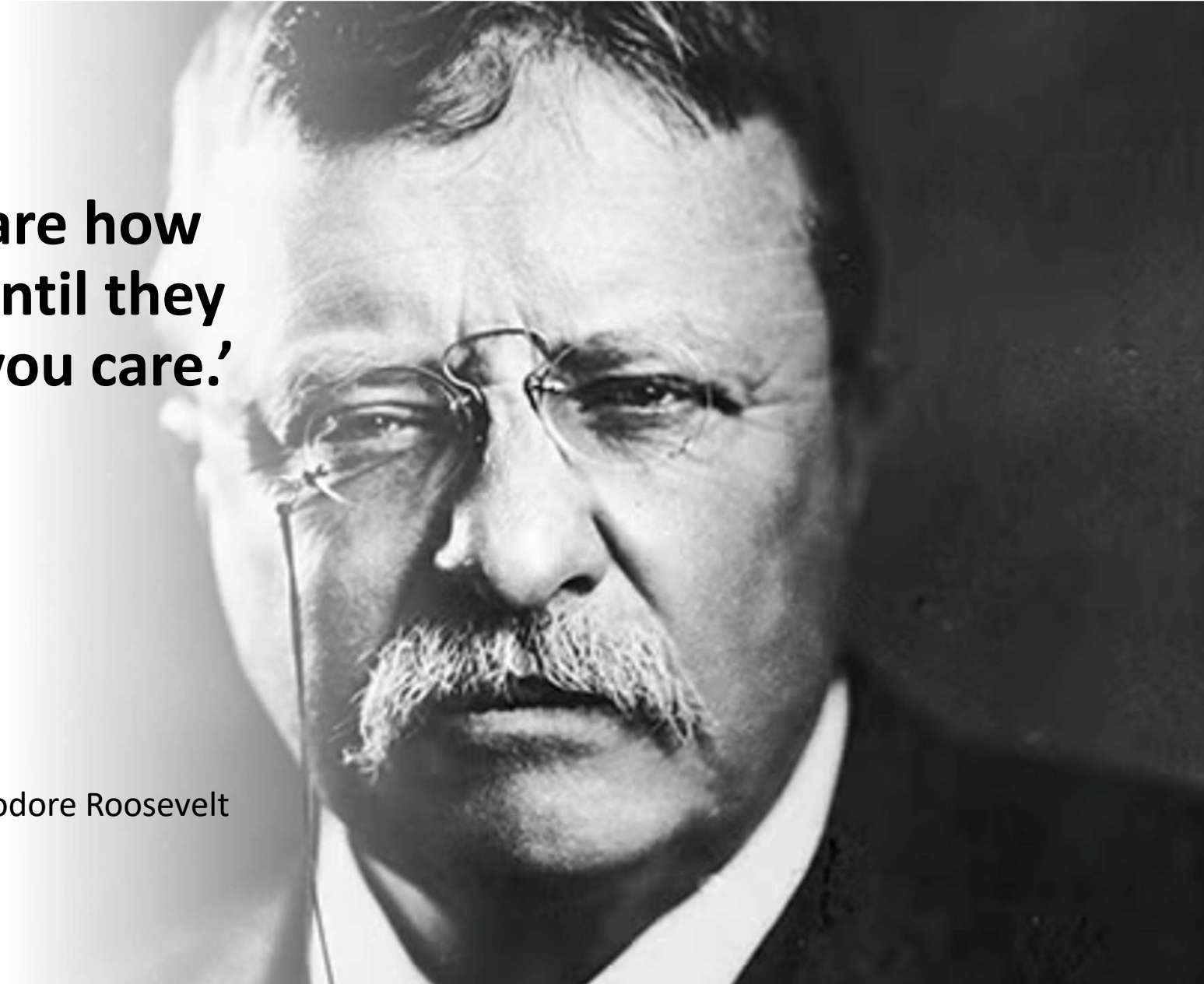
Acknowledgements

The RbD2 team, DPhil supervisors: Professors Greenhalgh and Swinglehurst, and Ms Dowrick

My GP partners for their patience

My patients – especially those referenced in this presentation (pseudoanonymized and consented)

'Patients don't care how much you know until they know how much you care.'

Theodore Roosevelt

'A relationship over time fosters familiarity, empathy, understanding, a two-way sense of responsibility, all core ingredients of trust; and this trust then encourages disclosure, improves communication, saves time; which in turn cultivates cooperation and empowerment, reduces anxiety and mistakes, improves the execution of tasks undertaken together [...] it all sounds like good common sense.

Any one of us who has a relationship with anyone else, personal or professional, intuitively knows this stuff'

Polly Morland 2022

CONTENTS

- Where is this coming from…

- Evolution of the GP-pt relationship.

- The current context

- Digital/AI in general practice

- How do digital/AI approaches facilitate GP-pt relationships?

- What goes wrong?

- What can I do?

RbD2: What has been the impact of the shift to remote and digital modalities for triage and clinical care (and the partial shift back to in-person care post pandemic) in UK general practice?

**12 UK general practices: July 2021- Dec 2023**
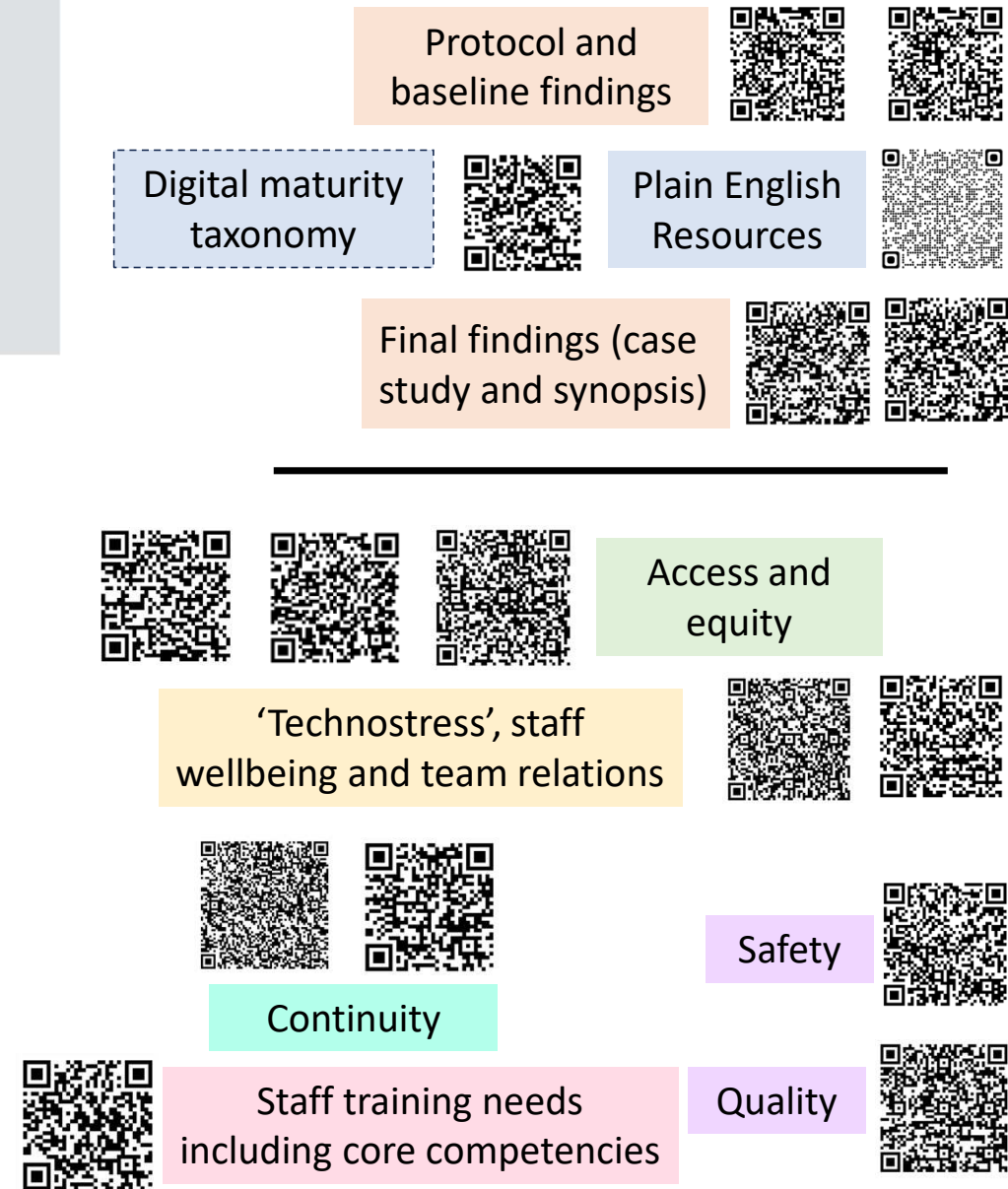
...highly variable

Digital trailblazer	• all the kit, all the know-how
Digitally strategic	• thinking and planning with tech
Digitally curious / digitally reactive	• playing around, following the must-dos
Digitally hesitant	• unsure, under-equipped, lacking knowledge and leadership
Strategically traditional	• serving deprived communities ('Deep End') via in-person care

OBSERVATION   INTERVIEWS   WORKSHOPS   SAFETY INCIDENTS
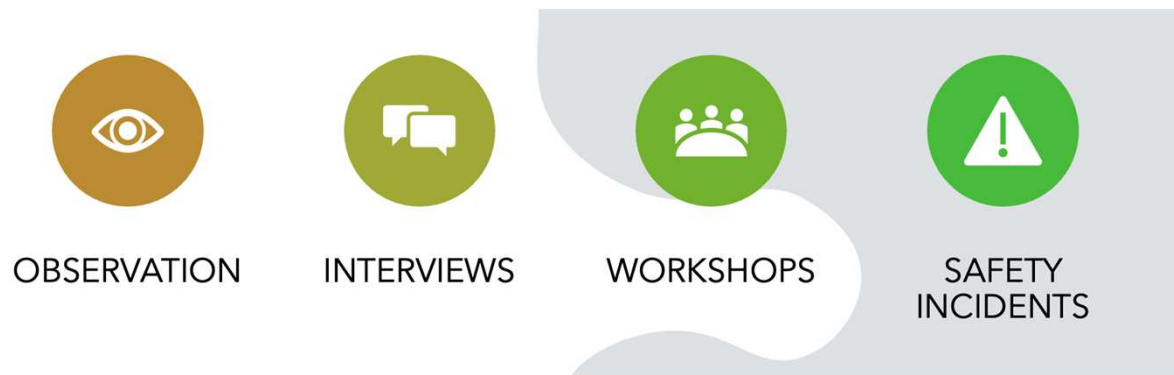
- **Access and triage**
- **Digital and wider inequalities**
- **Quality and safety of care**
  - Continuity
  - Interactional dynamics
  - Early diagnosis of serious illness,
  - Long-term conditions
  - Patients with complex needs
- **Workload, workforce and staff wellbeing**
- **Technologies and digital infrastructure**
- **Patient input**
- **Carbon footprint**

Protocol and baseline findings

Digital maturity taxonomy

Plain English Resources

Final findings (case study and synopsis)

Access and equity

'Technostress', staff wellbeing and team relations

Safety

Continuity

Staff training needs including core competencies

Quality

DPhil:
How are GP-patient relationships enacted and interpreted in contemporary general practice?

What influences shape how GPs and patients enact a relationship in contemporary general practice?

Through 'doing' a relationship, how do patients and GPs experience and make sense of psychodynamic connections alongside the work of healthcare?

How does this sensemaking influence and shape the actions and behaviours of GPs and patients within the system?

WALES
- Semi-rural, 3rd deprivation decile, 2 branches
- Traditional with lone innovator
- 12,000 pts, 98% white, 1.1% Asian, 0.03% other non-white

P01	Male 55-60 white	Professional Grown-up children	Chronic lung disease Anaemia
P03	Female 30-35 white	Intermittent employment Single-mum	ADHD/Autism Depression

CENTRAL ENGLAND
- Semi-rural, 9th deprivation decile, 2 branches
- Digitally Strategic
- 16,200 pts, 94.8% white, 2.2% mixed, 1.7% Asian, 1.3% other non-white

P02	Female 85-90 white	Retired nurse Female partner (carer)	Dementia Mild OA
P05	Male 40-45 Asian	Deputy manager Lives with parents (non-English speakers)	Stress & Depression

P04	Female 45-50 White	Single mum (6yr old, autism) Doesn't work	Chronic functional pain Diverticulitis
P06	Female 20-25 White	Single mum Unemployed Domestic abuse, Unstable housing	Learning difficulties Primarily psychosocial

SOUTH-WEST ENGLAND
- Inner-city, 4th deprivation decile, 6 branches
- Digitally Curious
- 30,000 pts, 95% white, 2% Asian/2% mixed, 1% other non-white

General practice is like calling an Uber, MPs say

20 October 2022 · Comments

By Nick Triggle
Health correspondent

What IS the GP-patient relationship?

How has the GP-pt relationship evolved?

Emma Ladds
Nuffield Department of Primary Care Health Sciences, University of Oxford, Oxford, UK
PubMed articles   Google scholar articles

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- **The Emergent Period (1815-1948)**

- **The Age of Decline (1949-1965)**

- **The Era of Revival (1966-1988)**

- **The Time of Marketization (1989-2004)**
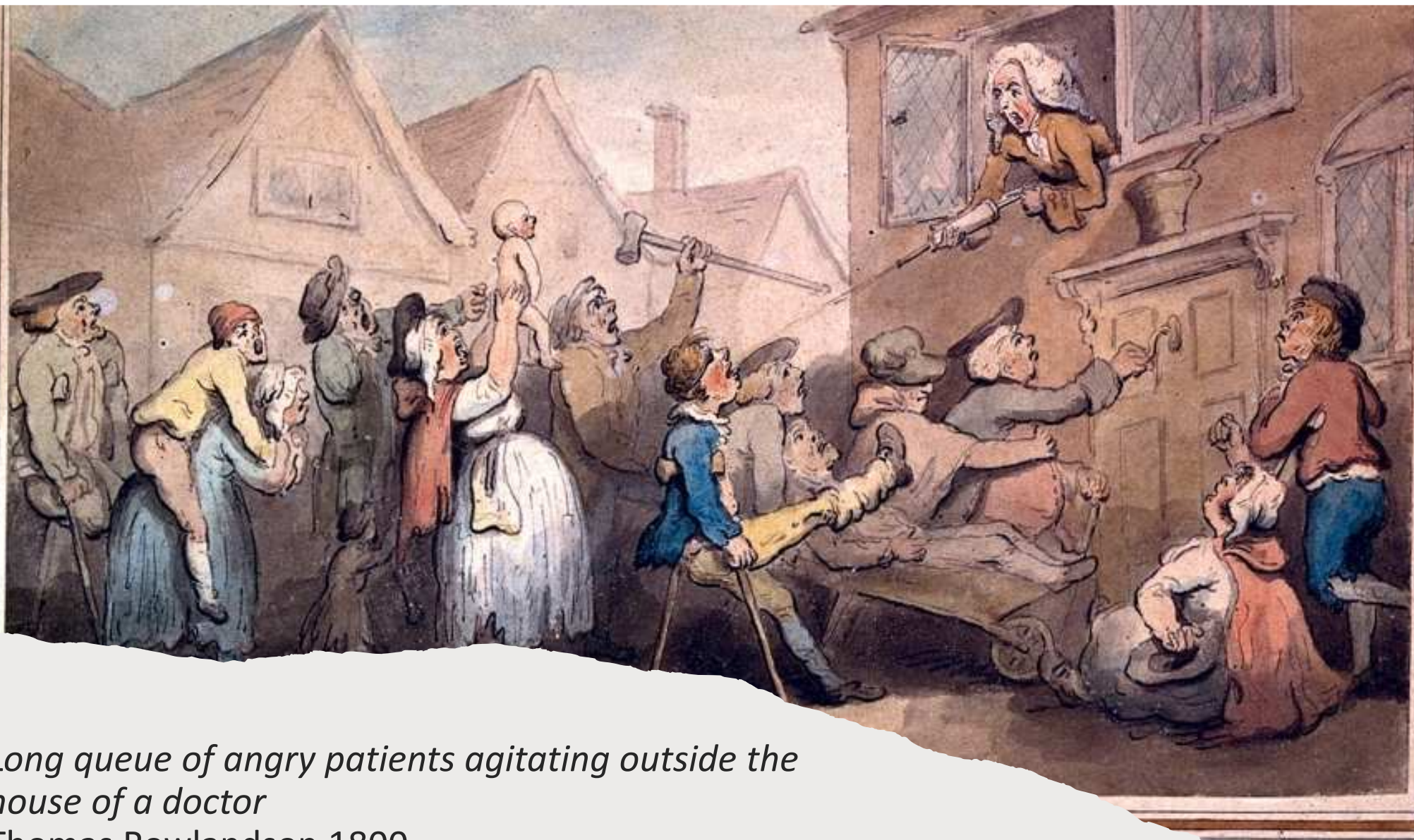
- **The Drive to Fragmentation (2004-present day)**

The Emergent Period (1815-1948)

An Apothecary shop
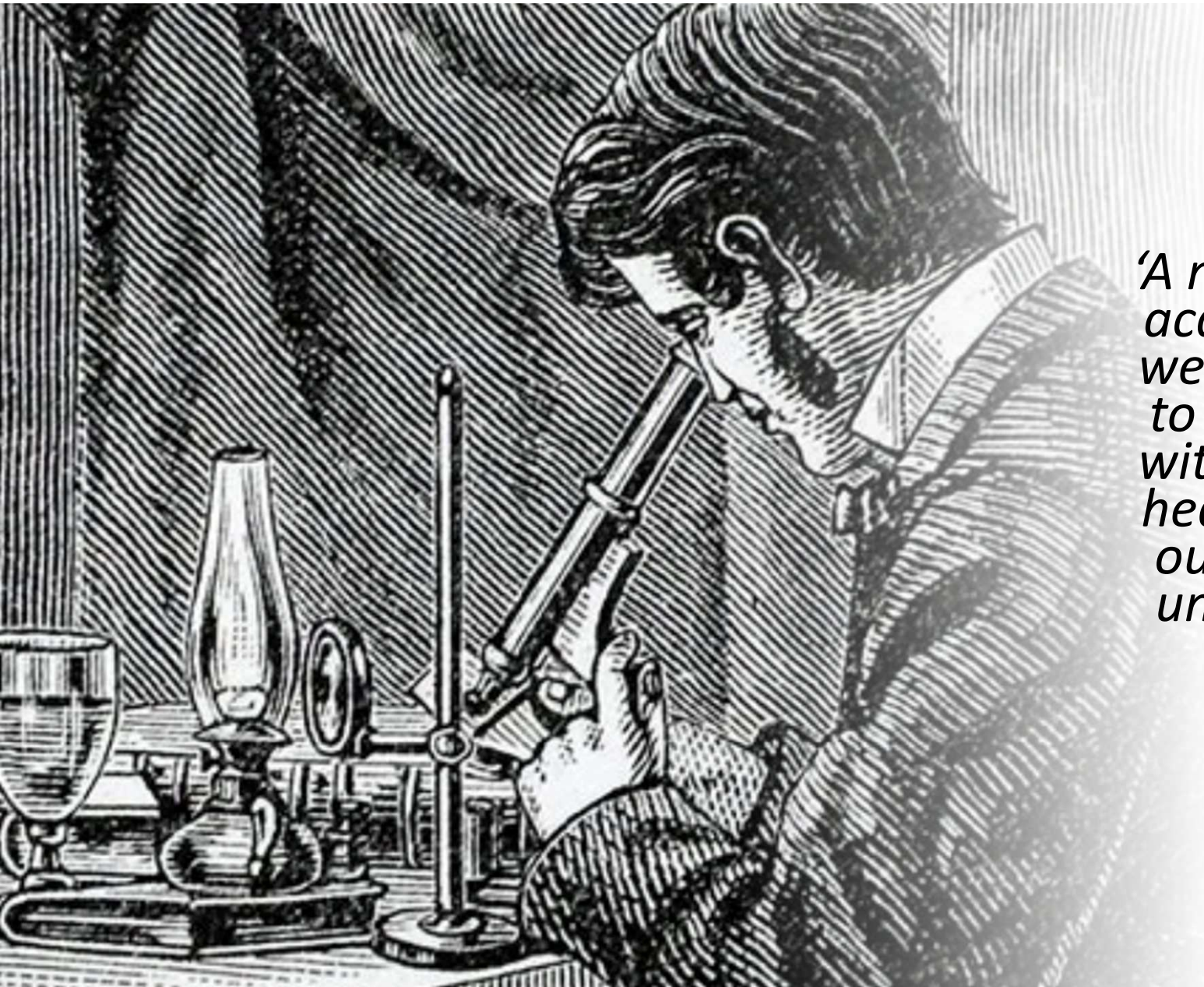
(*The Apothocary* circa 1752 - Pietro Longhi (1701–1785)

Long queue of angry patients agitating outside the house of a doctor
Thomas Rowlandson 1800

'A man who really has an acquaintance with us as we are. Who is admitted to some of us every day with wigs and paints off, hears the wanderings of our minds and sees the undisguised expression of our faces'

Little Dorritt
Dickens 1857

'there is no reason why the whole of the patient-doctor relationship should not be freed from what most of us feel is irrelevant to it – the money factor, the collection of fees or thinking how to pay fees – an aspect of practice that is already distasteful to many practitioners'

Bevan 1948

The Age of Decline (1949-1965)

'...about one quarter of general practitioners are very good indeed. About one half are good, sound, and reliable and would not hesitate to call them in for one's family...the remaining quarter are less satisfactory [with] a final twentieth for whom it is difficult to find any excuse'

Taylor 1954
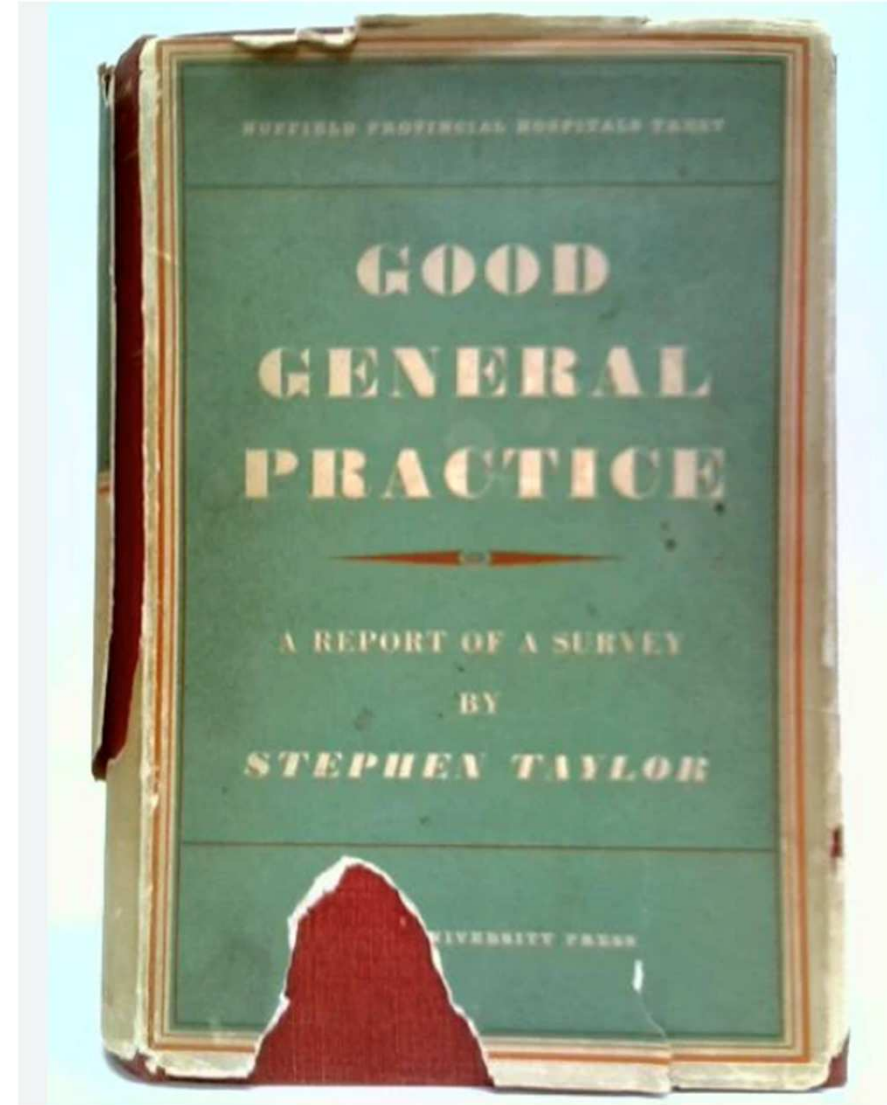
The Era of Revival (1966-1988)
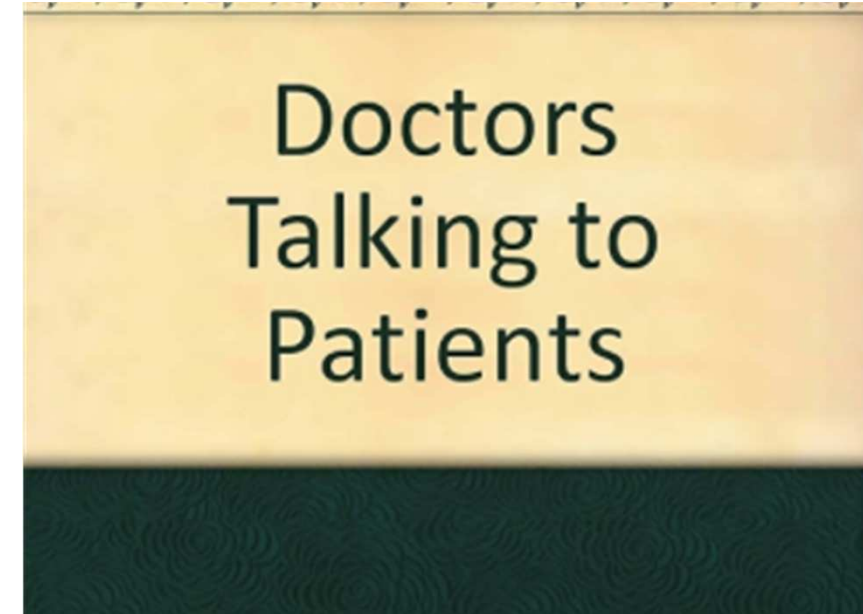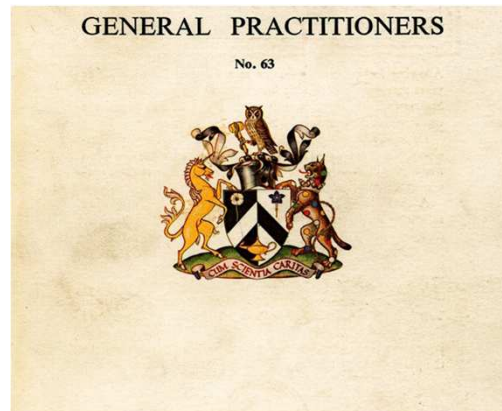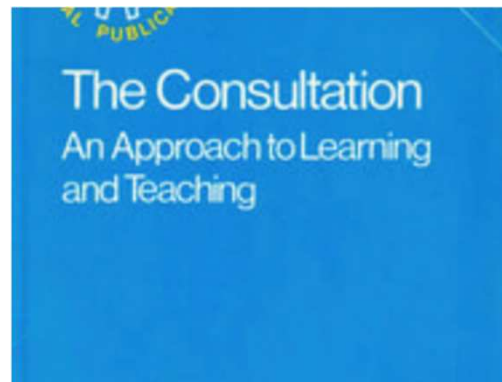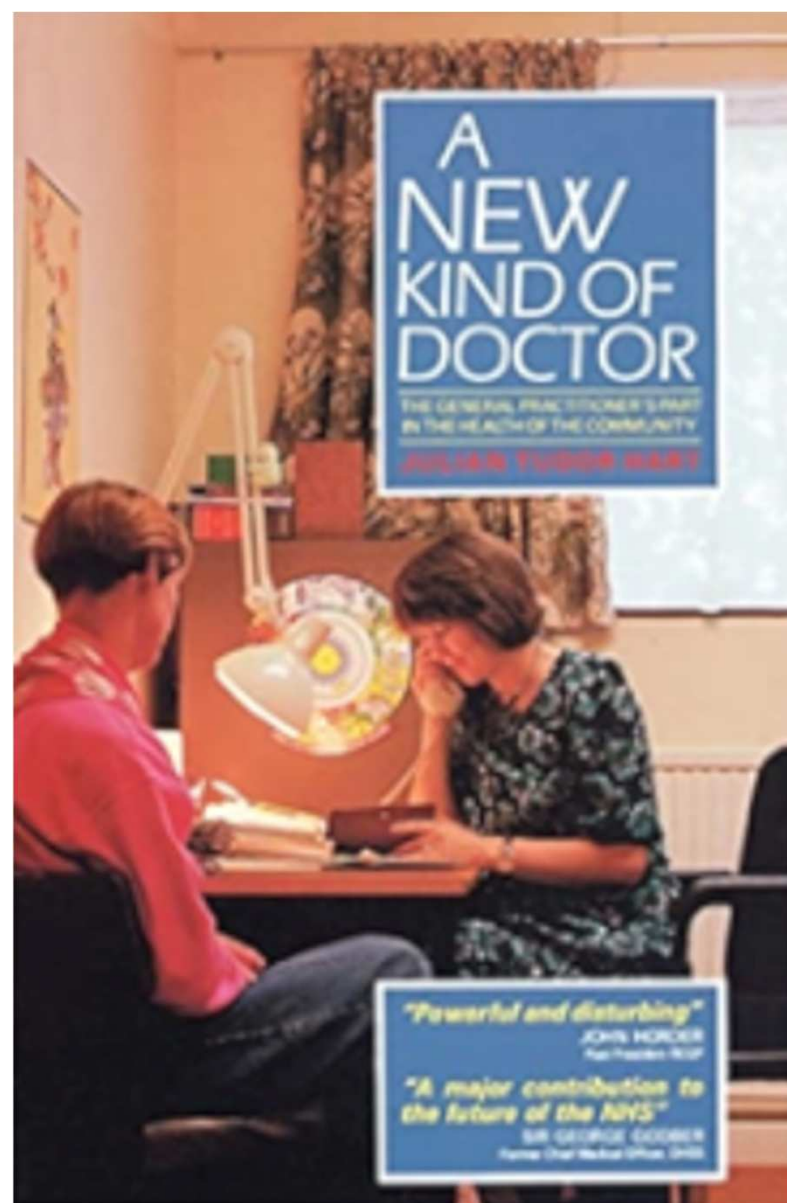
A NEW KIND OF DOCTOR

THE GENERAL PRACTITIONER'S PART
IN THE HEALTH OF THE COMMUNITY

JULIAN TUDOR HART

"Powerful and disturbing"
JOHN HORDER
Past President RCGP

*"A major contribution to
the future of the NHS"*
SIR GEORGE GODBER
Former Chief Medical Officer, DHSS

Computer and EHR in consultations

The Time of Marketization (1989-2004)

How to choose first-line medicines

Rescue therapy
For symptomatic hyperglycaemia, consider insulin or a sulfonylurea and review when blood glucose control has been achieved.

First-line treatment — Assess HbA1c, cardiovascular risk and kidney function

For information on using SGLT2 inhibitors for people with type 2 diabetes and chronic kidney disease see the section on diabetic kidney disease in the guideline.

Consider
- DPP-4 inhibitor ('gliptin') — or
- Pioglitazone — or
- Sulfonylurea

An SGLT2 inhibitor ('flozin') for some people:
- TA 390 Canagliflozin
- TA 390 Dapagliflozin
- TA 390 Empagliflozin
- TA 572 Ertugliflozin

NICE technology appraisals recommend SGLT2 inhibitors as monotherapy options in people:
- who cannot have metformin
- for whom diet and exercise alone do not provide adequate glycaemic control.

The SGLT2 inhibitors are recommended only if a dipeptidyl peptidase-4 (DPP-4) inhibitor would otherwise be prescribed and a sulfonylurea or pioglitazone is not appropriate.

In February 2022, using ertugliflozin to reduce cardiovascular risk when blood glucose was well controlled was off label. See NICE's information on prescribing medicines.
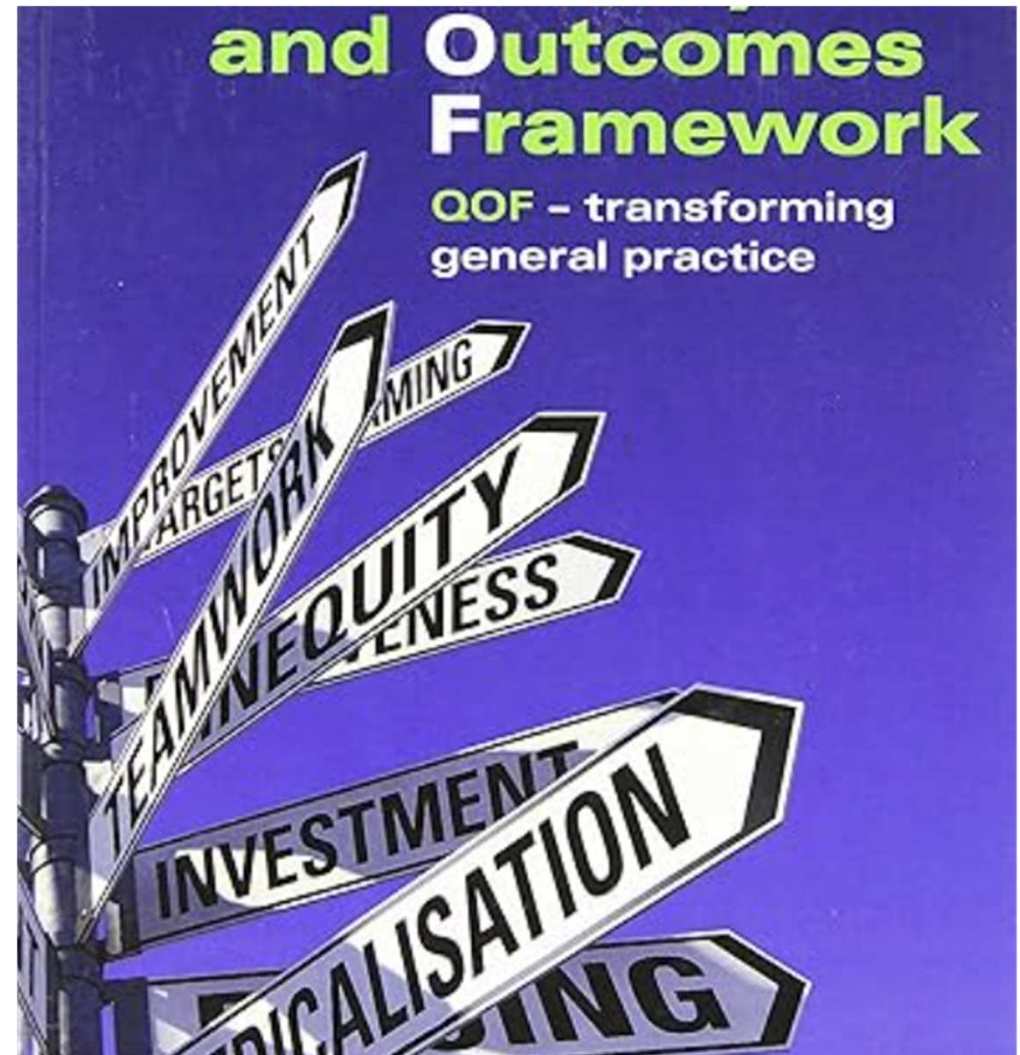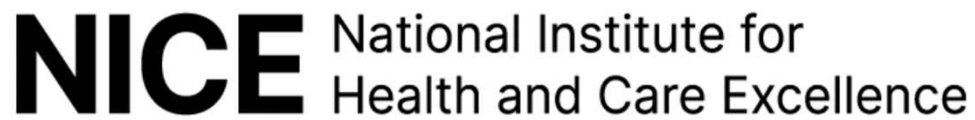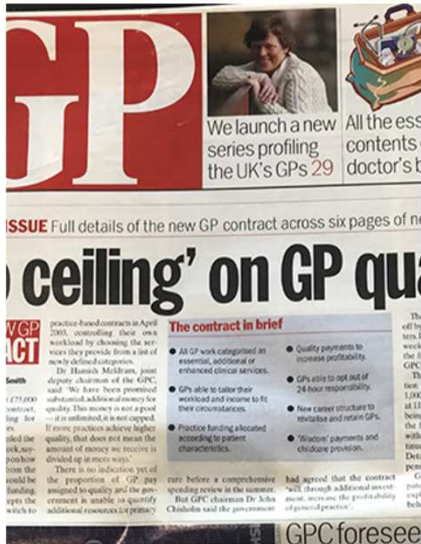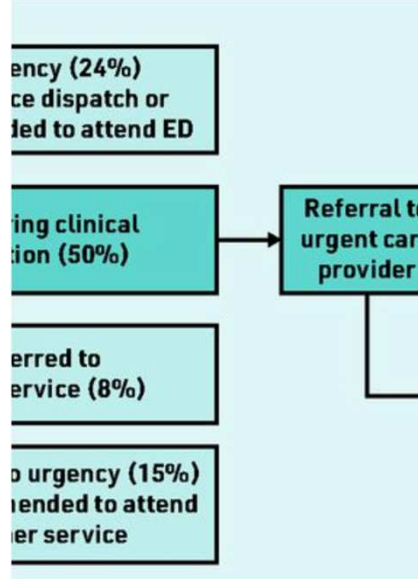
Not at high CVD risk

Offer
- Metformin
  Or if GI disturbance
- Metformin MR

If metformin contraindicated

Offer
- SGLT2 inhibitor alone

Chronic heart failure or established atherosclerotic CVD

Offer
- Metformin
  or if GI disturbance
- Metformin MR
  and as soon as metformin tolerability is confirmed, offer
- SGLT2 inhibitor ('flozin') with proven cardiovascular benefit

If metformin contraindicated

Start metformin alone to assess tolerability before adding an SGLT2 inhibitor

High risk of CVD
QRISK2 of 10% or higher

Offer
- Metformin
  or if GI disturbance
- Metformin MR
  and as soon as metformin tolerability is confirmed, consider
- SGLT2 inhibitor ('flozin') with proven cardiovascular benefit

Consider
- SGLT2 inhibitor alone

If metformin contraindicated

Person's HbA1c not controlled below individually agreed threshold, or the person develops CVD or a high risk of CVD

See treatment options if further interventions are needed

Established atherosclerotic CVD includes coronary heart disease, acute coronary syndrome, previous myocardial infarction, stable angina, prior coronary or other revascularisation, cerebrovascular disease (ischaemic stroke and transient ischaemic attack) and peripheral arterial disease.
Published date: February 2022.

NICE National Institute for Health and Care Excellence

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and Outcomes Framework

QOF – transforming general practice

IMPROVEMENT
TARGETS
TRAINING
TEAMWORK
EQUITY
ENESS
INVESTMENT
ICALISATION

The Drive to Fragmentation (2004-present)

NHS 111 dispositions (January 2025)

28%

Legend:
- Ambulance services
- Emergency services
- Primary care services
- Dental practitioner
- Pharmacist
- Repeat prescription medication
- Self-care
- Other outcome/service

111 online 2024/25

NHS 111 online

Sessions started (people landing on 111 online website)
30,464,500
Average 83,500 per day

Guided entry page

Users directed to other resources instead of a triage, such as NHS.UK
185,900

111 online triages started
8,245,200
Average 22,600 per day

Triages completed
7,794,000
Average 21,400 per day

Median duration of triage
82 seconds

Triages abandoned
451,200
Average 1,200 per day

20%

NHS

User recommended emergency treatment centre (including urgent treatment centres)
876,500
Average 2,400 per day
(11% of completed triages)

User recommended to call an ambulance
704,600
Average 1,900 per day
(9% of completed triages)

User recommended self care
594,700
Average 1,600 per day
(8% of completed triages)

User recommended primary care
3,421,300
Average 9,400 per day
(44% of completed triages)

User recommended dental care
452,100
Average 1,200 per day
(6% of completed triages)

User offered urgent repeat prescription
1,404,200
Average 3,800 per day
(18% of completed triages)

User reached clinical callback disposition
279,900
Average 800 per day
(4% of completed triages)

111 online
Get help for your symptoms

If you think you need medical help right now, 111 online can tell you what to do next.

I want to get:

help for my symptoms or injury	›
dental help	›
mental health help	›

| a prescription or medicines information | › |
| help with an existing medical condition | › |

Other ways to contact 111 if you have a hearing problem or need help in other languages

⊕ See more NHS services

⊕ Waiting for a 111 callback?

⊕ How 111 online works

General practice / Family practice
Research

PDF

XML

Potential for advice from doctors to reduce the number of patients referred to emergency departments by NHS 111 call handlers: observational study 🔓

Andrew Anderson [1], Martin Roland [2]

Correspondence to Professor Martin Roland; mr108@cam.ac.uk

Abstract

Objective To determine the effect of using experienced general practitioners (GPs) to review the advice given by call handlers in

Article Text

Article info

Citation Tools

Share

1474 cases sent to A&E by NHS 111 reviewed by GP

> A&E - **27%**

> Primary Care (OOH GP/regular GP) or MIU - **45%**

> Self-care – **28%**

The Internet and SoMe

Long Covid Support Group

🔒 Private group · 67.8K members

About   **Discussion**

Stop Mandatory Vaccination
Sponsored

"We followed the ambulance to the hospital. They tried, they really did. A nurse tried to take our son to a separate room with coloring books and treats that he was completely unfamiliar with. They hugged us in a smothering- not comforting- way, and tried to tell us that it would be ok. I heard them call for a second Epi-Pen. I knew it was hopeless. My husband and son stood in shock. I hugged my childhood friend, the firefighter, who had come to the hospital. He said, "I'm so sorry," and walked away." Want

Vaccines

Kill

Babies

6 Month Old Gets 7 Vaccines And Dies Two Weeks Later From "SIDS"
"My breasts were full of milk and my baby was dead."

Learn More

📊 **Ad Performance**
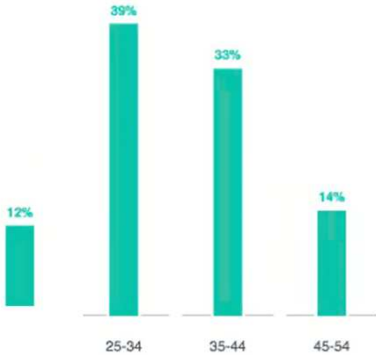
⦿ Inactive
Started running on Oct 5, 2018

| 1K - 5K | <$100 |
| Impressions | Money spent (USD) |

Audience Breakdown

Age and Gender

Men   Women   Unknown

Article

Trust in Doctors, Positive Attitudes, and Vaccination Behavior: The Role of Doctor–Patient Communication in H1N1 Vaccination

Health Communication

March 2021 · 37(1):1-9

DOI:10.1080/10410236.2021.1895426

Authors:

'The map of biomedical science only roughly matches the territory of human suffering'

Heath 2016

The Current Context

10 Year Long Term Plan

'5 transformative technologies:

- Data
- AI
- Genomics
- Wearables
- Robotics-technologies'

INTERFACE COMMUNICATION
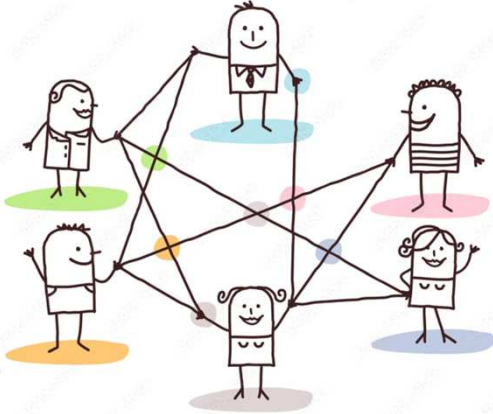
ACCESS
- Online access portals
- NHS App
- Triaging algorithms (eg: 111 online)

SERVICE COORDINATION
- Asynchronous communication
- Shared EHRs
- Direct referrals (eg: 111)

DATA SHARING
- Activity metrics (eg: appts)
- Targets (eg: QOF)

'CLINICAL' ENCOUNTERS

MODALITIES
- Online symptom sorters
- Virtual consultations
- Asynchronous encounters
- Online reviews/info submission

INFORMATION
- 'Dr Google' or 'Dr ChatGPT'
- Patient wearables
- Remote signposting/PILs
- NHS App – Results/f/u
- Digital/AI streamed guidelines
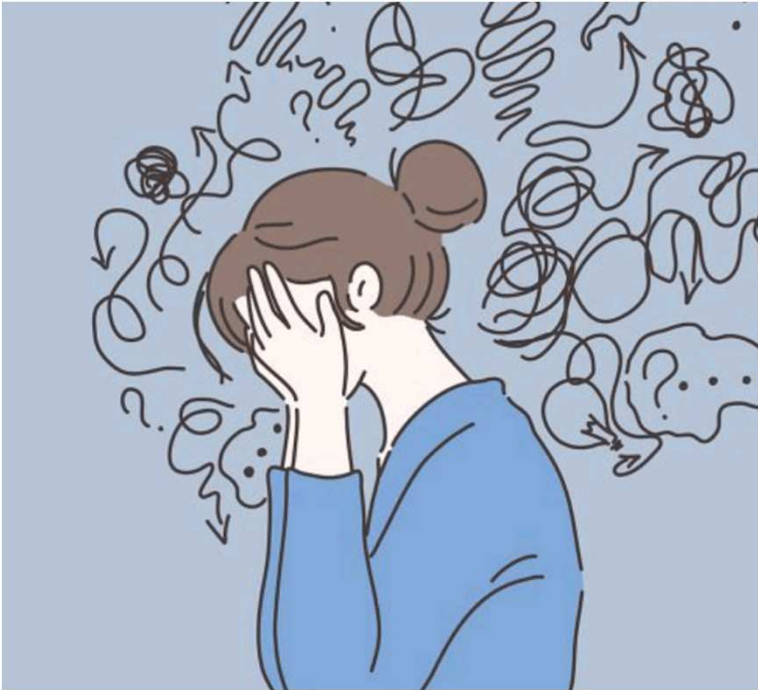- Digital tools/calculators

ADMINISTRATIVE

HR-RELATED
- AI policies/protocols
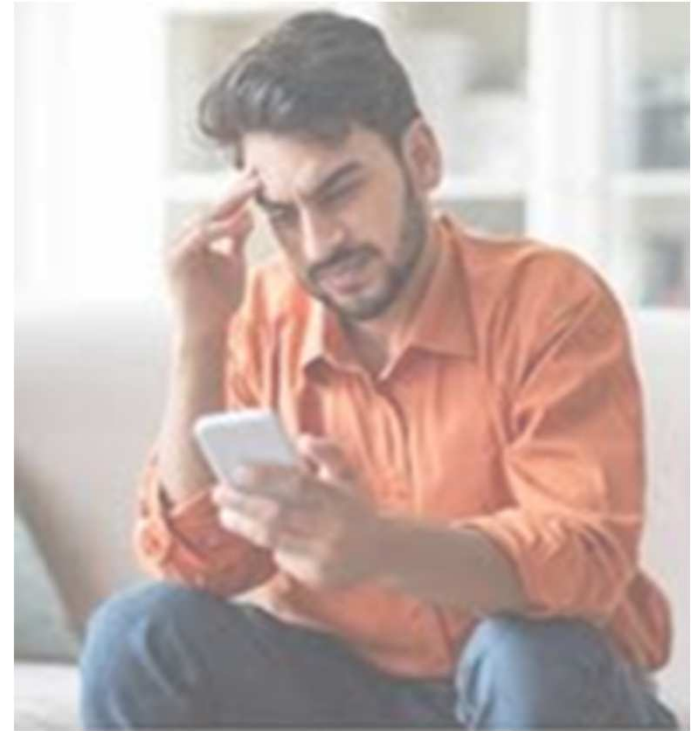- Staffing rotas etc
- Staff communication eg: WhatsApp groups)

WORKLOAD
- Workload coordination/planning
- Population
- Summarizing/redacting
- Automatic recalls/alerts
- AI scribes
- Remote prescribing

What matters to patients…

Laura, aged 19

Amir, aged 54

…it depends.

EFFICACY
- Effective information sharing
- More meaningful encounters eg: digital risk calculators etc.
- Facilitates signposting

ACCEPTABILITY
- Convenient
- Generally safe
- Enables care at a distance
- 'Black box' effect

WORKLOAD
- Supports stratification and triaging
- Can improve efficiency, workload, and streaming (and potentially access)
- Enables targeting of resources
- Asynchronous activities - autonomous time management

CAN SUPPORT CONTINUITY

EFFORTFUL

For (some) patients

- Locate/navigate services
- Negotiate tech (if able)
- Negotiate with staff
- Interpret and (mis)classify sy
- Persuasive digital facsimile (safety)

For (some) technology-users

- Configure the user:
    - Hearing/sight
    - Literacy/language

- Determined outcomes (eg: econsult > A&E)

For (some) staff

- Articulative (get it done/safety)
- Requires on knowledge of the patient
- Requires staff to use/learn tech
- Technostress

Experiences influence ongoing engagement

Relational sparsity of digital representation

- EHR
- Digital facsimiles

- **Reduced healthcare utilization** (Val Walraven et al 2010)

- **Increased 'compliance'/outcomes** (O'Connor et al (1998)

- **Increased patient satisfaction** (Val Walraven et al 2010; Saultz et al 2004)

- **Improved doctor satisfaction** (Ladds 2023)

- **Reduced mortality** (Pereira-Gray et al (2018)

"A feeling of security in knowing what to expect next"

"An ongoing relationship with the same person"

"Consistent approach to managing my condition"

"Being seen by someone I trust because I know them"

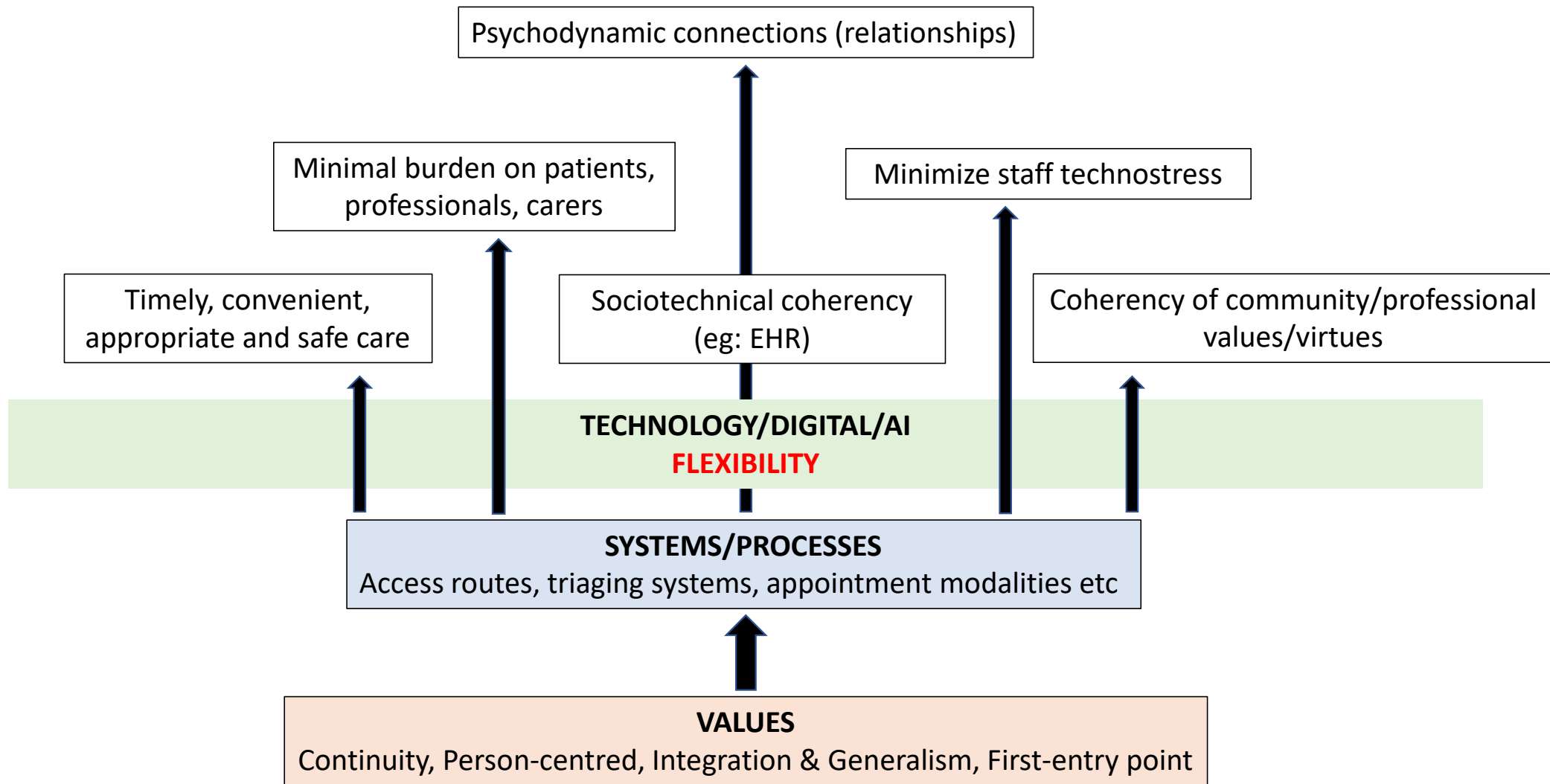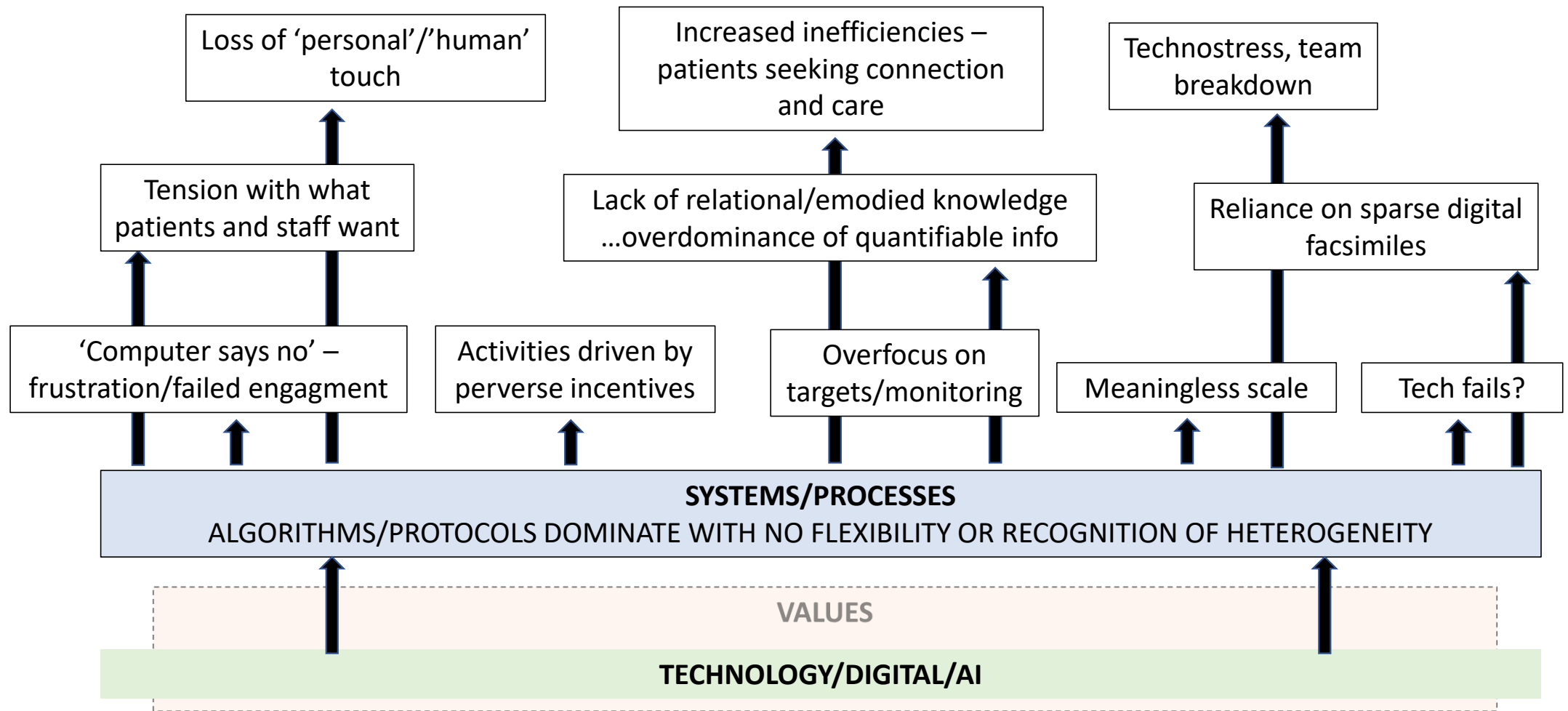"People talking to each other so that my care goes smoothly"

Type of Continuity	Definition	Paradigm
Therapeutic	Ongoing relationship with one or more practitioners: attentiveness, trust, and positive regard.	Psychodynamic
Disease Episode	Same practitioner for a number of disease episodes – may involve a central 'integrator'/overseer eg: GP.	Biomedical
Distributed work	Joining the 'arc of work' of multiple professionals, distributed in space and time.	Sociotechnical
Commitment to community	Serving a population over time according to need, values, and adapting to demographics, epidmiology, and health policy.	Sociopolitical/ ethical

Facilitating quality relationships...

Facilitating quality relationships...

Psychodynamic connections (relationships)

Minimal burden on patients, professionals, carers

Minimize staff technostress

Timely, convenient, appropriate and safe care

Sociotechnical coherency (eg: EHR)

Coherency of community/professional values/virtues

TECHNOLOGY/DIGITAL/AI
FLEXIBILITY

SYSTEMS/PROCESSES
Access routes, triaging systems, appointment modalities etc

VALUES
Continuity, Person-centred, Integration & Generalism, First-entry point

What goes wrong?

What can I do?

How can I help tech/AI developers/commissioners understand what I and my patients want/need?

AM I BEING A DINOSAUR?

What (uninteneded) consequences might there be from tech here?

How can I mitigate these any unwanted consequences?

What professional/community values should underpin my services?

How can tech/AI support my values rather than challenges them?

Is technology needed/appropriate for THIS patient, at THIS time, for THIS issue?

How would I feel if this was my care?

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