Pancreatic Cancer UK

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Improving Access to Optimal Nutritional Care, 22nd Sept 2020, 9 – 11am

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Improving Access to PERT: Empowering the Patient Through Technology

Mr Keith Roberts, Consultant Liver Transplant and HPB Surgeon,
University Hospitals Birmingham NHS Trust

Improving access to PERT: empowering the patient through technology

Keith Roberts PhD FRCS

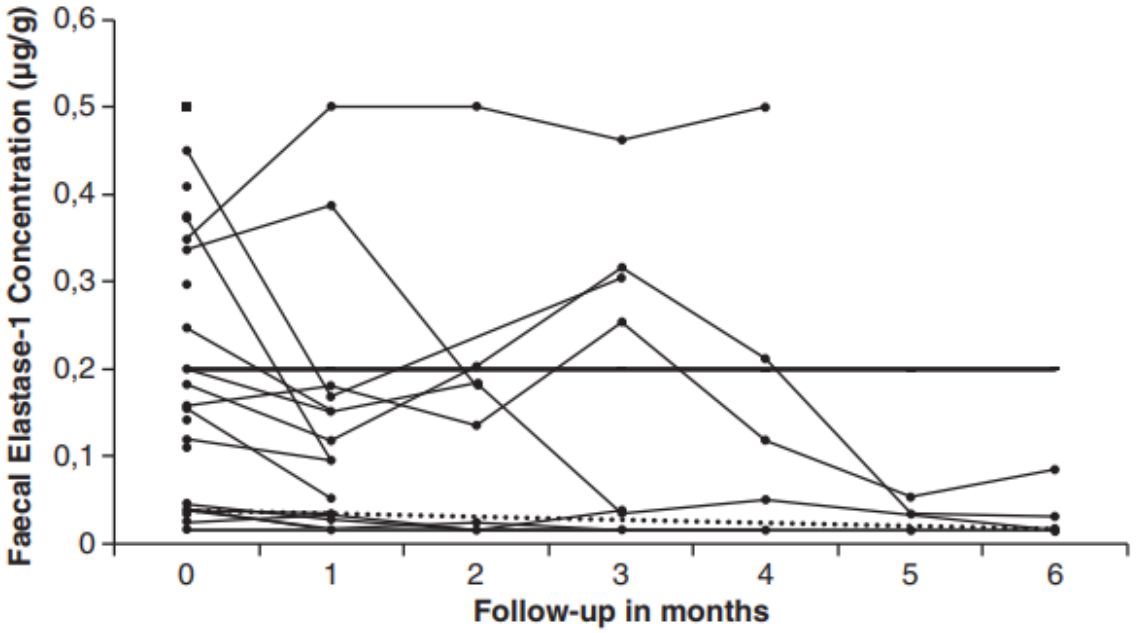
Liver transplant and HPB surgeon

Pancreas Lead, Royal College of Surgeons of England

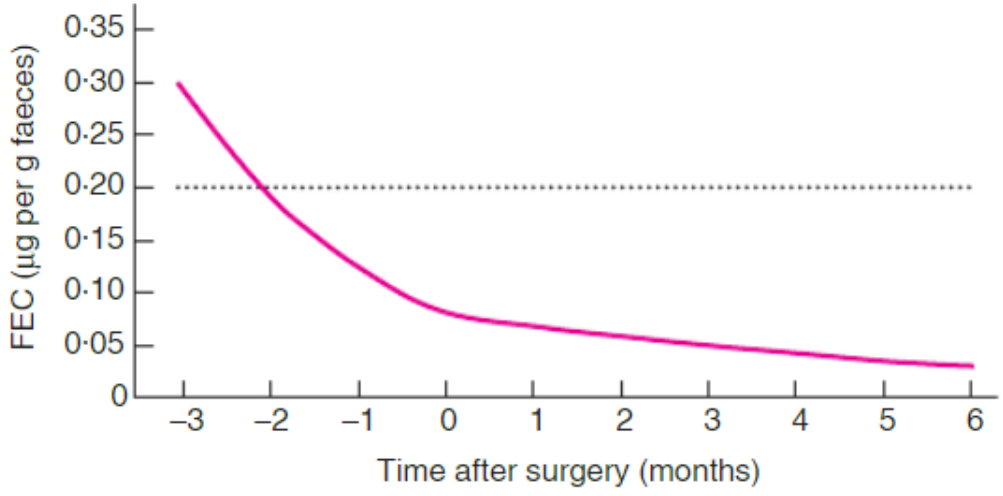
What is the problem?

- PEI affects most patients
- It is progressive
- Pancreatoduodenectomy particularly harmful to normal physiology

PEI IS PROGRESSIVE



PEI close to 100%: tumours in head or after PD for cancer



g. 2 Monthly median faecal elastase 1 concentration (FEC)

What is the solution?

Easy, its PERT….

NICE National Institute for Health and Care Excellence

Pancreatology 19 (2019) 114–121

Contents lists available at ScienceDirect

Pancreatology

journal homepage: www.elsevier.com/locate/pan

Enzyme replacement improves survival among patients with pancreatic cancer: Results of a population based study

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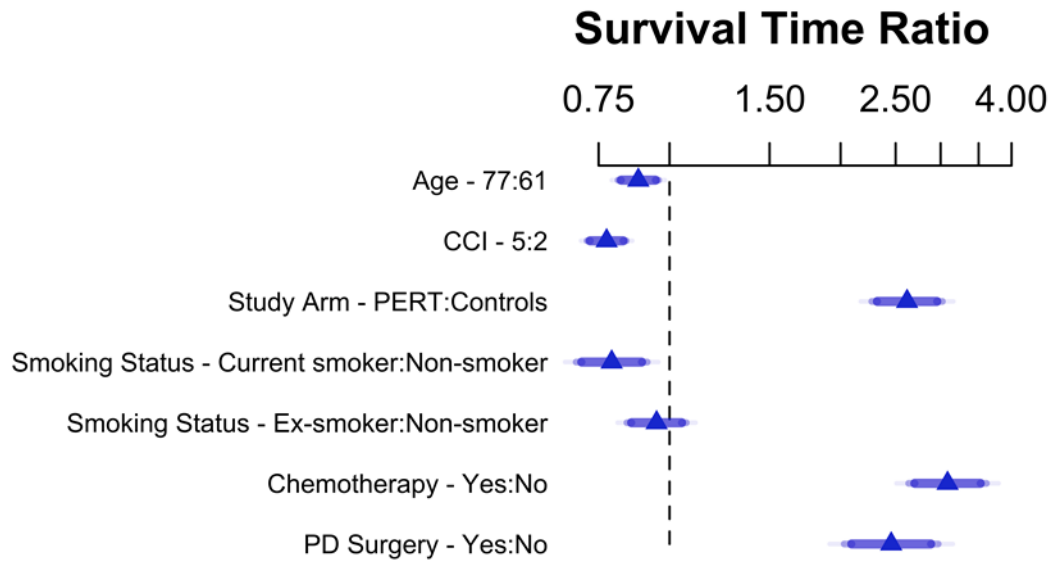


But….

Clear evidence of widespread undertreatment:

Australia – Unresectable PDAC – 21% prescribed PERT

Landers et al 2016

Dutch and German patients (mixed PDAC and Chronic Pancreatitis) – 69% prescribed PERT

68% with symptoms of malabsorption

25% on less than three capsules/day with 70% having ongoing steatorrhoea

Sikkens et al 2012

UK – 2001 to 2015 – all PDAC – 21.7% prescribed PERT

Roberts et al 2019

UK prospective audit: RICOCHET

Setting: UK wide – 59 secondary care and 25 tertiary care units

2018, 6 months after NICE guidelines

1350 patients with PDAC: **736 (54.5%) prescribed PERT**

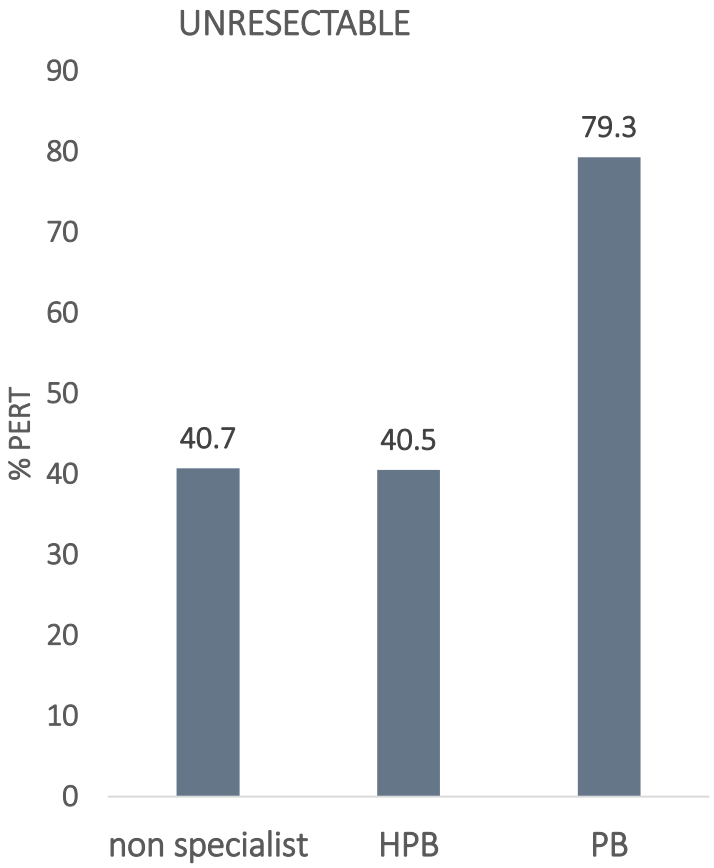
Factors associated with PERT prescribing:

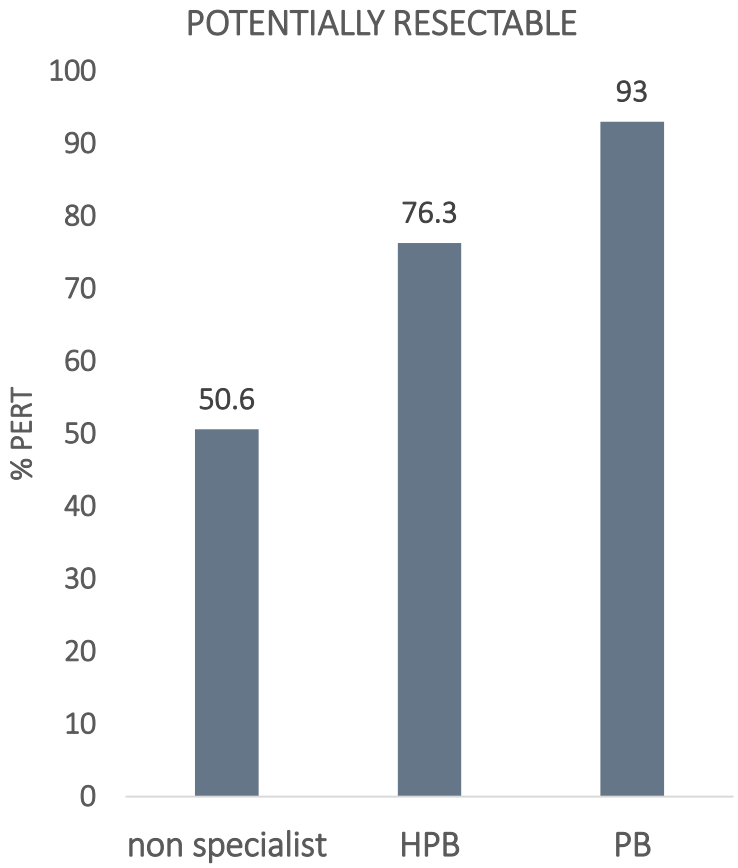
Younger, good PS, resectable, seen a CNS, seen a dietician, have acid suppression co-prescribed and treated in tertiary care

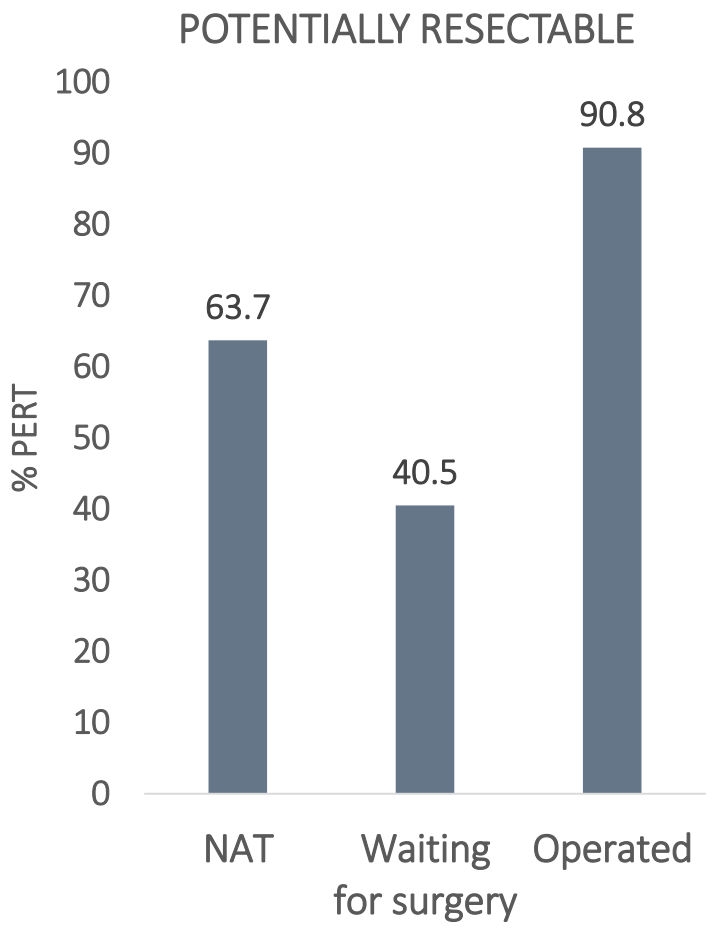
On multivariate analysis patients were more likely to be prescribed PERT :

- **manged in tertiary care (OR 1.47)**
- **seen a CNS (OR 1.65)**
- **seen a Dietician (OR 3.65)**
- **were resectable (OR 1.52)**
- **good PS (OR 1.7)**

PERT prescribing varied strongly by setting and stage





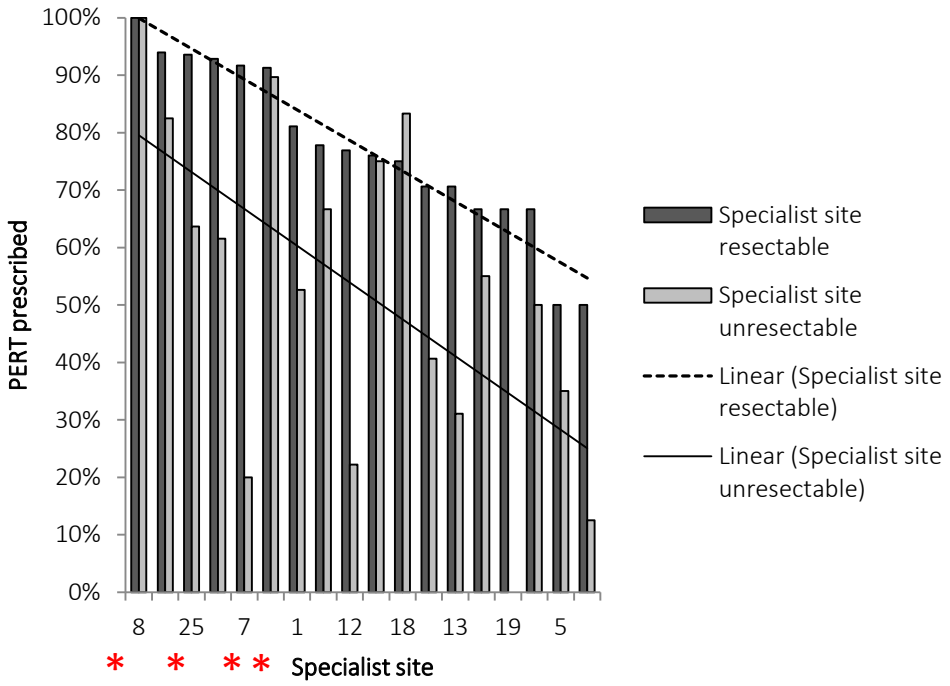


So, how to change practice?

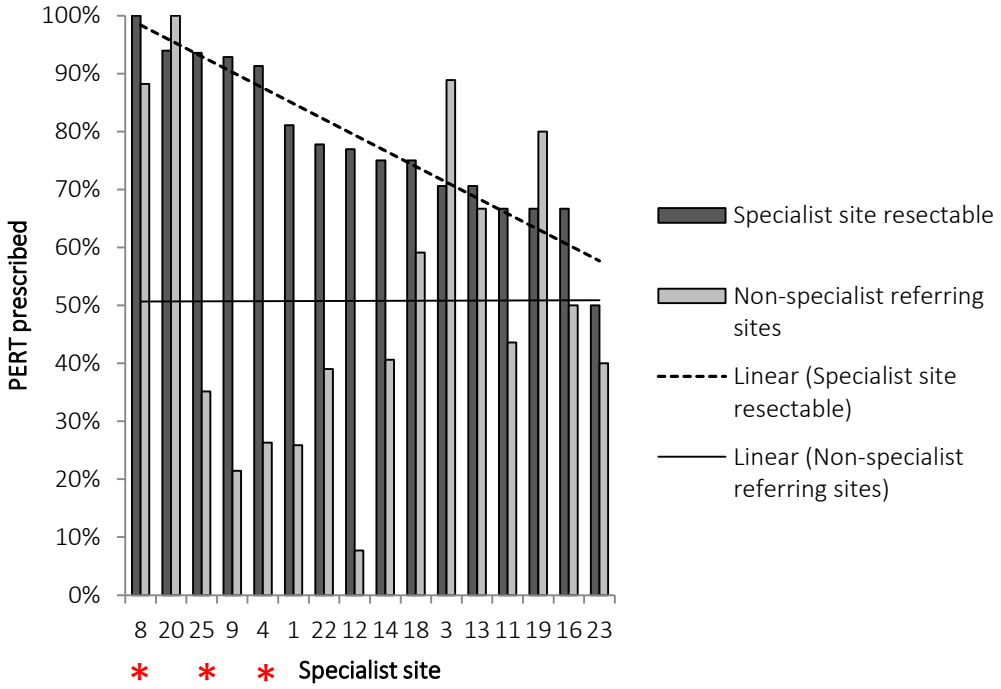
Increased access to CNS and dieticians – however not all organisations have access to dieticians; educating and empowering CNS in non specialist sites likely to be effective

Major issue is the geographic barrier between specialist and non specialist sites:

Tertiary care only: PERT use correlated between resectable and unresectable disease (though consistently lower in unresectable)



Tertiary care units and their referring sites: no correlation in PERT use between resectable and high/low prescribers in tertiary care



Novel solution: take the message to the patient

Use of mobile Health applications:

- Transmitting electronic medical records
- Remote diagnosis and monitoring patients
- Implementing interventions – Varghefi 2019:
  - *Weight management*
  - *Smoking cessation*

Patients want this – Vo et al JMIR 2019

- *Stronger patient engagement*
- *Improved patient empowerment*

Solution?

My Pancreas
NHS

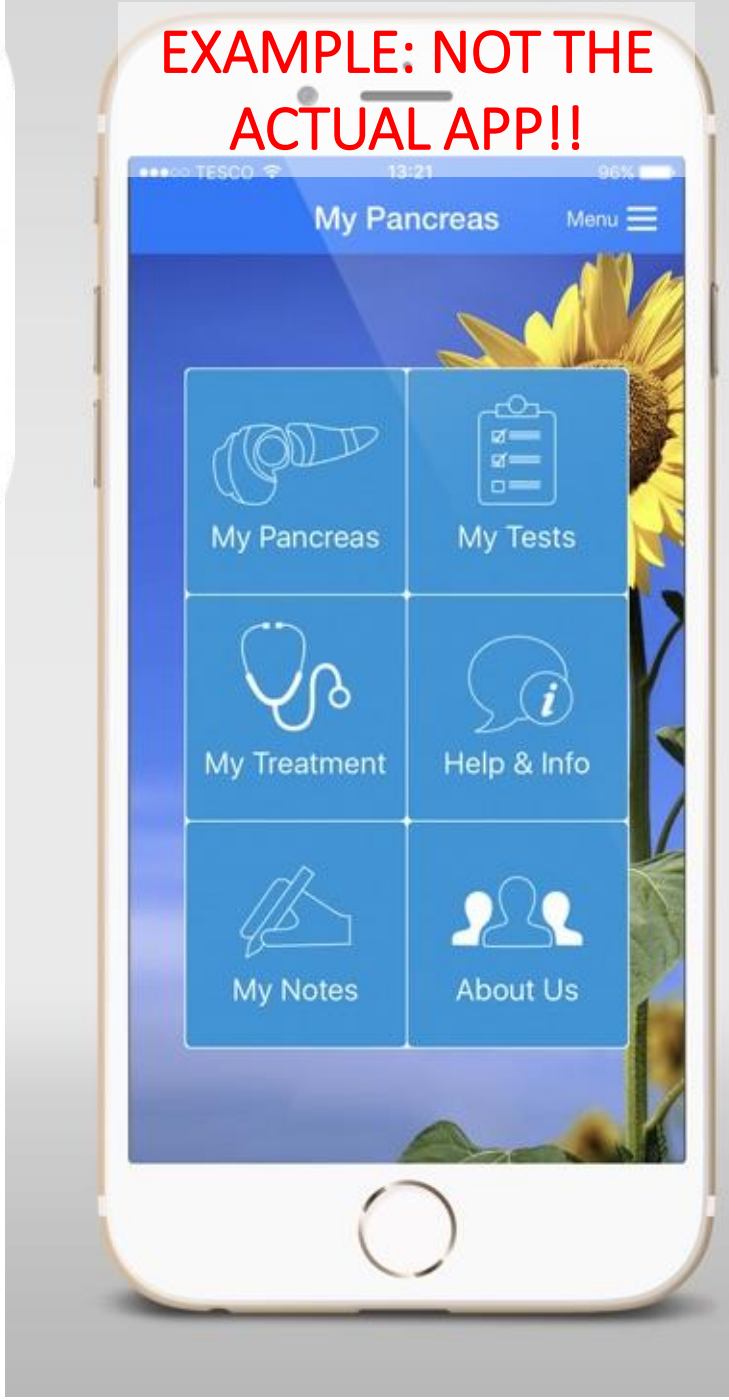
Mobile app based solution – provide patients with a pancreatic cancer app

Direct message to patients to ask if they are receiving PERT

Provide education to patient regarding symptoms of PEI and benefits of PERT

Point patients to their GP/local team to be prescribed PERT

Provide links to good prescribing practices, NICE guidelines and other relevant information for healthcare professionals to support the prescribing



Could PDAC patients use mHealth effectively?

Tarricone et al 2019: *Mobile health divide between clinicians and patients in cancer care*

- Far fewer patients than clinicians using mHealth
- Gap between basic and advanced users

Audit University Hospitals Birmingham 2020

64 PDAC patients – questionnaire about treatment of PERT, and attitudes/thoughts towards mHealth

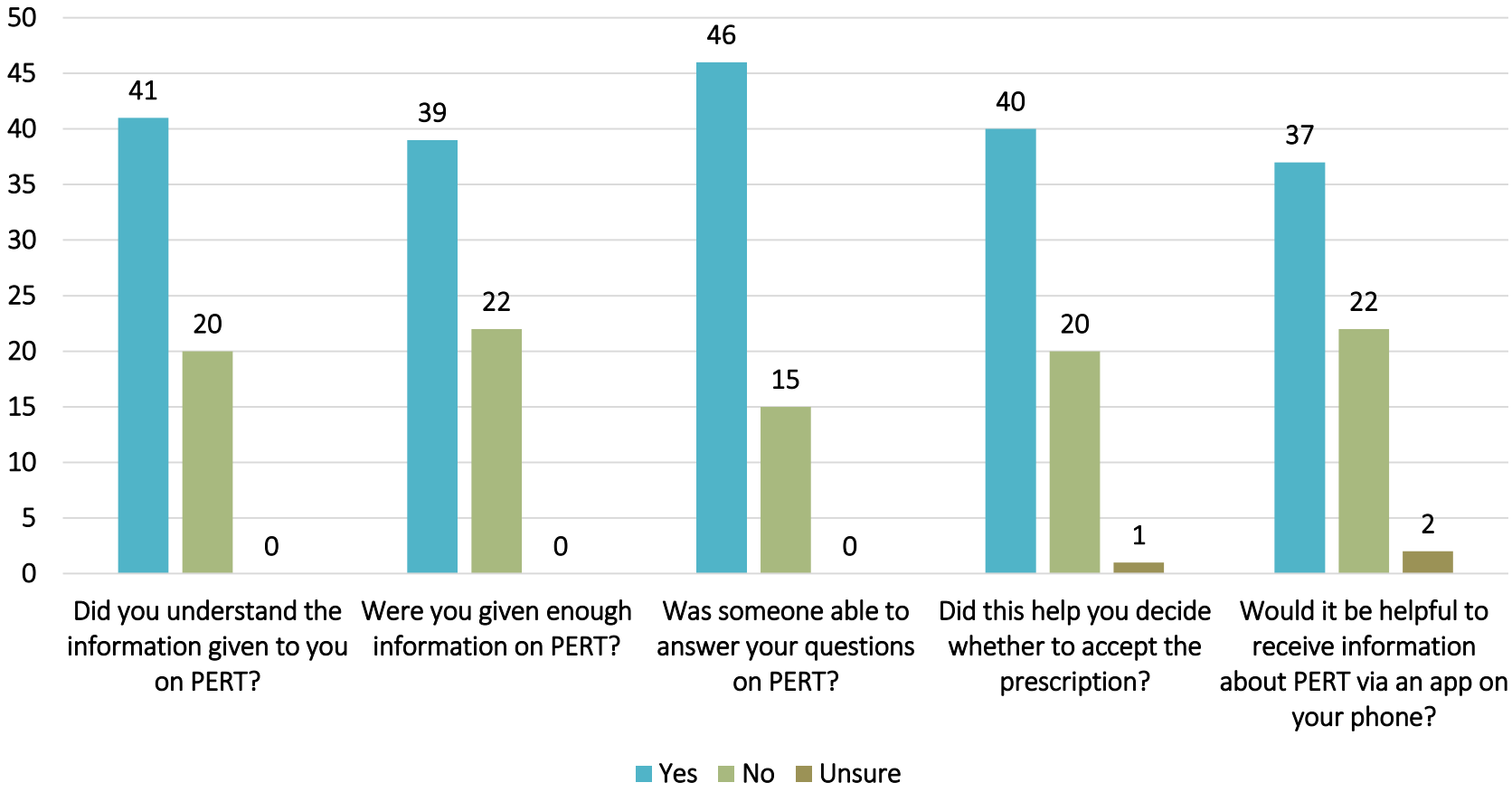
- Median age 72
- Median Deprivation index quartile = 3 with spread across least to most deprived

- 41 (64%) had smartphone and a further 8 (12.5%) had access to one (total = 77%)

Patient Perception of PERT Prescription

One third of patients did not understand or felt they did not receive enough information about PERT

61% of patients would welcome information from a mHealth source



Symptom reporting or AI to guide PERT??

Swedish study demonstrates PDAC patients can reliably self report abdominal symptoms Gustavel 2017

Issues raised:

Eating

Bowel function

Emotional well being

Fatigue

Pain

Remote review of self reported symptoms could be used to remotely identify ‘red flag’ symptoms

Artificial intelligence could automate this process and could recommend treatment

Challenges

The software doesn’t yet exist

Many mHealth solutions – how to effectively implement this – with existing app such as Leicester my pancreas, other third party, stand alone or other pdac app

No data to show this would change practice

Data protection

Inequalities – elderly, socially deprived less likely to use

Conclusions

PEI is highly prevalent and yet despite a cheap treatment and national guidance is undertreated

Wide geographic and stage specific variation: evidence of unanticipated consequence of centralisation of pancreatic surgery?

Mobile health technology could bridge the gap and provide useful information direct to patients who could be directed to healthcare professionals

Who in turn are provided supporting information direct through the app

Thank you

Dr Hilary Brown and Dr Antiope Ntouva, University of Birmingham

Lewis Hall and Rupaly Pande, surgical trainees, local audit UHB

Sarah Powell Brett, PhD student developing novel diagnostic test for PEI

RICOCHET team and collaborators

PCUK

Royal College of Surgeons
ADVANCING SURGICAL CARE

RICOCHET

NHS
University Hospitals Birmingham
NHS Foundation Trust