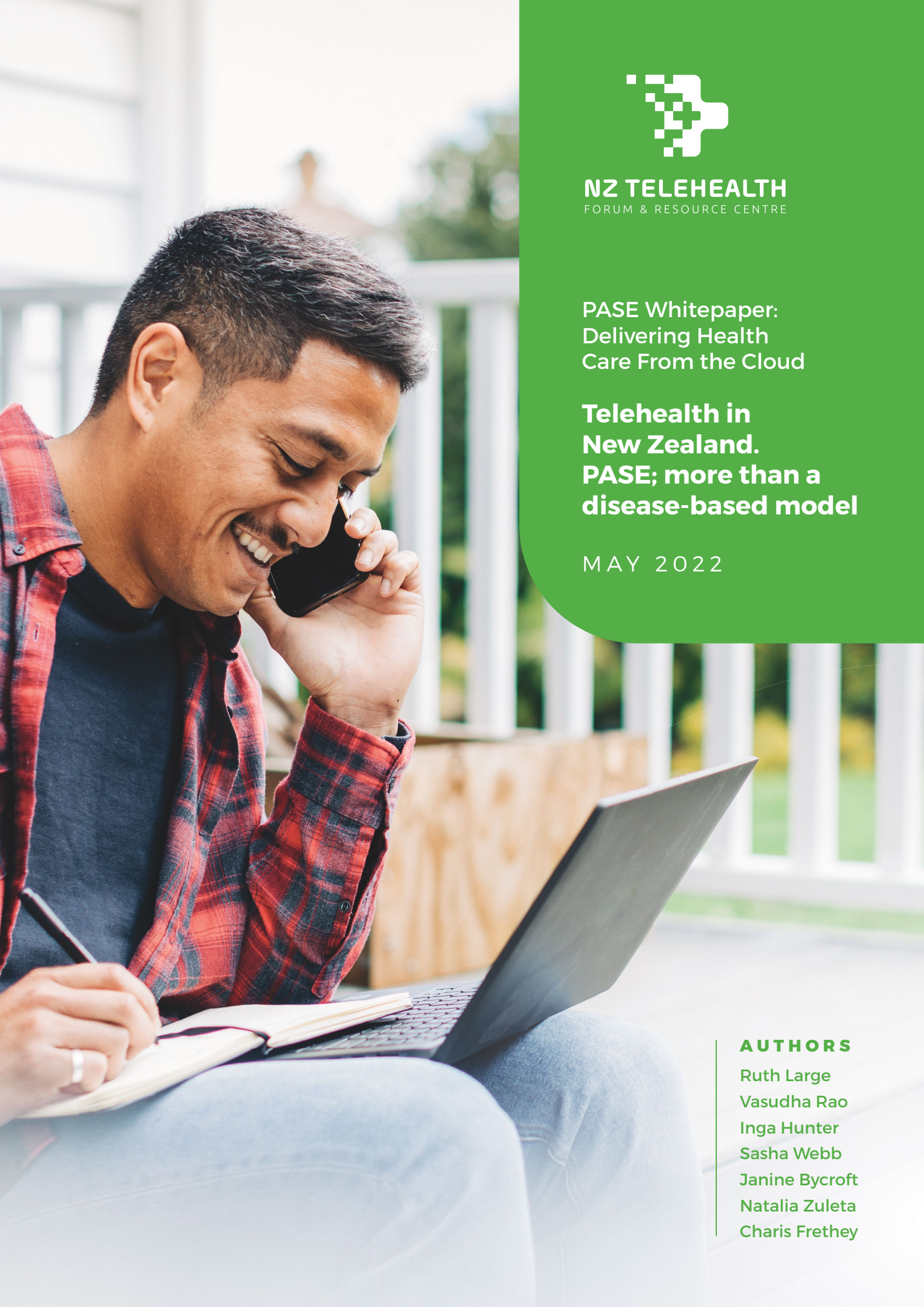

NZ TELEHEALTH
FORUM & RESOURCE CENTRE

PASE Whitepaper:
Delivering Health
Care From the Cloud

# Telehealth in New Zealand. PASE; more than a disease-based model

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# Introduction:

Every community deserves access to quality healthcare services based on its needs. In Aotearoa New Zealand (NZ) increasing demand on every health service, alongside growing workforce shortages, have resulted in burned-out clinicians and poor access to health care, particularly for marginalised communities. The current system of multiple District Health Boards (DHBs) being responsible for their "patch" has resulted in widespread inequity, inefficiencies, duplication, and fragmentation. Unacceptable health inequities have existed across the country for decades, not just between rural and urban areas but also for Māori, Pasifika, disabled and other minority groups. These inequities, system issues and workforce concerns have been exposed by the Health and Disability System Review (2020)[1] which has paved the way for health reform. The government has responded to the review by establishing two health authorities: Health NZ and the Māori Health Authority.

> *Telehealth is a tool that has been used in NZ and across the world as a mechanism to support whānau closer to home.*

Meanwhile, the COVID-19 pandemic has served as a catalyst for finding innovative ways of delivering healthcare utilising technology. It has inspired many of us to work smarter, find creative solutions to many of our challenges and embed them for the future. Across the world, many countries are rising to a similar challenge; turning to digital technology to alleviate the burdens of distance and time.

Telehealth is a tool that has been used in NZ and across the world as a mechanism to support whānau closer to home. As an extension of normal healthcare delivery, telehealth is provided using digital technology (in particular, information communication technology) either directly to whānau or in a multidisciplinary manner. Telehealth provides an opportunity to reduce inequity [2,3,4] - provided that it is implemented well. Although historically healthcare in NZ has been slow to adopt telehealth widely, the opportunity to build on the advances of other sectors and current proof of concepts is there for the taking. This digital revolution is here to stay.

Recently the Health Quality Safety Commission (HQSC) published a review of the impacts of COVID-19 on the health system[5]. The review documents backlogs in primary care, emergency care and elective and outpatient care, noting ongoing volatility in these areas and the need to 'catch up'. The review suggests that barriers to access are projected to remain for some time due to alert level restrictions and fear of COVID-19 as well as other mounting pressures on health systems, including reduced GP numbers. The report briefly examines telehealth as an opportunity to redress imbalance and enable patients to receive care outside of an in-person setting. It also identifies the potential to increase inequity if delivered poorly, noting that patients can have negative experiences if relying solely on telephone and/or receive care from digitally unprepared health care providers and recipients.

## The Patient Anywhere receiving healthcare from the Specialist Elsewhere (PASE) model of care

Over the past two years the NZ Telehealth Forum[6] (NZTF) has seen a rapid growth in activity across the country and has supported clinicians to provide telehealth services to their patients. Having conducted two previous National DHB Telehealth surveys (2014[7], 2019[8]), with a third in the pipeline and having gathered extensive information from our working groups/communities of practice and national experts within the various NZTF groups, the NZTF is well placed to be setting achievable goals for the future of telehealth delivery in NZ. This white paper explores the possibilities for NZ to deliver healthcare in a better way. It offers a pathway to reduce inequity of healthcare delivery by harnessing the power of the health system reforms and making use of the decades of experience of the New Zealand Telehealth Leadership Group (NZTLG) in what we have termed the **Patient Anywhere Specialist Everywhere** (PASE) model.

## What could services deliver in the future? A telehealth 'locality' model incorporating PASE

With the current improvements in technology capability and connectivity alongside the potential for national appointment booking capacity, a shared electronic record (Hira) and a national employer, there has never been a better time to rethink how we deliver services (Figure 1). Currently, patients and whānau are limited in their options of healthcare delivery to those services which are offered in their region. This has been termed the 'post-code lottery' of service delivery[9, 10, 11]. Consequently, service provision is variable across regions and vulnerable to workforce shortages, with some regional and rural areas being unable to deliver key services locally such as high-risk maternity, paediatric or child/adolescent psychiatry due to resource, leave or difficulty recruiting specialists. In addition, it can be difficult for some clinicians to take time out without adequate leave cover provided, leading to increased rates of burnout, poor retention rates and high staff turnover. Added to this, the ever-increasing range of rare and complex diseases, specialist medication and treatments, the need for multi-disciplinary teams, and sub-specialty development continues to complicate healthcare delivery making it difficult for specialist care to be delivered by one person or even local groups of people.

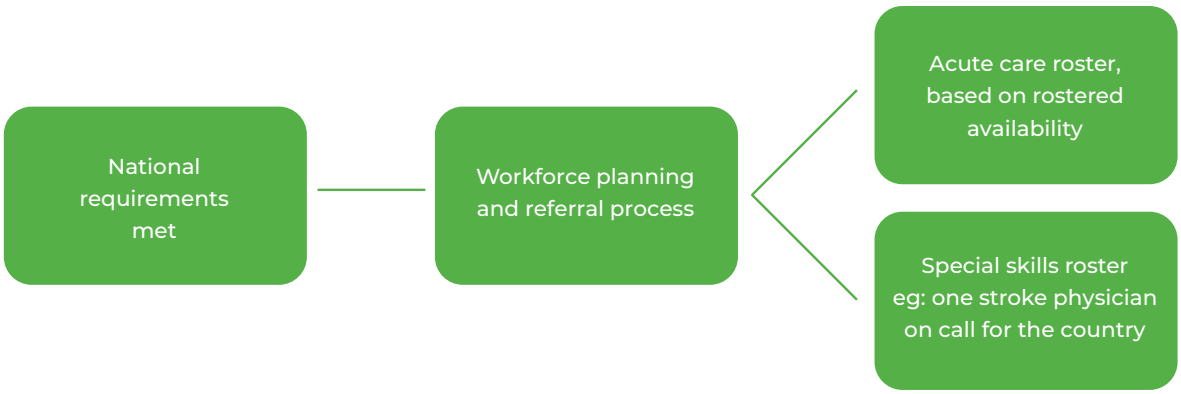


*Figure 1: With National requirements met a workforce planning and referral process could take place to supply a National acute care and special skills roster*

Whilst telehealth cannot and should not be a panacea for specialist workforce shortages, it can enable more spread of existing services, plus convenience and faster access. Telehealth can also support clinicians to continue to work where they live and enable others to work to the top of their scope with specialist support. Telehealth enables shared care where, for example clinicians such as specialist GPs can consult with inpatient specialists with the patient and whānau in the GP's rooms or elsewhere. Other advantages include supporting nurse practitioners and rural outreach clinics as well as other rural and regional healthcare providers.

The concept of Patient Anywhere, Specialist Elsewhere (PASE) has been developed where the right care can be provided at the right time by the right person (Figure 2). The concept relies on a national employer, national booking system and shared health record and can be imagined as a cloud based multispecialty health service provider which is not reliant on bricks and mortar.

There is national and international evidence of healthcare models similar to PASE, based on collaborative teams involving primary care clinicians, specialist doctors, nurses and allied health service professionals. Some international examples in OECD countries include the management of hypertension, stroke, dermatology, adult and paediatric emergencies, hospice care, chronic conditions such as asthma, arthritis and congestive heart failure, involving cardiologists, neurologists, psychologists, paediatricians and radiologists. Examples of projects and pilots in NZ are available on the NZTF National Telehealth Register[12].

A review of international, national and local models from NZ enables an insight into some of the key benefits and challenges of such an approach[13, 14, 15]. However, none of the current models take a holistic approach across whole of country, person or system. This is where the PASE model differs, offering a collaborative cloud based approach to healthcare providing multiple benefits, both for patients and their whānau, as well as for clinicians.

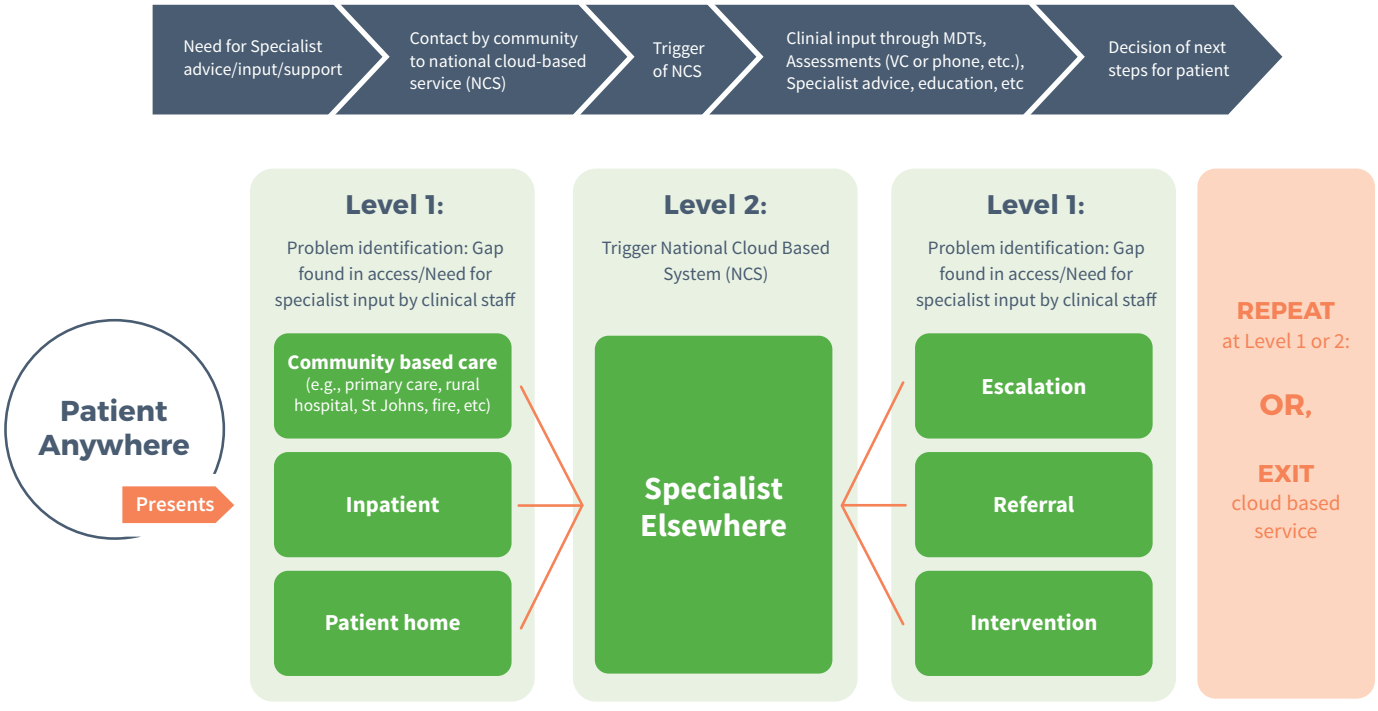


*Figure 2: PASE workflow recognising that the patient can be anywhere but receive care from a Specialist elsewhere*

# The benefits of a PASE model of care are vast and extend to patients and their whānau, clinicians, organisations, the health system and the environment

## Benefits to patients and whānau

- Comprehensive patient management with the help of a multidisciplinary team
- Access to specialist expertise while being managed by GP
- Potential to access cross-border specialists
- Improved access to allied health services, from speech language therapy to physiotherapy, OT, medicine reviews, mental health services and much more
- Reduced waiting time to diagnosis
- Decreased risk of misdiagnosis
- Less travel and accommodation, due to less requirements for in-person specialist appointments
- Reduced time away from work/study to attend in-person specialist appointments
- Whānau able to speak with the specialist and in-person clinician at same time
- Meeting cultural and disability needs
- Enable geographically separated informal carers and family to share in care decisions/support
- Offer different and improved accessibility options
- Translators, sign language, etc.

## Benefits to clinicians

- Twenty-four seven access to a full network of health specialties
- Faster and more accurate diagnosis made possible
- Access to professional development via telehealth consultations with specialists
- Ability to simultaneously engage with patient/whānau and specialist is required
- Greater engagement between primary, secondary and tertiary health professionals
- Reduced travel required for specialists consulting in rural/remote locations
- Peer support for isolated or scarce practitioners.

## Benefits to health organisations

- Twenty-four seven access to a full network of health specialties
- Patients spend less time in hospital beds awaiting diagnosis
- Reduced DNA (did not attend) appointments for in-person specialist services
- Ability for primary care and rural hospitals to offer greater range of services, with specialist support via telehealth
- Improved confidence and capability among clinicians.

### Benefits to health system

- Equitable access to specialist care, regardless of location
- Reduced travel costs (both patient travel reimbursements and specialist travel costs)
- Improved efficiency and reduced wastage due to less DNA's for in-person specialist appointments
- Greater engagement between primary, secondary and tertiary health professionals
- Reduced risk of any ongoing costs of patient care due to misdiagnosis.

### Benefits to the environment

- Reduction in greenhouse gases
- Reduction in petrol/diesel use/costs (also an equity issue).

### Some of the challenges identified from projects and initiatives in this area include:

- Need for multidisciplinary teams to work together cohesively
- Technology issues
- Stakeholder buy-in
- Resistance to uptake.

## Taking the PASE model forward

Based on our understanding of telehealth, we propose a preliminary processual model for operationalising PASE. It is vitally important that a full systems view is taken in order to avoid potential inequities. The true strength in this model will be seen in a whole of system/whānau/person implementation approach rather than a narrow disease or locality approach. If we can view PASE as a model to distribute regional resources nationally then we will reap the most benefit for our communities. Review of international and national models, especially in other OECD contexts can enable such insights and offer improvements and extensions to this model.

One such care model that spans multiple pathological processes and specialties to consider developing in urgency is a National long COVD-19 telehealth model[16]. This model would allow patients anywhere to receive multi-disciplinary care provided by Specialists elsewhere, particularly when the natural course of new treatments is to centralise them. Given the impact of this disease and the need for timely support for sufferers a service of this nature would make it an ideal national PASE model.

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