Wilmington Healthcare Costed Integrated Patient Scenario:

Atopic Dermatitis

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Wilmington
Healthcare

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Contents

Foreword

This is the fictional story of Shanice who suffers, like many people, from chronic and debilitating atopic dermatitis (AD), often referred to by patients as eczema. Many people are unaware of the devastating impact that severe AD can have on people's lives. At its worst, Shanice's skin is cracking, weeping and bleeding, seriously affecting her sleep and mental health. This story compares the differences between a typical suboptimal care pathway with the very different journey she takes with optimal care. It has been written to underline just how important it is that AD patients receive the correct care and advice to manage their condition and avoid years of unnecessary misery and potential stretches of long-term sick leave.

AD typically affects adults who are of working age, so it is essential to design a system that supports patients in having the best quality of life that they can achieve. Patient outcomes rely considerably on a solid foundation of best practice in primary care and this can shape the outlook for patients dramatically. GPs who get it right ensure that patients are prescribed the correct-strength topical steroids and understand how much to use, as well as making them aware that there is a range of emollient options available. Furthermore, patients need education about their condition and how to manage it, including how to manage a flare-up and when/how to seek help. For the majority of patients, AD can be well managed within this context.

Patients who do not receive enough support and the right treatment for their AD are more likely to deteriorate. In these circumstances it is vital that GPs quickly recognise the need for prompt referral to secondary care so that patients can access more potent treatment. Rapid access review is an important tool for enabling earlier discontinuation of ineffective treatment and introduction of alternatives to alleviate symptoms. In Shanice's case she required biologic therapy, and although expensive, the optimal scenario illustrates that her condition improves much earlier on in her care pathway, giving her a substantial head start on a better quality of life.

Fortunately, the majority of patients who receive swift and effective intervention in primary care will not need to be seen in secondary care because their condition will be adequately managed. Shanice's story highlights the type of service that needs to be in place to offer this level of support. This involves an integrated dermatology pathway between GPs and specialist dermatology healthcare professionals, such as GPs with an extended role (GPwER) and specialist dermatology nurses (SDNs) in the community. Shared care protocols between hospital trusts and GPwER services expedite prescription of certain medicines in the community and therefore help to reduce secondary care costs. For patients in secondary care, patient-initiated follow-up (PIFU) gives patients more control over their follow-up hospital care, meaning that appointments occur in response to patient need rather than at arbitrary intervals.

Shanice's story maps the adjustments that services need to undergo in order to give patients the best chance at an ordinary life that is not dominated by AD. The benefits for patients speak for themselves, and with the healthcare and wider social costs in mind, there are considerable benefits to be achieved for society too.

Introduction

Atopic dermatitis (AD) is a chronic relapsing skin condition characterised by intense itching, dry skin, redness, inflammation and exudation. It affects mainly the flexor surfaces of the elbows and knees, as well as the face and neck.

It is thought that the condition may affect as many as 15–20% of school-age children and 2–10% of adults. Most people with AD (more than 80%) experience mild disease; only around 2–4% of people with AD have a severe form of the disease. This can be debilitating where much of the body is covered by excoriated, bleeding and infected lesions. Despite the lower prevalence, the presentation of disease in adults is often more severe and chronic in nature. Its course may be continuous for prolonged periods or of a relapsing–remitting nature, characterised by acute flare-ups. Damage to the skin from scratching can cause bleeding, secondary infection and thickening of the skin (lichenification)[1].

The impact of AD on quality of life can be considerable and varies. Sometimes this may be according to disease severity; however, any level of AD can impact quality of life negatively and the psychosocial impact of the condition should not be underestimated. In addition to the burden imposed by daily treatment, studies have shown not only that the condition affects everyday activities such as work or school and social relationships, but also that people with AD may experience anxiety, depression and other psychological problems. Sleep disturbance is common, especially during flare-ups, which in turn can lead to problems with irritability and lack of concentration[1].

The All-Party Parliamentary Group (APPG) on Skin highlighted concerns in its 2020 mental health report that access to specialist mental health support dedicated to dermatology patents is limited throughout the UK, despite a growing need for such services. Suffice to say that psychological interventions can be helpful in coping with many skin conditions. Yet many individuals with skin disease are desperate and frustrated at being unable to receive the psychological support. Growing evidence indicates that managing patients holistically from the start of their illness reduces the physical and psycho-social disease volume in the long term[2].

Management of AD takes place predominantly in primary care and aims to relieve symptoms and prevent secondary complications. This management involves skin care, anti-inflammatory treatment, and the identification and avoidance of exacerbating factors. Providing people with good-quality information about these issues is essential to successfully managing and treating AD. For patients with severe AD that have not responded to appropriate therapy, early referral to secondary care is advised. It is essential that primary care professionals identify when patients need to be referred, or recognise quickly when signs of deterioration occur, in order that patients can access stepped-up treatment as soon as possible and be provided with the right support and information to self-manage.

This resource provides clarity on the issues faced in managing AD by bringing the scenarios to life in a realistic way. The resource also provides practical guidance on how to improve care and quality of life for patients in the context of the service 'recovery and reset' phase following Covid-19.

During the response to Covid-19, the health and social care system has seen unprecedented levels of uptake of digital tools and services, helping keep patients, carers, friends, relatives and clinicians safe and ensuring that essential care can continue. It is crucial to develop digitally enabled care pathways in ways which increase inclusion. They provide an opportunity to create a more inclusive health and care system, creating more flexible services and opening up access for people who might otherwise find it hard to access in person, for example due to employment or stigmatisation[3].

Work published in 2019 shows that only 30% of dermatology departments were using remote consultations, pre-Covid-19; currently, 100% of departments are providing remote access consultations for diagnosis and follow-up, with variable results. As a specialty, dermatology is carrying out work to determine which of these innovations work best in various patient settings[4].

The pandemic has accelerated strategies set out in the NHS Long Term Plan[5] (2019) to redesign outpatient clinics over time with the aim of avoiding up to a third of face-to-face visits. The Long Term Plan also states that services should be integrated across an integrated care system (ICS) or Sustainability and Transformation Partnership (STP) and in this regard AD pathways are a good disease area to focus on. Dermatology outpatients was highlighted as an area that could be reduced and moved into the community setting.

Analysis style

This case study uses a Delphi-style consensus process involving experts in this specialist field alongside an economic analysis methodology. This has been developed using fictitious, but realistic, patient journeys which are compared to highlight potential care improvement opportunities.

Use of behavioural methodology drives engagement through the combination of objective clinical data, clinical expertise and financial analysis wrapped in a journalistic style. The study includes prompts for commissioners and service transformation leads to consider when evaluating their local health economy.

The goal is to inspire more stakeholders to take note and act towards positive change by thinking strategically and collaboratively about engagement, education and designing optimal care for people with atopic dermatitis (AD).

Look out for red highlight boxes to see typical suboptimal pinch points in many pathways throughout the country.

Look out for green highlight boxes to see best practice points which are above and beyond current recommended optimal practice, and which are already being trialled in some care pathways across the country.

The optimal story of Shanice's experience

With choices and typical pathway failure points highlighted along the way

In this scenario using a fictional patient, we compare a pre-Covid-19 suboptimal pathway with an optimal pathway in the NHS 'reset phase' for Shanice, who has AD.

At each stage of this pathway we have modelled the costs of care, not only financial to the local health economy, but also the impact on the patient and their family's experience.

This document is intended to help commissioners and providers understand the implications, both in terms of quality of life and costs, of different care pathways for individual patient needs and expectations.

It demonstrates how changes in treatment and management can help clinicians and commissioners improve the value and outcomes of the care pathway.

Meet Shanice

Shanice is 26 years old and lives in North London with her partner Steve and their two daughters, aged six and two. Between her family and her teaching job at a local primary school, she has very little time to herself.

She has suffered from moderate AD since childhood and was under the supervision of a consultant dermatologist. However, throughout her late teens and early twenties a good skin care regimen kept it under control, and she considered herself to have grown out of it.

She has a small group of old friends whom she sees often, but the bullying she experienced as a child has left its mark and she has very low self-esteem and anxiety about making new friends. She has always loved swimming and is at her most relaxed when she gets a chance to go open-water swimming.

Goals and values

Shanice wants to:

- Feel confident about her appearance
- Have energy to spend quality time with her family
- Look good on her wedding day
- Go swimming

Challenges and pain points

Shanice is challenged with:

- Low self-esteem
- High stress levels
- Poor sleep quality

Shanice's pain points are:

- Childhood bullying

Sources of information

- British Skin Foundation
- National Eczema

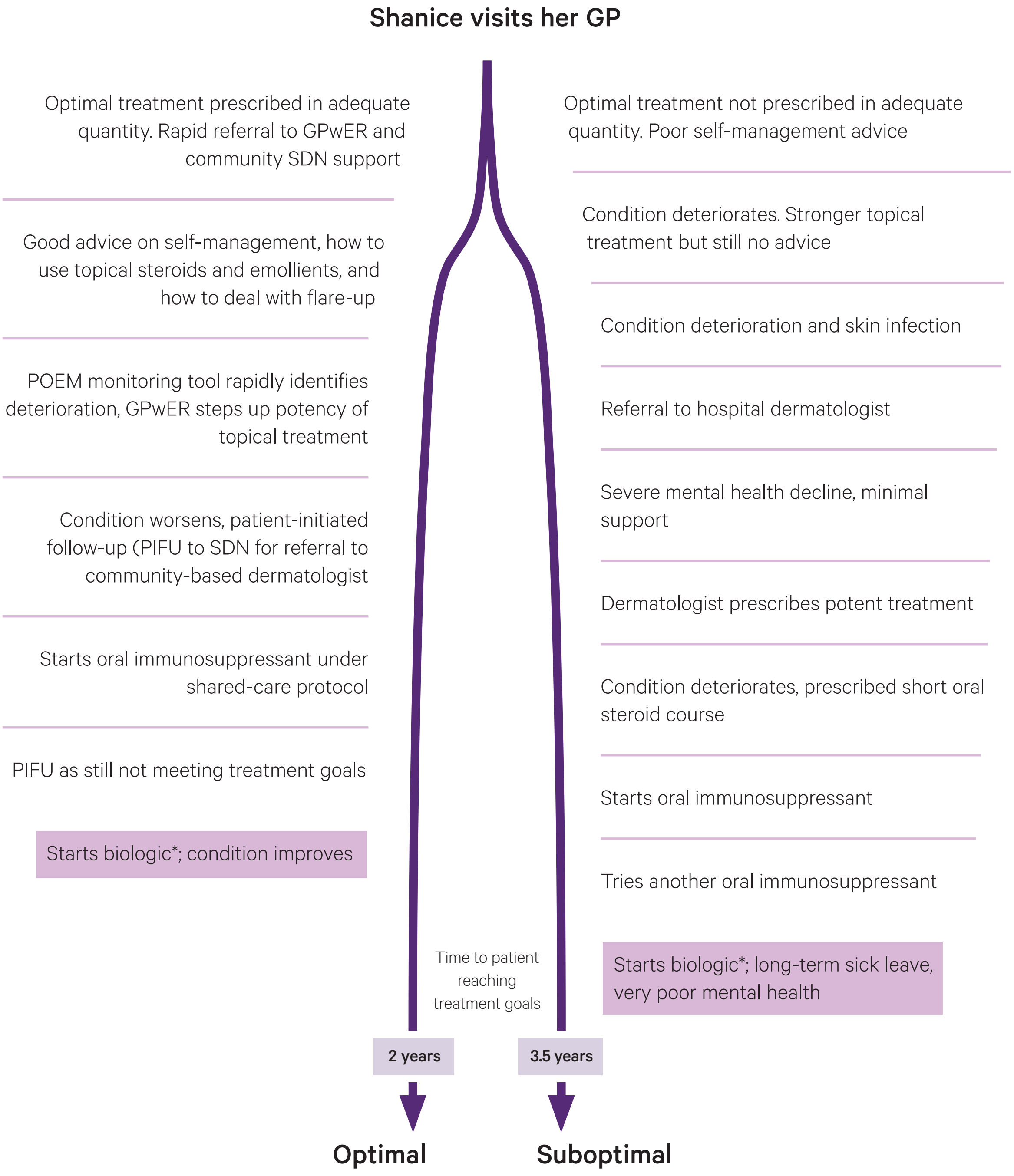
Engagement difficulties / objections

- Fitting appointments around her schedule

Shanice's experience with AD

Shanice had just started a new job as a primary school teacher when the AD returned. The flare-up on her hands, knees and elbows was spreading up her neck too. She had severe itching and the skin was cracking and with occasional bleeding. It was affecting her sleep and really getting her down, so she made an appointment to see her GP.

Both of Shanice's pathways started in the same way, with a visit to the GP, but the two journeys were very different as illustrated below. Both optimal and suboptimal pathways were costed for 3.5 years.



Shanice visits her GP

Optimal treatment prescribed in adequate quantity. Rapid referral to GPwER and community SDN support

Good advice on self-management, how to use topical steroids and emollients, and how to deal with flare-up

POEM monitoring tool rapidly identifies deterioration, GPwER steps up potency of topical treatment

Condition worsens, patient-initiated follow-up (PIFU to SDN for referral to community-based dermatologist

Starts oral immunosuppressant under shared-care protocol

PIFU as still not meeting treatment goals

Starts biologic*; condition improves

Optimal treatment not prescribed in adequate quantity. Poor self-management advice

Condition deteriorates. Stronger topical treatment but still no advice

Condition deterioration and skin infection

Referral to hospital dermatologist

Severe mental health decline, minimal support

Dermatologist prescribes potent treatment

Condition deteriorates, prescribed short oral steroid course

Starts oral immunosuppressant

Tries another oral immunosuppressant

Starts biologic*; long-term sick leave, very poor mental health

Time to patient reaching treatment goals

2 years

3.5 years

Optimal

Suboptimal

GPwER, GP with extended role; POEM, Patient Orientated Eczema Measure; SDN, specialist dermatology nurse.

*At the time of writing, dupilumab is the only biologic treatment approved by NICE for the treatment of AD.

Suboptimal AD pathway

At her first GP appointment, Shanice was prescribed:

- 1% hydrocortisone cream
- Emollient ointment

The GP advised her to use the hydrocortisone sparingly and plenty of emollient and contact the surgery again if symptoms persisted. The hydrocortisone had little effect, so at her next appointment the GP prescribed an additional topical steroid (clobetasone butyrate) and a one-month course of antihistamines to help with her rash and itch.

In the following months, she didn't see any improvement and became increasingly worried and self-conscious about her skin. Life was difficult, with pressure building at work and broken sleep because of the itchy inflamed areas of skin.

In the suboptimal pathway, the GP had difficulty recognising the severity of AD on darker skin types and therefore did not prescribe the optimal treatment. Shanice was also given suboptimal emollient advice and was not made aware that she should wash with it rather than using soap.

GPs with better awareness about AD are quicker to step up treatment for patients like Shanice and provide education to patients to help them self-manage. Some patients will need further treatment escalation, but for many patients, starting early with the right regimen will ensure that their condition is well managed.

No improvement after 12 months

Twelve months later her condition was considerably worse. Frantic scratching was further damaging her skin and bleeding from the AD was leaving marks on her clothes. Steve, her partner, was being as supportive as possible in the face of Shanice being under significant pressure at work, struggling to sleep and by now she was feeling anxious and depressed. She saw the GP for the third time and was prescribed a more potent topical steroid (betamethasone cream) but wasn't given any advice on when and how to use it.

After 12+ months, this was an opportunity to examine Shanice's skin more closely and re-evaluate her condition and treatment path.

A few weeks later, back at the surgery with signs of a skin infection, Shanice was prescribed a course of antibiotics. She mentioned how low and anxious she had been lately, but the GP attributed this to her work rather than her worsening condition.

The topical steroid did help, but as soon as she stopped using it her skin would flare-up again. Feeling miserable, exhausted and acutely embarrassed by the appearance of her skin, she explored dietary changes and tried a herbalist, hoping for some relief. Ahead of an OFSTED review at work, she started to wonder if stress was exacerbating her skin condition. Despite the combination of topical steroids and emollients (she has not been given any specific bathing products), Shanice was not managing.

Shanice was not given any guidance on how to use topical steroids correctly. Simple information about how best to use the ointment to manage flare-ups would have helped with symptom control. She didn't receive any guidance about managing flare-ups or how to taper the treatment.

Many patients report only receiving small tubes of topical steroid at a time, sometimes 30g to treat the whole body. Repeat prescriptions are difficult to obtain, and GPs and pharmacists can sometimes overemphasise the risk of skin thinning and sparing use, leading to undertreatment. Volume and education on need for repeat intermittent therapy (not a one-off course) is important.

Referral to dermatology

Twenty months after Shanice originally sought help, the GP finally recognised the severity of her condition. She was prescribed antidepressants and the GP referred her to a dermatologist and gave her information about IAPT (Improving Access to Psychological Therapies).

By the time she saw the consultant dermatologist 16 weeks later in hospital, the AD covered 30% of her body, with even more cracking and weeping, and she was off sick from work. She was prescribed a very potent topical steroid (clobetasol) and an immunomodulator (0.1% tacrolimus) for her face and flexures and given advice on how to use them. She was also prescribed an additional emollient ointment to use at night. Her disease severity was assessed using the Eczema Area and Severity Index (EASI) and Patient Orientated Eczema Measure (POEM) scoring systems forms and it was discussed with her which symptoms were bothering her the most.

If a POEM review had been initiated sooner (in primary care) this would have flagged that Shanice needed to be referred for specialist assessment much earlier. Wider use of the POEM app by GPs and pharmacists could transform escalation of care at the appropriate time for patients like Shanice. POEM takes less than a minute for most patients to complete and can be used by a patient serially to monitor response to therapy.

Unfortunately, her skin continued to deteriorate, so at her review appointment a few weeks later she was offered UVB phototherapy. In addition to continuing with the topical treatment she was prescribed a six-week course of oral steroids (prednisolone) to help manage the immediate-term symptoms. The phototherapy offered some hope, but the earliest appointment she could get was five months away and it would mean a 60-mile round trip twice a week for 10 weeks. With her job and the kids, she couldn't see how to make it work.

In the suboptimal scenario Shanice had no options to discuss her symptoms and emotions with AD in a clinical setting. There was no integration between the physical and mental health primary care services she received. Growing evidence indicates that managing patients holistically from the start of their illness reduces the physical and psycho-social disease volume in the long term, and as such the APPG on Skin recommends that primary care training in dermatology and psychodermatology is mandatory[2].

During this time, she was still off work and not coping well. Her severe AD, depression and stress were overwhelming. Shanice and Steve had talked about getting married for a long time, but when he did propose later that month she couldn't bear the thought of getting married with her skin the way it was, and so delayed the decision about her wedding until matters were under control.

There was a marked improvement with the oral steroid, but after she had finished the short course of treatment her skin flared up again. She saw the hospital dermatologist again, who decided to stop the tacrolimus treatment and requested blood tests and a liver scan with a view to beginning oral methotrexate treatment.

At her follow-up appointment they decided to go ahead with the methotrexate treatment. She would need to come back for a review in three months and have blood monitoring every two weeks in primary care.

Shanice noticed an improvement in her AD, but it was a long way from being under control. However, she did feel well enough to go back to work. Getting to the surgery for the blood monitoring early or late enough to fit around work put a strain on her.

At her next consultant dermatology review appointment, after seven months on methotrexate, she was very upset about the impending wedding. So, in addition to the methotrexate treatment, the dermatologist prescribed oral prednisolone again to try and help improve her symptoms.

At her next review appointment nine months after she started methotrexate, the dermatologist decided to stop that treatment and try ciclosporin instead, and also made a referral for psychological support.

Twelve weeks on ciclosporin did improve things, but Shanice was still exhausted, stressed and anxious and struggling to see a way forward. There were delays in mental health review/assessment. Shanice was finding it difficult to sleep and the weekly visits to her GP surgery for blood monitoring for the first four weeks of treatment were exhausting. This had a significant impact on her work/life balance, which was becoming enormously strained, and once again took more sick leave.

She finally received a mental health review, which showed that she was in a very anxious and stressed emotional state. She was referred for cognitive behavioural therapy (CBT) alongside a higher dose of antidepressant.

For patients like Shanice, education about their condition and mental health are vital. Except for her partner, she did not have access to any other education or support.

At her next review appointment, it was clear that none of the systemic treatments had worked well enough for Shanice, and the dermatologist decided to stop the ciclosporin. Three and a half years after first contacting her GP for help, she was on long-term sick leave from work and was in a very bad place mentally. The dermatologist was considering starting her on a biologic medication and she was seeing a mental health nurse regularly.

Setting treatment goals is key. When Shanice had her first meeting with the dermatologist, she was asked what she ultimately would like to be able to do and achieve. This type of goal setting for patients with AD should start in primary care, as it is central to monitoring progress and the efficacy of treatment.

Key themes in Shanice's suboptimal pathway with AD include:

- No shared decision-making. Lack of integrated care plan about what happens next, poor social care support, poor psychological support, poor familial support, additional transport costs (blood monitoring), declining quality of life, reduced mental health and a feeling that she may recover but that it will take a long time.
- Negative financial impact: Shanice ultimately had a large amount of time on sick leave and had to take full advantage of benefits available.
- Lack of signposting to help and support.

Optimal AD management pathway

This management pathway has been established with a best practice approach and is in line with the Covid-19 'Reset' phase context[6].

As part of the NHS service redesign mapped out in the Long Term Plan and also the 'Reset' phase of the Covid-19 crisis, dermatology is a clinical area that has been highlighted as highly suitable for secondary care consultants to operate some clinics within the community setting rather than hospital. Community-based SDNs are a vital part of this service and have the opportunity to spend time with patients like Shanice over the course of several appointments to help them gain a deeper understanding of their condition and learn how to self-manage.

At Shanice's first visit the GP recognised the severity of her skin condition and prescribed her initial treatment of:

- 0.1% mometasone furoate cream (100g tube)
- Emollient ointment for daytime
- Emollient ointment for night-time

In addition, the GP immediately referred her to a GPwER colleague for an assessment and a parallel referral to the SDN who now has clinics in the community. Shanice was also given access to the Patient Orientated Eczema Measure (POEM) app to monitor her condition.

Shanice was prescribed a potent topical steroid cream by her GP, with adequate quantities for one-to-two weeks of continuous therapy then twice weekly maintenance, as per NICE technology appraisal guidance TA81[1].

Shanice's GP practice is part of an established Primary Care Network (PCN) with a number of GPwERs. As part of the integrated service, her GP has received an education session about AD and key signs to look out for, so she gets a rapid referral to a community based GPwER and also the SDN community team.

Rapid access to specialist team

Within two weeks Shanice had seen the GPwER, who confirmed her GP's initial treatment prescription. The Eczema Area and Severity Index (EASI) scoring system forms were completed and also the (POEM) app and Dermatology Life Quality Index (DLQI) to help monitor her disease progression. Together they established the goals for her treatment, which included being able to go swimming again.

During the assessment, the GPwER took into account that erythema looks different in darker skin. It is very important that the effects of AD on darker skin pigmentation are considered in the assessment process.

EASI, DLQI and POEM are dermatology-specific tools for monitoring AD and focus on the patient's experience of the condition. These are key for tracking improvement/worsening of the condition.

In a separate appointment, the SDN talked Shanice through a complete treatment plan, explaining that she should avoid using soap and should use emollient three times a day, including after bathing, which she was advised to do with tepid water. The SDN explained how to use finger-tip units for measuring the amount of topical steroid to use and told Shanice to use topical mometasone cream nightly for a month to obtain maximum benefit.

A month later Shanice had another SDN appointment to review her progress. They discussed how to use the mometasone cream routinely and how she should adjust the amount and frequency to deal with flare-ups and alongside her emollient. Her SDN also gave her information about an intensive pulse/weekend therapy plan[7].

Shanice's treatment plan involved a clear discussion with the SDN about behavioural issues: coping with eczema, and lifestyle changes that might help, including keeping cool and wearing natural fibre clothes. She was given education and training support to enable her to manage her AD, with knowledge of how/who to access should symptoms flare-up again in future. Patient choice with regard to emollients is important and the SDN explained the different emollient options available, as per guidelines, and recommended transitioning to greasier emollients during flare-ups.

Condition worsens

Shanice's AD didn't respond to the initial treatment with topical corticosteroids and emollients and was continuing to spread. At a follow-up video call appointment, the GPwER reviewed her treatment. The POEM, EASI and DLQI scores showed her condition was getting worse and she was prescribed treatment with a very potent topical steroid, clobetasol. Alongside this she was prescribed an immunomodulator (0.1% tacrolimus) to use on her face and flexures every day until resolved, which was put into her treatment plan.

After about a month on clobetasol, and with three months' tacrolimus treatment, the scoring systems showed that the AD was not improving and in fact had slowly got worse. The school OFSTED inspection was looming, and Shanice's skin started to flare-up, so she arranged a patient-initiated follow-up (PIFU) with her SDN who made a rapid access referral to a consultant dermatologist who runs clinics in the community.

There is a shared care protocol in place between the hospital trust and the GPwER service, allowing the GPwER to prescribe certain medicines in the community. The GPwER had an 'advice and guidance' telephone call with the consultant dermatologist to discuss Shanice's case. It is therefore very clear to Shanice, and everyone involved in her care, what is the treatment plan and point of contact. A dermatology co-ordinator position is in place within the PCN.

Rapid access referral

Shanice's initial face-to-face review with the dermatologist was focused on assessing her symptoms. They agreed to stop the tacrolimus and discussed UVB phototherapy as an option; however, she didn't think she could afford the time commitment involved for this treatment. Instead she underwent full blood tests and a liver scan ahead of beginning a course of oral immunosuppressant, methotrexate. In a consistent approach, the dermatologist maintained the use of EASI/POEMs for tracking her disease progression and monitoring and Shanice knew what the indicators were for her to communicate with the team.

While she was on methotrexate treatment, she needed to go into her GP surgery every other week for blood tests until she was stable. The practice offered evening and weekend blood clinics, which considerably reduced the stress of accommodating appointments around her work schedule.

Shanice's referral into secondary care dermatology in is an example of patient-initiated follow-up (PIFU), which gives patients greater control over their follow-up hospital care by allowing patients to arrange a follow-up as and when needed rather than at routine intervals. This was expedited via virtual care technology, so she was seen very quickly via rapid access referral. Secondary care clinics that operate in the community are more accessible to patients and avoid the need to travel to hospital to see a consultant. Many also offer telephone consult options for follow-up appointments.

With the support of the community SDN, she remained on methotrexate treatment under the shared care protocol for six months in the run up to the Ofsted review. Her skin was marginally better, but she was not achieving her treatment goals to be back at her swimming club. So, she requested a patient-initiated follow-up (PIFU) with the consultant dermatologist to discuss her options. The dermatologist prescribed a biologic treatment. There is no need for blood monitoring with this treatment, but Shanice saw the SDN to learn how to self-inject at home.

After three months on biologic treatment, and two years since she originally sought help from her GP, Shanice was making good progress and her AD symptoms were improving. She was able to get back to swimming, which was a huge step forward for her and a key treatment goal. Over the following 18 months she saw the GPwER twice, via patient-initiated follow-up (PIFU), who was delighted to see the improvement in her skin. Feeling more relaxed, she and Steve went away on holiday where they got engaged. She is thrilled about the upcoming wedding and how good her skin is looking.

A dedicated education programme was in place to support Shanice with learning to self-inject at home. A direct/rapid response service in community dermatology was in place to provide assistance with concerns/queries – with managing 'flare-ups' and mental health wellbeing. In the optimal scenario Shanice did not require psychological support.

Key themes

- Integration of the dermatology pathway into a true integrated service between GPs, GPwERs in the community based within an established Primary Care Network and secondary care dermatologists allows for holistic assessment and seamless transfer between primary care and secondary care.
- Rapid access review permits earlier discontinuation of ineffective treatment and introduction of alternatives to alleviate symptoms.
- Use of POEM allows continued monitoring of disease/progression and reinforces 'patient focus' and outcomes.
- Need to focus on GPs prescribing adequate quantities of the correct-strength topical steroid.
- The introduction of patient-initiated follow-up (PIFU) allows patients to be in control of their condition and allows them to seek assistance when it is needed and not by arbitrary three-monthly cycle[8].

Learning points

For clinicians and GPs

- Prescribe adequate quantities of correct-strength topical steroid from the start in primary care with correct instruction on the amount to use. Please explain to the patient that the pack information may not be applicable in these circumstances. Also discuss the options of emollient and agree what to try but ensure that the patient understands that there are many options if the initial ones are not suitable.
- Educate patients to support them to manage their AD, with knowledge of how/who to access should symptoms flare-up again in future.
- Understand the impact severe AD can have on patients and respond accordingly.
- Use of the POEM scoring system within primary care is essential to monitor disease progression and to reinforce 'patient focus' and outcomes within care.
- Be aware that rapid access review permits earlier discontinuation of ineffective treatment and introduction of alternatives to alleviate symptoms.
- All patients with a chronic skin condition should receive an annual medicines review, which includes an assessment of the psychological impact of the condition, via a validated psychological health-screening questionnaire.

For service providers and healthcare professionals

- Shared care protocols between hospital trusts and GPwER services expedite prescription of certain medicines in the community.
- Patient-initiated follow-up (PIFU) gives patients greater control over their follow-up hospital care and allows them to be seen very quickly via rapid access referral.
- Virtual care technology and telephone consult options make specialist advice more accessible to patients.
- Secondary care clinics that operate in the community are more accessible to patients.
- A dedicated education programme for patients to learn to self-inject at home saves on clinic costs.
- Direct/rapid response services in community dermatology using video technology can provide patients with assistance with concerns/queries about managing 'flare-ups' and mental health wellbeing.
- All regions should have at least one dedicated psychodermatology service or pathway with a trained specialist psychodermatologist, dedicated liaison psychiatrist input, a multidisciplinary team approach and stepped-care psychological support (see appendix 1).

For commissioners and finance managers

- Integration of the dermatology pathway into a true integrated service between GPs, GPwERs in the community based within an established Primary Care Network and secondary care dermatologists allows seamless transfer between primary care and secondary care.
- Commissioners need to understand that psychodermatology clinics are cost effective to run when compared to managing skin patients with psychological distress in more generalist healthcare settings.
- Each new Integrated Care System must review its regional service provision in dermatology and psychodermatology.
- Comprehensive multidisciplinary psychodermatology teams providing care to patients with all facets of psychodermatology must be commissioned across the country in proportion to patient populations, and there must be comprehensive psychodermatology services available at least regionally across the UK.

For patients

- Use the POEM app to monitor your condition and allow staff to keep track of your response to therapy.
- Setting treatment goals is key – discuss with your Healthcare Professional (HCP) what you would like to be able to do and achieve.
- Discuss with your health professional how to manage your AD and how/who to access should symptoms flare-up again in future.

The ‘bills’ and how they compare

For the financial evaluation a detailed analysis was performed by mapping the lifecycle of the pathway. Through this process it is possible to identify the cost drivers that would be incurred in primary and hospital care using, where appropriate, the NHS National Tariff Payment System[9], NHS reference costs[10] and MIMS[11].

We have included the wider social and economic impacts in the story but not the cost outside of the health remit or the social, emotional, physical and financial costs to the patient and family members. In an integrated care service and with integrated budgets there is a need to understand the overall cost of the total patient journey.

It is important to keep in mind that while some patients like Shanice require stepped-up therapy, the majority are able to manage their condition within the optimal care pathway without the need to progress seeing a consultant dermatologist. With optimal care involving proactive, well-informed intervention and by spending time with an SDN, most patients are able to keep their AD under control with topical steroid and emollient therapy within primary care, without the need for systemic methotrexate treatment and biologic therapy.

In this case the optimal pathway costs £4,359 – versus £7,299 for Shanice’s suboptimal care in which her condition is not well controlled in primary care – a 40% saving of almost £3,000 (see Figure 1). This highlights the value of investment in SDN services, and in fact, patients who get this specialist input during childhood and adolescence are much more like to be able to successfully manage their condition as they get older.

Figure 1. Financial costs – detailed analysis for patient managed in primary care without methotrexate and biologic treatment in the optimal pathway

Activity	Suboptimal	Optimal
Medical consultant review, clinic	£1,260	£504
Medical review, GP practice	£170	£340
Investigation, bloods	£228	£145
Prescription, hydrocortisone 1% steroid cream	£19	£0
Prescription, emollient 1	£1,305	£1,305
Prescription, emollient 2	£473	£1,120
Prescription, clobetasone cream	£154	£0
Prescription, antihistamines	£7	£0
Prescription, betamethasone	£53	£0
Prescription, flucloxacillin 250 mg	£6	£0
Prescription, venlafaxine 75 mg	£122	£0
Prescription, prednisolone	£150	£0
Investigation, fibroscan	£125	£125
Prescription, methotrexate	£106	£0
Prescription, ciclosporin	£265	£0
Prescription, mometasone furoate	£0	£49
Nurse / allied health professional review, specialist community	£108	£270
Prescription, clobetasol	£202	£385
Prescription, dupilumab	£1,897	£0
Prescription, tacrolimus	£429	£117
Mental health specialist nurse	£220	£0
Total	**£7,299**	**£4,359**

For Shanice, whose condition did require biologic therapy, Figure 2 shows a summary of the costs for the suboptimal care pathway (£7,299) and the optimal care pathway (£29,130). See Figure 3 for a breakdown of individual costs.

Shanice's stepped-up optimal healthcare journey which starts biologic therapy much sooner costs over £21,500 more; the biologic has been provided to the NHS at a confidential Patient Access Scheme (PAS) discount so the prices quoted are NHS list price, not the price paid through the PAS scheme. However, taking into account the broader social costs of her two periods of long-term sick leave, which total seven months, she is likely to receive benefits in the region of £12,000[12]. Therefore, the true cost to the taxpayer of suboptimal care is at least £19,000. Although the optimal care pathway is more costly, the clinical outcome for Shanice is much better and her quality of life and ability to work are significantly far improved.

Figure 2. Full financial summary of NHS costs

Cost driver activities	Suboptimal	Optimal
Acute care	£3,387	£25,399
Community care	£220	£0
Primary care	£3,691	£3,730
Total	**£7,299**	**£29,130**
Sick leave benefits	£12,000+	

Figure 3. Financial costs – detailed analysis

Please see appendix 2 for the detailed methodology for the calculations

Activity	Suboptimal	Optimal
Medical consultant review, clinic	£1,260	£504
Medical review, GP practice	£170	£340
Investigation, bloods	£228	£145
Prescription, hydrocortisone 1% steroid cream	£19	£0
Prescription, emollient 1	£1,305	£1,305
Prescription, emollient 2	£473	£1,120
Prescription, clobetasone cream	£154	£0
Prescription, antihistamines	£7	£0
Prescription, betamethasone	£53	£0
Prescription, flucloxacillin 250 mg	£6	£0
Prescription, venlafaxine 75 mg	£122	£0
Prescription, prednisolone	£150	£0
Investigation, fibroscan	£125	£125
Prescription, methotrexate	£106	£106
Prescription, ciclosporin	£265	£0
Prescription, mometasone furoate	£0	£49
Nurse / allied health professional review, specialist community	£108	£270
Prescription, clobetasol	£202	£385
Prescription, dupilumab	£1,897	£24,665
Prescription, tacrolimus	£429	£117
Mental health specialist nurse	£220	£0
Total	**£7,299**	**£29,130**

The optimal and suboptimal costings both stop at the same point for a clear comparison; the financial costs are rounded to the nearest pound, are indicative and calculated on a cost per patient basis. Local decisions to transform care pathways would need to take a population view of costs and improvement.

Financial calculation notes

- As noted above, the financial calculation presented here represents an indicative level of efficiency potential of the case only. Firstly, as the case is an example pathway, differential pathways for other patients may increase or reduce the potential benefit. Secondly, the potential release of resource associated with implementing the optimal pathway across a larger cohort of patients will be subject to overarching contractual arrangement in place between providers and commissioners, which may differ across the country. For example, some of the financial benefits identified in the case, may not be fully realisable where the elements of the pathway are subject to block contracts or risk/gain shares in place between contracting parties. Equally, the release of resource may only be realised should there be a critical mass from within the targeted patient population.

- It should also be noted that the financial calculation is considered from a commissioner perspective. The impact on income and costs (including capacity management) for provider organisations will require consideration in the implementation of the optimal pathway.

- Each healthcare organisation and system will need to assess the potential for realising the financial benefits identified in the case.

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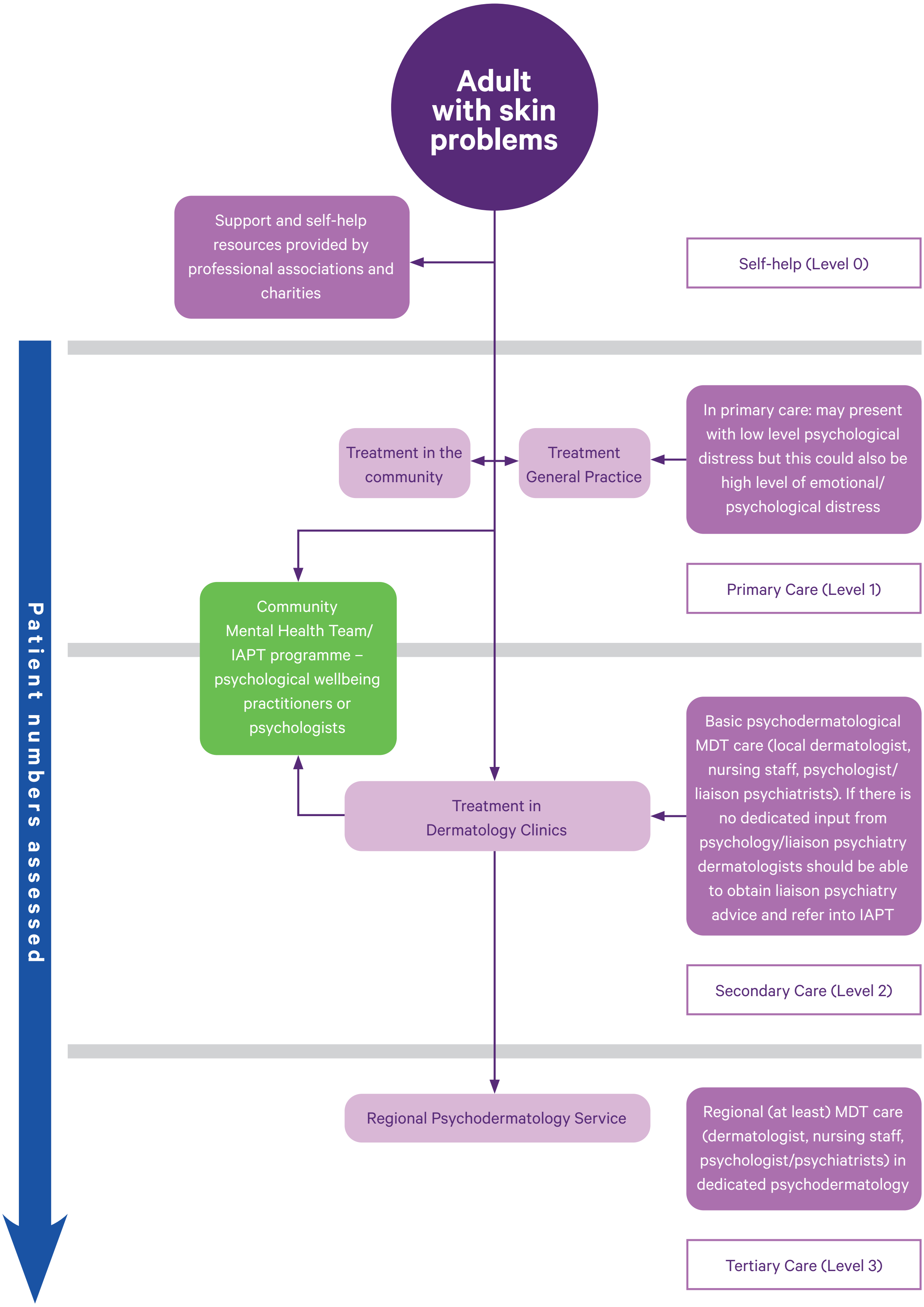
Appendix 1

The APPG on Skin[2] recommends that all regions should have at least one dedicated psychodermatology service or pathway with a trained specialist psychodermatologist, dedicated liaison psychiatrist input, a multidisciplinary team approach and stepped-care psychological support. The stepped-care model is illustrated in figure 4 below.

Examples of psychodermatology techniques and resources that might be appropriate for patients in a stepped provision of support includes: peer support, either online via patient advocacy and other communities or in person; mindfulness, aimed at reducing stress; habit reversal, to reduce or break harmful repetitive behaviours such as picking or scratching; and cognitive behavioural therapy (CBT), to alter behaviours, thoughts and feelings, for example reducing avoidance behaviour.

Figure 4. Stepped provision of support to adult patients with a skin condition and psychological or psychiatric distress



Financial Analysis Methodology:

General Methodology:

This style of analysis is using suboptimal and optimal case studies of a fictitious, but realistic, patient to compared and contrast. The intention is to highlight potential improvement opportunities.

The purpose is to raise awareness through supporting local health economies – including clinical, commissioning and finance colleagues – to think strategically about designing optimal care for people.

This scenario has been developed with experts in this specialist field and includes prompts for commissioners to consider when evaluating their local health economy requirements.

For the financial evaluation, we performed a detailed analysis through mapping the lifecycle of the pathways (from 1st Jan year 1 through to the 6th July year 3 – so just over 3.5 years). Through this process we were able to identify the cost drivers and this appendix details the medicine costs in more detail.

The financial costs are indicative and calculated on a cost per patient basis. NB local decisions to transform care pathways would need to take a population view of costs and improvement (differential pathways for other patients may increase or reduce the potential benefits).

The potential releasing of resource associated with implementing the optimal pathway across a larger cohort of patients will be subject to an over-arching contractual arrangement between providers and commissioners, which may differ across the country. Each healthcare organisation and system will need to assess the potential for realising the financial benefits identified within the case.

Medicine Methodology:

The expert clinicians in this analysis were asked to consider a "typical" patient and within each scenario consider "typical" treatments. So, the medications listed below were chosen using this methodology.

Care needs to be taken when reviewing the volumes in each scenario. Note, although both scenarios cover the same period (just over 3.5 years) some medicines start and stop at different times. Also, depending upon the nature of the medication some might be applied daily, weekly or monthly.

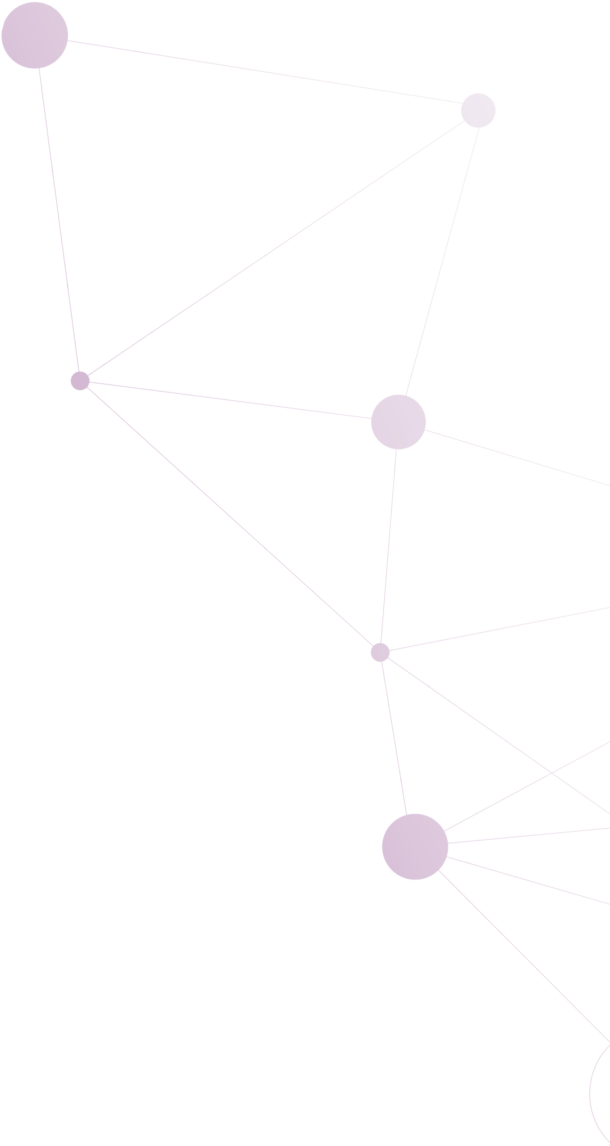
Care also needs to be taken when reviewing Average Unit Costs too. Some represent daily cost and others weekly or monthly. Averages are also applied to take into account different pack sizes and titration effects.

Note – Dispensing fees have been added and are included within these costs.

The reference source for all these medication costs was the Monthly Index of Medical Specialities (MIMS).
Last assessed October 2020

Available at: www.mims.co.uk

	Suboptimal Scenario			Optimal Scenario		
	Volumes	Average Unit Cost (in £'s)	Scenario Total Cost (in £'s)	Volumes	Average Unit Cost (in £'s)	Scenario Total Cost (in £'s)
Hydrocortisone 1% steriod cream	4	4.79	19	-	-	-
Cetraben 500g	180	7.25	1,305	180	7.25	1,305
Hydromol 500g ointment	76	6.22	473	180	6.22	1,120
Eumovate (clobetsone) ointment	23	6.70	154	-	-	-
Antihistamines	1	7.26	7	-	-	-
Betnovate	12	4.41	53	-	-	-
Flucloxacillin 250mg	2	3.13	6	-	-	-
Venlafaxine 75mg	26	4.71	122	-	-	-
Prednisolone	3	50.12	150	-	-	-
Methotrexate	6	17.50	105	6	17.50	105
Ciclosporin	3	88.26	265	-	-	-
Elocon mometasone furoate cream	0	-	-	3	16.36	49
Clobetasol	22	9.16	202	42	9.16	385
Dupilumab	3	632.33	1,897	38	649.08	24,665
Tacrolimus	11	39.02	429	3	39.02	117



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