

The roundabout of remission: integrated personalised care in tertiary prevention

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Article points

1. Patients with a history of diabetic foot disease need constant ongoing care in order to prevent re-ulceration. The term 'remission' is used to describe this patient cohort
2. The care provided to patients in remission can involve a large number of different clinical services across acute and community networks, depending on their individual need. Such care is often delivered by a large number of health and social care professionals.
3. Bespoke packages of multidisciplinary care designed around the patient's individual needs has the potential to overcome the challenges of managing this patient cohort

Key words

- Diabetic foot
- Integrated Personalised Care
- Prevention.
- Remission

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Patients with a history of diabetic foot disease need constant ongoing care in order to prevent re-ulceration. The term 'remission' is used to describe this patient cohort. Patients may need to access a variety of different services, provided by different healthcare professionals in different settings. This can cause confusion to patients and carers while navigating the health services. Through creating a bespoke package of remission care facilitated by a named member of the healthcare team, this confusion may be reduced. The patient in remission is a challenge for all members of the multidisciplinary foot team. Through person-centred integration of healthcare services the patient should be able to navigate the roundabout of remission, thereby reducing the rate of re-ulceration.

The prevalence of diabetic foot ulceration (DFU) varies from country to country and region to region with rates of up to 10% reported in some areas (Mairghani et al, 2017). DFU is often complicated by infection and concomitant peripheral arterial disease (PAD), which is in turn associated with an increased rate of amputation. Patients who present with a new DFU have a 5-year survival rate of 50–60% (Morbach et al, 2012). This survival rate decreases once an amputation is performed, with survival rates following amputation of between 20% and 50% at 3 years (Thorod et al, 2016). Data from our centre showed that mortality after major amputation at 5 years was 83% (Gillen and Wilson, 2012).

A significant concern for clinicians is the number of re-ulcerations and re-amputation following the initial episode (Mader et al 2019). Our data show that 45% of people who underwent initial minor amputation needed further amputation on the same foot within 4 years (Whelan et al, 2015).

The use of the term 'remission' to describe such patients has entered into the vernacular of diabetic foot disease (Armstrong and Mills, 2013). A foot

'in remission' applies to patients who have had a previous DFU, amputation or a consolidated Charcot (Armstrong and Mills, 2013). This group of patients necessitate indefinite care from the multidisciplinary foot team (MDFT).

In order for optimal outcomes to be achieved in DFU, care should be delivered within a MDFT. Such team-based care has been shown to improve outcomes for patients who are managed in this manner (Buggy and Moore, 2017). The International Working Group on the Diabetic Foot (IWGDF) advocates for the use of such MDFTs despite a lack of high-quality evidence. Different authors highlight the effectiveness of MDFTs, although globally the structure of such teams is heterogenous, which means outcomes are difficult to compare (Buggy and Moore, 2017; Schaper et al, 2020).

Such MDFTs are often resource intensive per consultation and are, as such, a 'hard sell' for healthcare management (McGill et al, 2017). This has been the authors' experience meaning that the models reported in the literature were not suitable for their current practice setting.

Care of the patient in remission consists of interventions aiming to prevent ulcer recurrence. These interventions will be tailored to the individual although they should include: treatment of non-ulcerative pathologies, footwear with proven pressure-relieving properties, management of systemic comorbidity risk, assessment and treatment of PAD and correction of structural foot deformities (Aragon-Sanchez and Mani, 2014; Bus et al, 2020). It can be argued that such preventative ongoing care is as important as the management of ulceration when it occurs (Bus and van Netten, 2016). Preventative care such as this lacks a strong evidence base as it is hard to quantify and, as such, data supporting its inclusion is difficult. It has been estimated that 10 times more is spent on the management of ulceration than on its prevention (Bus and van Netten, 2016).

We have noted that since the adoption of the term 'remission', it has facilitated greater understanding of this condition for patients living with diabetic foot disease.

One of the challenges which has been highlighted in the management of tertiary prevention is that of navigating health services. This is compounded when the patient falls between different centres of care. Dependent on the reimbursement system not all services may be available to all patients. There may also be regional variances between service provisions (Paisley et al 2018).

Integrated care services facilitate an easier and more holistic journey through the healthcare system. They have been shown to be effective in providing continuing care in many specialities (Araujo de Carvalho et al, 2017). This process of integrated care in wound management is a challenging one with a variety of services, professionals and physical locations required (Moore et al 2014). The authors have likened this pragmatic approach to service delivery as a roundabout of care within remission. Drivers will understand that when they enter an unfamiliar roundabout, it is quite easy to take a wrong exit, proceed in the wrong direction or even become trapped in a continuous loop. This can be further compounded by the amount of traffic on the road, the number of exits from the roundabout and the information at hand regarding the route that should be taken. However, as the driver becomes familiar with using a particular roundabout, it is easier to understand which direction they should be heading.

In many ways, healthcare systems are no different to roundabouts. For those who work in the healthcare system, the complexities and uniqueness of the system is understood very well but patients and their carers may easily become lost on the roundabout.

It is the role of the individual members of the MDFT to guide the patient/carer journey on this roundabout. If the patient is considered the driver on the roundabout, MDFT members are like the satellite navigation system, ensuring that they are taking the correct exit to receive care in the appropriate setting at the right time.

Figure 1 is an example of a roundabout of remission. The model incorporates a large roundabout with several mini-roundabouts extending from the main roundabout. These mini-roundabouts represent episodes of specialist care for patients in remission who may need to avail of them at any time. Each service will need to develop their own roundabout depending on the facilities and services available. The patient journey through the roundabout will be unique to their experience and clinical need.

Many healthcare professionals think of the MDFT as a hospital-based team providing acute care for ulceration with inpatient intervention. While this may have been correct in the past, some patients may never need an acute episode of hospital-based care. The enhancement of services previously delivered by hospitals on an inpatient basis, such as intravenous antibiotic therapy or surgery may now be offered to patients on an outpatient basis. In addition, the care provided subsequent to the acute episode may be delivered in any setting provided the patient receives the correct care delivered by members of the MDFT (Simmons et al 2015). This hub and spoke model has proven to be very successful in specialised vascular services (Shahidi et al, 2019). All continued care is part of the MDFT, which needs to be embraced by all healthcare professionals and patients. Services and healthcare workers who have not been described in existing MDFT models may be included here dependent on the needs of the patient and skills of the team (Simmons et al, 2015). There are many routes a patient can take through the healthcare system and although each journey is unique similarities may exist. Once the individual enters this remission category under the care of the MDFT, they will permanently remain in 'the roundabout of remission' — a closed circuit of continued lifelong care, which is designed

to maximise ulcer-free, activity rich and hospital-free days facilitated by bespoke packages of individual care based on individual needs (Boghossian et al, 2013; Khan et al, 2018).

Living with a chronic disease places a significant burden on an individual's quality of life (Megari, 2013). Patients may need to attend consultations with a variety of different healthcare professionals on a regular basis in a variety of settings. Over a 6-month period across the authors' diabetic foot clinic patients had an average of an appointment every 2 weeks (Wilson et al, 2019). This places a significant burden on an individual especially when they have to travel for such appointments. Any care which can be delivered closer to the patient's home will lessen this burden. Care provided in the primary care setting can ease the congestion often seen in the acute setting and allow patients to access other services in one location, which may not be provided in the outpatient clinic. Such services are equally important to those provided in other healthcare settings and can facilitate ease of transition between different members of the team (Baker, 2006). From the MDFT point of view, this spread of care ensures that patients can easily access diabetic foot care in either setting without any access barriers to treatment or waiting times.

The roundabout of remission is continuous irrespective of the care setting so patients can frequently travel between settings depending on their current clinical need. Wagner (1999) showed that utilising primary care clinics for the management of chronic disease delivered improved outcomes and reduced costs, there is no stop or start in their treatment and patients can have confidence knowing that they will not be discharged from the service.

Within the authors' current practice setting, they have initiated a service where patients accessing a new package of care are accompanied by an existing trusted member of their professional team on the first episode, in order to assist with the process of referral, as well as with the exchange of information. This MDT with a 'navigator' as described by Moore et al (2014) facilitates integrated care irrespective of the site or speciality delivering care. This process has been greatly enhanced by a fully electronic health record (EHR). This has enabled the live time sharing of the inpatient journey and facilitates better communication between team members irrespective of location of care (Lang and Melia, 2009).

As patients live longer with a greater number of comorbidities the membership of the MDFT will need to be individualised (Headrick et al, 1998). When a large number of healthcare professionals are involved in the delivery of care to an individual, it is easy for breakdowns in communication to occur. These have the potential to cause misunderstandings and lead to a less than optimal delivery of care for patients (Baker, 2006). Through the inclusion of the navigator, as well as a team meeting to discuss clinical challenges we have observed better communication and co-ordination of services. Each service has their own specific role to deliver and it is important when the individual's role has been fulfilled it is passed on to others. Through the use of the navigator, this is facilitated. MDFT members need to understand that the patient views everyone as the same, whether they work together in a team or not (McPherson and Moss, 2001). Through the facilitation of an integrated pathway of care, patients can be reassured that they are not losing access to any specialist service rather than each acute service is inextricably linked. This can be facilitated by the patient knowing that the different members of the MDFT communicate effectively and know each other. The authors has found the use of first names assists this process, building personal relationships across specialities within the MDFT. A roundabout is supposed to ease congestion rather than add to it and it was proposed that by streamlining the processes and services involved in remission care, patients and their families can use their navigator to reduce the number of appointments and specialist services they are accessing.

The patient in remission is a clinical challenge for all members of the MDFT, indeed for all members of the wider healthcare teams providing care for them. Through the adoption of effective integrated use of all appropriate healthcare services, the patient should be able to navigate the roundabout of remission with ease, thereby enabling their number of ulcer-free, activity rich and hospital-free days to be increased (Boghossian et al, 2013). ■

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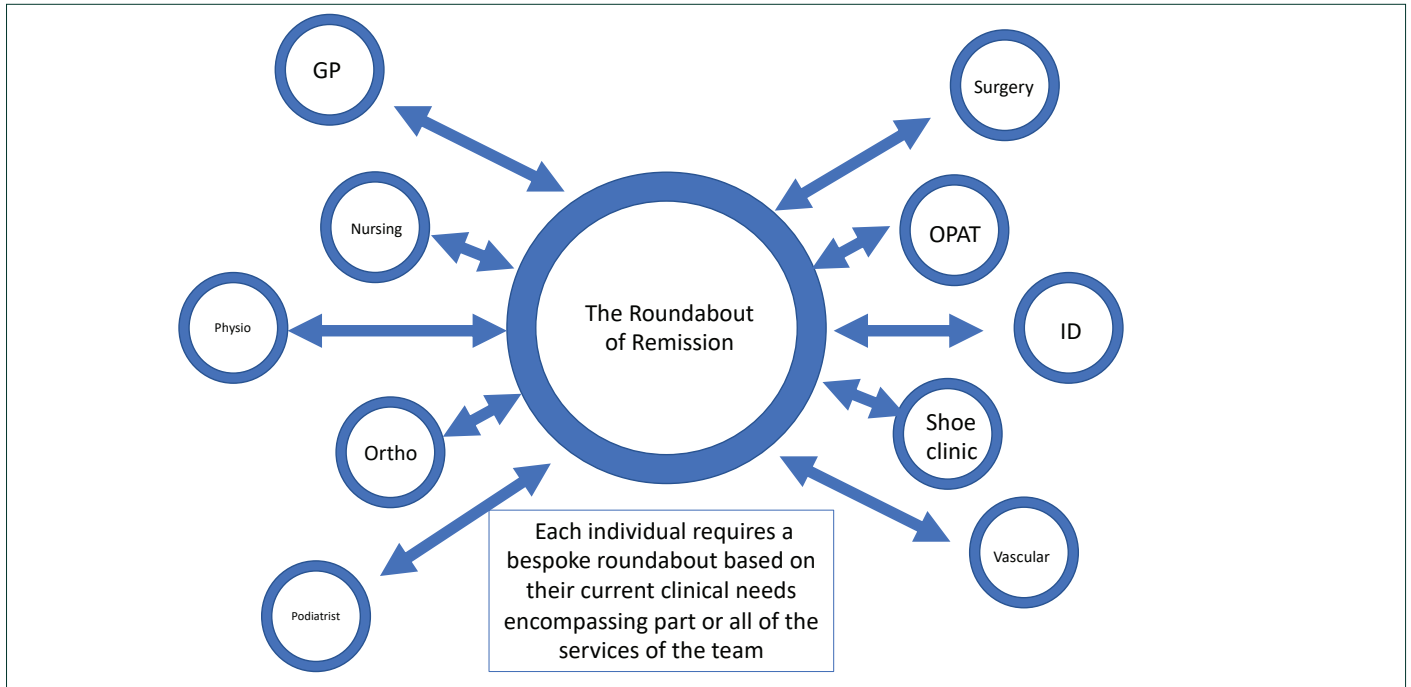


Figure 1. An example of a roundabout of remission.

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