Interim Evaluation of the NWCSP First Tranche Implementation Sites and the NWCSP for Lower Limb Wounds.

Evaluation Report - Highlights

August 2022

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Background and context

About the National Wound Care Strategy Programme (NWCSP)

The National Wound Care Strategy Programme (NWCSP) was launched in September 2018, building on several previous initiatives which addressed the issue of sub-optimal wound care. Evidence points to marked unwarranted variation in UK wound care services, underuse of evidence-based practices and overuse of ineffective practices.

NWCSP offers major opportunities to improve the quality of wound care through innovative solutions that will improve wound healing, prevent harm, increase productivity of staff, and produce financial savings in line with the requirements of the NHS Long Term Plan.

NWCSP recommends taking a transformative approach to improving care by:

1. Changing the model of care provision to allow more people with lower limb wounds to receive care from dedicated lower limb services staffed by clinicians with appropriate time, knowledge and skills and where there are established referral routes to escalate care as needed.
    - Increase early diagnosis and treatment
    - Deliver care in a clinic setting, where possible
    - Encourage supported self-care, where possible
    - Referral routes for escalation of care as appropriate.
2. Increasing the delivery of evidence-based care for lower limb wounds *.
3. Improving data and information to support clinical decision making and enable quality improvement to be monitored.
    - Establishment of national metrics for lower limb wounds
    - Implementation of point of care, NHS compliant digital technology.

NB1: The definition of *lower limb wounds is a wound below the knee that is not healing as you would normally expect

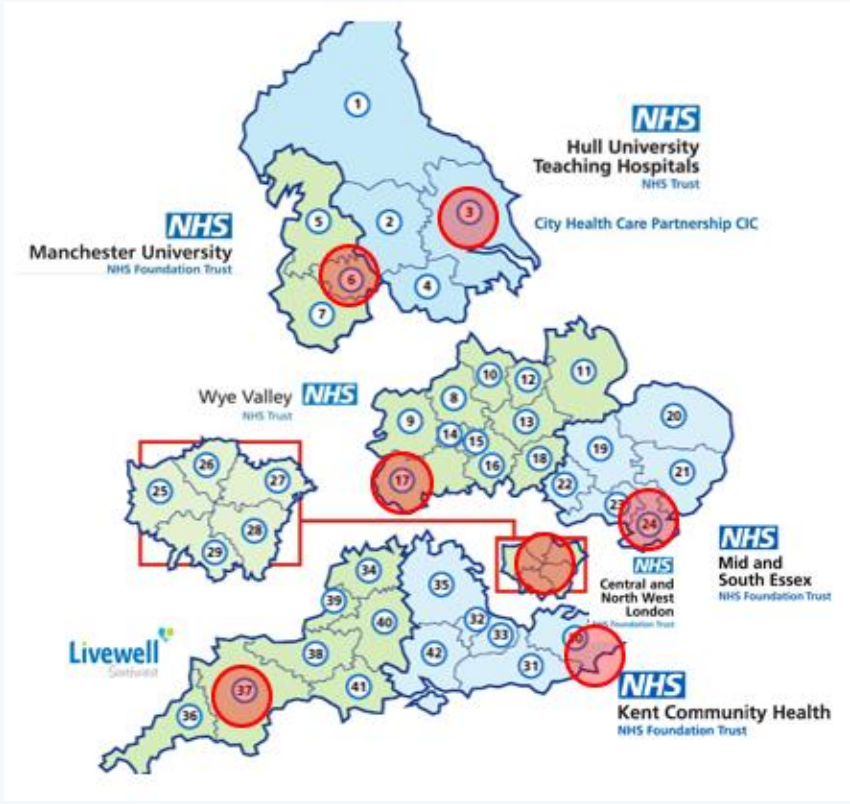

Figure 1: FImps sites

About this interim evaluation

The NWCSP Lower Limb Recommendations for Clinical Care are now being implemented in seven First Tranche Implementation Sites (FImpS).

This interim evaluation was conducted by a team from PA Consulting, over a period of six weeks between May and July 2022. The specific requirements of this evaluation were to:

- Conduct a quantitative evaluation of the Implementation Case using data from the FImpS, including testing and amending key assumptions;
- In parallel, undertake a qualitative evaluation of how the NWCSP recommendations are being rolled out across the FImpS sites; and
- To identify lessons learned to improve the implementation of the NWCSP recommendations, ahead of the completion of the pilots – and final evaluation – in 2023.

The interim evaluation is being carried out now so that its findings can inform changes to the Programme ahead of the final evaluation (December 2023), as well as feeding into the design of that evaluation.

Identifying key lessons from implementation now will also be valuable as lower limb wound care has been identified as an AHSN Programme priority for the coming year. This may mean that many more sites (in all areas of the country) will begin work in the near future.

In scope for this evaluation	Out of scope for this evaluation
• Quantitative evaluation based on the available data from the FImp sites. Analysis of FImpS data to test, evaluate and amend key assumptions in the Implementation Case modelling • Analysis of outcomes using FImpS data versus that predicted by the model (to the extent that this is supported by available data) • Document review – key documents from the National Programme and the FImp sites. • Structured interviews with NWCSP national team representatives and key staff from FImpS • Visit at the FImpS • Thematic analysis of findings • Lessons learned from the sites, and recommendations to inform further rollout.	• Inconsistencies in the range of data and quality of data. • Creation or use of datasets other than those used at mobilisation. • Structural changes or rebuilding of the Implementation Case model. • Material changes to the clinical model. • Refresh of the Implementation Case document • External clinical review / quality review validation • Implementation planning (including costings) for the review's recommendations

Stakeholders and Engagement

As part of the review process, members of the evaluation team spoke to both NWCSP central team and clinical and non-clinical staff across all seven FImp sites. Engagement activities included:

- Semi-structured one to one interviews with representatives of the seven sites, as well as key members of the NWCSP central team.
- In person visits to five sites. These included London, Wye Valley, Manchester, Mid-Essex, and Livewell South West (listed opposite)
- MS Teams (online) sessions with two sites - Hull and Kent.
- An online survey including all core team roles (clinical, programme and data, digital and information) from each FImpS. A complete list of survey questions is included at **appendix 1.**

We are grateful to everyone who has given up their time to talk to the evaluation team. These discussions have provided a large amount of rich information and detailed insight which has informed all aspects of the review.

Throughout this process everyone we spoke to has been extremely helpful and – as noted elsewhere in this document – very clearly committed to the programme and the benefits which it provides.

This evaluation included a subset of sites within each FImpS and therefore insights and learnings are based on this subset only, there is variation of the application of NWCSP across sites within FImpS.

Name	Organisation	Role
Simon Wootton	NWCSP National Programme	*Programme Lead*
Rachael Lee		*Clinical Implementation Manager*
Krishna Gohil		*Lower Limb Clinical Lead*
Danielle Fulwood		*Education and Workforce Lead*
Nicky Morton		*Supply and Distribution Lead*
Una Adderley		*Director*
Ann Franklin		*Data, Digital and Information Lead*
Mike Watson		*Data, Digital and Information Programme Manager*
Michael Oliver	Livewell Southwest FImp	*Programme Manager*
Vivienne Turtle-Savage		*DDI Lead*
Theresa Mitchell		*Clinical Lead*
Hannah Blake		*Clinical Lead*
Ariel Goodbourn		*District Nurse Team Manager*
Clinic team at Livewelll		*Team Leader, Tissue Viability Nurses, Band 5 and 6 Nurses, Health Care Assistant.*
Verity Morton	Manchester FT FImp	*Programme Manager*
Alison Lynch		*SRO, Group Chief Nurse*
Naseer Ahmad		*Vascular Surgeon*
Robin Drummond-Hay		*DDI Lead*
Lucy Woodhouse	Wye Valley Trust FImp	*Clinical Lead, Programme Manager*
Alison Baker		*Team Leader, Tissue Viability Nurse*
Jane Morris		*Lower Limb Nurse Specialist*
Bright Chitanda		*DDI Lead*

Name	Organisation	Role
Matthew Read	Central and North West London NHS Foundation Trust FImp	*Programme Manager*
Ann Duhig		*Programme Manager*
Abu Jabbar		*DDI Lead*
Luxmi Dhunmoon		*Clinical Lead*
Michelle Dyer		*Tissue Viability Nurse*
William Sakala		*Chief Nurse*
Louise Baldwin		*Training and Education Lead*
Clinic and community team		*District Nurse, Band 5 & 6 Nurses, Lower Limb Nurse Specialist, Clinic Administrator, Training Lead Nurse.*
Matthew Turner	Mid and South Essex FImp (Maldon Site, St Peters)	*Programme Manager*
Mark Syrett		*DDI Lead*
Andrea McDonald		*Clinical Lead, Team Leader*
Clinic Team at Maldon Site		*Band 5 & 6 Nurses, Lower Limb Nurse Specialist, Health Care Assistants*
Karen Dadson	Kent Community Health NHSFT	*Programme Manager*
Sarah Phillips		*SRO, Medical Director*
Eldon MacArthur		*DDI Lead*
Harshita Singh		*DDI Lead*
Claire Acton		*Clinical Lead*
Vincent Siaw-Sakyi		*Clinical Lead*
Angela Hind	Hull City Health Care Partnership CIC	*Programme Manager*
Julie Powdrell		*PMO Support*
Toni Goodman		*Assistant Director, Community*
Rich Maddison		*Industry Supplier*
MDT		*TVNs, Vascular Nurse, Podiatrist*
TVN Huddle		*TVNs, Clinics & East Riding Community*
Mike Cosgrove		*DDI Lead*
Sophie Bielby		*DDI support*

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Summary of conclusions and recommendations

Summary of Conclusions and Recommendations

Clinical and Service Delivery (1/2)

Conclusion	Recommendation	
Initial analysis suggests that the increase in healing rates, resulting from implementation of the new model, are greater than modelled in the business case (71% vs 61%), and compared to base the rates are 24% higher (All lower limb). The healing rate translates into further improvements in the Benefit:Cost Ratio of the service. Currently this is 27.5 (vs 9.8 in the business case). BCR >4 is considered to be very high value for money, as per HMT classification. Staff across all sites are highly convinced of the value of the model and provided a number of examples of how it is benefitting their patients. ***It is important to note that data to substantiate benefits in objective, quantitative terms is only just beginning to emerge, and that these conclusions are therefore fragile (see conclusions relating to data, digital and information for further detail).***	C1	Continue to build out the dedicated lower limb wound care service interventions including education for health and care practitioners, access to materials and equipment for appropriate therapy and materials to support self management.
	C2	Improve data gathering and control at site level to reduce the strategic risk of not being able to evidence benefits for future commissioners (link to recommendations D2 and D3),
	C3	Explore the potential benefits from linking to other services (well being coaching services, leg cafe, age concern). Reinforce the “system response to healing”.
	C4	FImps should establish direct links with each other and build relationships and networks for learning. Consider opportunities for learning beyond the lead roles (clinical, programme, DDI).
There are difficulties in identifying people who would benefit from the service, including both ‘at risk populations’ who would benefit from preventative measures and people known to practices who are not currently being referred.	C5	There is opportunity to further increase the impact of the lower limb service by helping referrers identify people earlier. This could be achieved through raising awareness and further educating practice nurses, GPs and other referrers as to who would benefit from the service. There is also potential to further optimise the HCA role in identifying people in practices and providing support to facilitate an onward referral.
Strict inclusion and exclusion criteria mean that patients who might otherwise benefit from the service – are unable to access it.	C6	a) Improve links to Lymphoedema services. Consider if the model could be extended to cover patients with Lymphoedema where that service does not exist. Discussions suggest significant levels of unmet need. b) Improve links to podiatry and vascular services. Consider how the model could be extended to cover patients with foot ulceration without diabetes where that service does not exist. Discussions suggest significant levels of unmet need.

Summary of Conclusions and Recommendations

Clinical and Service Delivery (2/2)

Conclusion	Recommendation	
The e-referral process into the service is problematic. Clinicians overcome the difficulties with verbal communication and other 'off system' workarounds.	C7	Embed a simple referral template in the electronic patient record and make it easy for staff to complete. Consider attaching a digital wound image as clinical staff say this is invaluable.
	C8	Raise awareness and further educate referrers on how to refer into the lower limb service whilst making it as easy as possible for them to do so.
The model has contributed to some standardisation of practice – both within and across sites. However, there is continued variation in practice across all elements of the pathway.	C9	Continue to standardise practices across the clinical pathway, building on successes and good practice already achieved. This could be achieved through establishing direct links between FImps to facilitate the sharing of best practice.
	C10	The National Programme should develop a tool (handbook, implementation guide) to support rollout to other sites (including but not limited to those sponsored by AHSNs). This should be based on the key learning points from the seven sites, including but not limited to the learning points in this review.
Most sites can make a direct referral to vascular services. This link provides direct benefit to both patients (more timely access to specialist services) and staff (reduced time requirement).	C11	Ensure the required information is passed on to vascular services. Precise information to be transferred will need to be locally agreed, based on national recommendations. Sites should work towards ensuring that the receiving vascular service can see the full dataset about the patient (electronic patient record).
	C12	The model suggests all patients with venous and/or arterial disease (not all lower limb wounds) should be referred to vascular services. There is a need to both refine referrals, to ensure they are limited to those who need them, and to inform those who are referred as to the importance of attending the appointment.
FImps don't differentiate between treatment and maintenance phase. This may lead to 'healed' patients not being recognised as such, and so underplays the benefits of the service.	C13	Consider how to help staff differentiate between the treatment phase (focussing on healing) and maintenance phase (focussing on prevention of recurrence) of care. Maintenance and prevention of recurrence could be formalised in new structures such as Well Leg clinics. It is important to distinguish between and record healed cases, at risk patients and recurrence patients. It is important to stress to both staff and patients that a wound is different to an underlying condition for which another service is required.

Summary of Conclusions and Recommendations

Workforce, Education and Training

Conclusion		Recommendation
Having core roles funded by the programme has enabled the service to become more established in all FImp Sites. This has been identified as a critical element of their success.	W1	Consider how FImpS can build on / capitalise on being part of a national programme. This could be by the NSCWP central team facilitating support on sustaining services and enabling FImpS to share their successes with each other.
	W2	Implement the clinical, programme, education and training, and technology roles together – the core roles compliment each other and set the foundation for implementation.
All FImpS highlight competency based education and training for clinical staff as critical to effective wound care. However, many staff – across almost all sites (6/7 sites) - are struggling to complete the training which is on offer.	W3	Consider making education and training part of the overall model – and associated business case - such that 'implementation' is defined as including training as well as the clinical pathways. This should help sites to ensure sufficient capacity for training – including ringfenced time and backfill for staff.
	W4	Use the standardised, freely available, NWCSP/HEE education resources to reduce variation in delivery supplemented by in-house education and training for those aspects that need to remain flexible.
A core part of the education and training requires a senior member to observe the trainee in practice and sign off as competent. Senior staff are struggling to commit the time therefore the benefits are also delayed.	W5	Consider making the Education and Training lead an additional post within the core team. It currently does not have sufficient time dedicated to it in most sites. The Education and Training lead should have ringfenced time to observe and sign off staff as competent. Current roles are often combined with a team leader role, running clinics, caseload.
All lower limb wound care is 'shared care' (ie. multiple professionals involved). However, evidence from the sites is that not all professional roles across the clinical pathway are engaged in education and training.	W6	Target professional roles for education and training and ensure they receive it. Re-visit the FImp stakeholder engagement plan (beyond host organisation).

Summary of Conclusions and Recommendations

Digital, Data and Information (1/2)

Conclusion	Recommendation	
Lack of consistent data gathering and control both within and across sites creates a strategic risk to the Programme.	D1	FImpS should consider 'buddying' support to help staff problem solve and share best practice, especially around technical solutions. Explore alongside the behavioural change work underway to encourage effective recording.
	D2	In the absence of robust and automatic data capture (using digital solutions) sites should – as a minimum – ensure consistent manual collection of a smaller number of key metrics, in order to evidence benefit and (importantly) motivate staff in relation to it. This should be a transitional approach, in place for the shortest time possible. Should manual data collection be required, we suggest that sites focus on (i) Number of patients referred to the service (ii) Number of patients assessed (iii) Time between referral and assessment (iv) A comprehensive assessment in line with the NWCSP Lower Limb recommendations. (90 minutes) (v) At 4 weeks, formal review of healing (vi) For those unhealed at 12 weeks, a comprehensive assessment in line with the NWCSP Lower Limb recommendations. (vii) Healing rates (12 weeks, 24 weeks, 52 weeks, > 52 weeks) by wound type (viii) Recurrence rates and recurrence intervals by wound type (ix) Referral to specialist services (e.g. lymphoedema, vascular, dermatology) and timing of referral. (x) Maintenance data (data on when the patient is healed and exits active treatment, and is actively managed to the maintenance phase of the pathway, with a regular review for renewed prescription of hosiery and/or actively managed in other ways, such as Well Leg clinics) (xi) Data on prevention and maintenance programmes (at risk patients/healed patients) (xii) Additional costs of the programme (including hardware/software, equipment, renting a space)
The data FImps do have is not always used to inform practice. This is in part because staff who are recording data are spending a disproportionate amount of time doing it (double entry to overcome interoperability issues).	D3	Sites should make any dashboards or other data about the service routine available to their clinical teams. If there are concerns related to quality of data, teams should be invited to 'use it to improve it.' This recommendation should be included within future versions of the national model and, where possible, examples of clinically-led Quality Improvement using the data should be collected and shared across sites.
Data required to construct a robust business case (for future phases of the programme) sits in various places within each provider organisation. This presents a barrier to effective future rollout.	D4	The National Programme should consider what changes / improvements can be made to its template business case materials, in order to maximise its helpfulness to sites in making the case for the programme locally. This could include consideration of what metrics and analysis are required, and where (within each provider) they will most likely be gathered.

Summary of Conclusions and Recommendations

Digital, Data and Information (2/2)

Conclusion	Recommendation	
The use of digital applications is variable across the programme. This is leading to both sub-optimal service provision and driving the strategic risk to the programme which arises from insufficiently robust data capture.	D5	There is an opportunity to use examples of digital technology from individual sites, rolled out to all, to promote collection and analysis of data. This is more feasible now national implementation models exist and WDMS suppliers are changing their software to incorporate the national metrics.
Sites have been selective in which aspects of the model they have implemented. Those focusing on digital may have missed out on clinical and service delivery benefits others have gained during the first year.	D6	Leverage opportunities to improve healing rates by incorporating aspects of the clinical recommendations other FImps have proved works (the 90 min comprehensive assessment undertaken by a certified competent healthcare professional as per NWCSP/ HEE core capabilities framework within the desired time, within 2 weeks as per NWCSP clinical recommendations and timely use of compression therapy, if appropriate).

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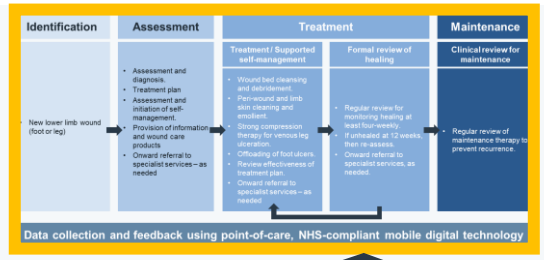
Interim evaluation of FImpS and programme

Summary of NWCSP interventions required to deliver the improvement (across a patient pathway)



This graphic is used in subsequent sections of this report to indicate the aspect, or aspects, of the service to which each conclusion relates. Many relate to multiple parts of the pathway.

In consultation with clinical leads at first tranche implementation sites, the NWCSP central team mapped the recommendations for lower limb wound care across the clinical pathway. In doing this, they articulated the key interventions required to deliver improvement at each stage. The number, size and frequency of the clinics will vary depending on the implementation approach, population coverage and workforce though this overarching implementation model is a clear communication of a complex requirement. *Where possible we have evaluated the implementation of the lower limb wound care recommendations within the context of this clinical pathway.*

Identification

- New lower limb wound (foot or leg)

Assessment

- Assessment and diagnosis.
- Treatment plan
- Assessment and initiation of self-management.
- Provision of information and wound care products
- Onward referral to specialist services – as needed

Treatment

Treatment / Supported self-management

- Wound bed cleansing and debridement.
- Peri-wound and limb skin cleaning and emollient.
- Strong compression therapy for venous leg ulceration.
- Offloading of foot ulcers.
- Review effectiveness of treatment plan.
- Onward referral to specialist services – as needed

Formal review of healing

- Regular review for monitoring healing at least four-weekly.
- If unhealed at 12 weeks, then re-assess.
- Onward referral to specialist services, as needed.

Maintenance

Clinical review for maintenance

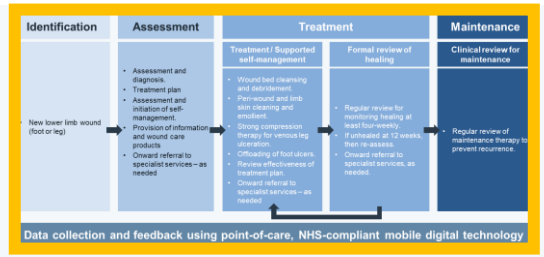
- Regular review of maintenance therapy to prevent recurrence.

Data collection and feedback using point-of-care, NHS-compliant mobile digital technology

Figure 1: NWCSP clinical pathway and interventions.

3a. Clinical and service delivery

Clinical and Service Delivery – Conclusion 1: *Staff across all sites are highly convinced of the value of the model, and provided a number of examples of how it is benefiting their patients.*



Overall value of the service

All FImpS who have implemented a dedicated lower limb service or enhanced an existing one reference the impact it has had on healing rates (see analysis in section 3 above) . A timely comprehensive assessment, a swift diagnosis and access to appropriate therapy and products (such as compression) are cited as the main reasons for healing.

A Tissue Viability Nurse said:

> *"We decided to bring people through treatment rooms and focus on gold standard wound care. [A high percentage] of patients who go through are healed and its so satisfying to spend 90 min a patient and do everything at once not in dribs and drabs "*

A Team Leader said:

> *"We had people on books for years and 12 weeks in clinic – they're healed "*

It has also been found that implementation of appropriate therapy such as compression happens quicker as a result of having a dedicated lower limb service. Access to materials and equipment for delivery of compression therapy are more readily available and senior staff available if something needs to be checked.

Most service leads report moving towards being staffed with clinicians with appropriate time, knowledge and skills to deliver the service but this is not in place yet. Staff shortages and recruitment delays have impacted roll-out of lower limb services though almost all sites have found ways around it.

Being part a the national programme has allowed FImpS to build their clinical teams in numbers and skills.

A Tissue Viability Nurse said:

> *"I feel proud of being part of a lower limb service, we have a purpose, and ringfenced time to do the right thing for patients"*

Benefits have been gained from introducing standard practices. Doing so in a dedicated lower limb clinic has been easier than doing so in the community.

Staff views of the service are in line with our conclusions from the quantitative analysis of the service (see section 3 above). However, this analysis is based on a small amount of data only, and there is a significant risk that staff / sites will be unable to provide objective, quantifiable evidence which to appropriately describe the clearly excellent work which they are doing.

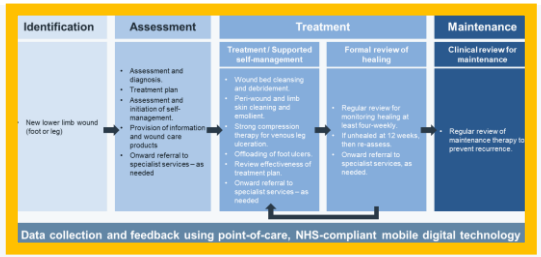
Organisational support for implementing the service

Teams implementing the service have generally found their organisations to be very supportive – as would be expected from a pilot programme. A number of interviewees and survey responses mentioned the importance of senior stakeholder engagement – both with the provider implementing the change, and more widely in the health and care system – as critical to the smooth rollout of the new model.

> *"My biggest learning so far is to ensure all key stakeholders are involved from the start. This pays off further down the line"*

This validates the NWCSP programme's decision to require a detailed engagement plan and approach from applicants. It will be important to ensure that new providers joining the programme have a similarly robust engagement approach.

Clinical and Service Delivery – Conclusion 1: *Staff across all sites are highly convinced of the value of the model, and provided a number of examples of how it is benefiting their patients.*



Support from the NWCSP National Team

Sites were also overwhelmingly positive about the support provided by the NSCWP central team. In our evaluation survey, 18 of 21 (86%) respondents rated support positively (see overleaf)

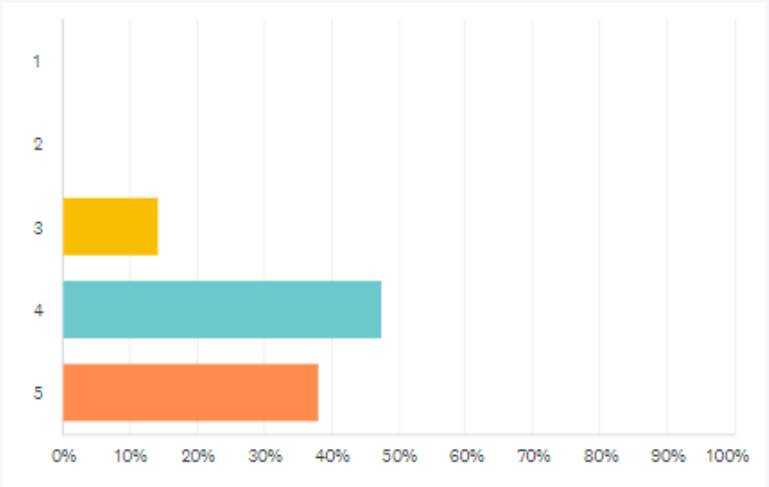


Figure 2: Survey question 6 - How would you rate the support to the programme provided by the NWCSP National Programme Team? (1 = low, 5 = high).

Sites also provided feedback to further increase the value of the national teams' support, including:

- More clarity and coherence in scope of work
- Consistent messaging and an overall outline of timeframes for what is being asked for, by when, and from whom.
- Regular up-dates on how the programme is going overall
- FImpS Team meetings with NWCSP rather than individual meetings

Continued learning and improvement

It is also worth noting that there is a strong learning ethos within the sites, and they are keen to both improve their own practice and to learn from each other.

> *"[We would like to have] more frequent meeting with examples from other trusts of work that has been beneficial and work that could have been reduced."*
>
> *"Don't re-invent the wheel. Learn from the other sites what the challenges have been and how they have overcome them, what works and what doesn't."*

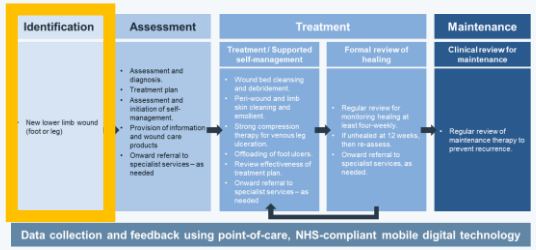
Recommendation C1: Continue to build out the dedicated lower limb wound care service interventions including education for health and care practitioners, access to materials and equipment for appropriate therapy and materials to support self management.

Recommendation C2: Improve data at site level to reduce the strategic risk of not being able to evidence benefits for future commissioners (link to recommendations D2 and D3),

Recommendation C3: Explore the potential benefits from linking to other services (well being coaching services, leg cafe, age concern). Reinforce the "system response to healing".

Recommendation C4: FImpS should establish direct links with each other and build relationships and networks for learning. Consider opportunities for learning beyond the lead roles (clinical, programme, DDI).

Clinical and Service Delivery – Conclusion 2: *There are difficulties in identifying people who would benefit from the service, including both 'at risk populations' who would benefit from preventative measures and people known to practices who are not currently being referred.*



The identification of people with lower limb ulcers is problematic. An individual may have had a wound or ulcer for a long time before seeking treatment from their GP and also tried to manage it themselves. Even when presenting to the GP or another service it may not be picked up as a lower limb wound or ulcer and referred. Patients who would benefit from the service may be in contact with health services for some time before referral.

> *"Podiatry, district nurses, TVNs, GPs, practice nurses, vascular, lymphoedema and dermatology teams all have a part in identifying people suitable for the service"*

A Lower Limb Nurse Specialist said:

> *"There's a big gap with people with lower limb wounds being missed in the community and in primary care. Wounds are hidden and start small, often people go to the pharmacy or tell a care worker but are not picked up"*

It is unknown how many people in the community have a lower limb wound or ulcer but are not seeking treatment. Discussions indicate significant levels of unmet need.

> *"There is no front door for the diagnostic dopplers – and we need to have one. We need a community diagnostic service"*

There are difficulties accessing 'at risk populations' and putting preventative measures in place. Two FImpS (Central and North West London and Mid and South Essex) have shown the benefits of raising awareness of lower limb services in shopping centres. Both offered an ABPI assessment, education and signposting to other services.

> *"Out of the 50 people we were seeing at a day, around 80% of those needed hosiery and would have gone on to ulcerate without it"*

A Team Leader said:

> *"We are expanding the number of satellite clinics being run in GP surgery's. The leg café model is being replicated across the other localities now we can quantify the benefits"*

This is response to the opportunity presented in primary care fand the voluntary sector for early identification and prevention.

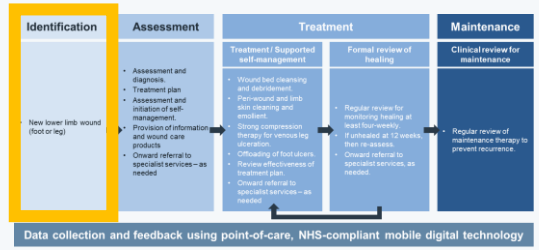
The importance of relationships with practice nurses was raised specifically in relation to identifying patients sooner. The practice nurse would likely be seeing patients with lower limb wounds supported by a health care assistant.

The role of health care assistant is an increasingly valuable as they work together with practice nurses in the care and maintenance of people who need lower limb care beyond the initial appointment with a GP. They are well placed to assist with early identification of wounds and timely referral to the lower limb service.

Overall FImpS are still trying to get on the agenda of Primary Care Networks (and by implication also place based partnerships and integrated care systems). There are pockets of good practice with individual practices but strategically they are unsure where the lower limb service fits or who to engage.

Recommendation C5: There is opportunity to further increase the impact of the lower limb service by helping referrers identify people earlier. This could be achieved through raising awareness and further educating practice nurses, GPs and other referrers as to who would benefit from the service. There is also potential to further optimise the HCA role in identifying people in practices and providing support to facilitate an onward referral.

Clinical and Service Delivery – Conclusion 3: *Strict inclusion and exclusion criteria mean that some patients who might otherwise benefit from the service are unable to access it.*



The NWCSP implementation case is about the lower limb wound care. That has been the priority because that is where the biggest savings in terms of time and improvement of patient outcomes.

A Team Leader said:

> *"Patients don't present with simple problems and we spent a lot of time getting to the bottom of their symptoms. But sometimes they are already in the treatment phase before we realise they actually need a different service"*

Strict inclusion and exclusion criteria to the lower limb service has benefits though patients with Lymphedema in particular are missing out.

A Programme Manager said:

> *"We have not been able to implement 'immediate and necessary care' and jumped straight to trying to improve our assessment process We are now looking at Lymphoedema as how to incorporate into the pathway"*

> *"Lymphedema patients are missing out. They can't be seen as part of FImpS and the local service is only offered to cancer patients"*

There is an unmet demand for this cohort though it is not yet quantified.

> *"The lower limb service has enabled us to deliver a more equitable service geographically but not with people with other issues. People with Lymphoedema are coming through to us because there is no service for them"*

> *"Lymphedema patients are not being captured on EMIS – if they don't have an ulcer they cant be captured on system "*

Based on our discussions with sites therefore, we believe that there is an opportunity to extend the model to include other needs and pathways.

There are examples of sites running a Lymphoedema and Dermatology service as well as the current NWCSP model – meaning that there is experience to draw upon. Some sites (London, Mid Essex, Hull, Kent) have incorporated the NWCSP clinical recommendation for lower limb wound care into an existing services. The reasons given for this are geography and population size.

> *"Our service covers lower limb wound care, lymphedema and dermatology. The service is delivered in clinics primarily so we are able to cover all three. We want to get the model and the data right, before rolling out to community"*

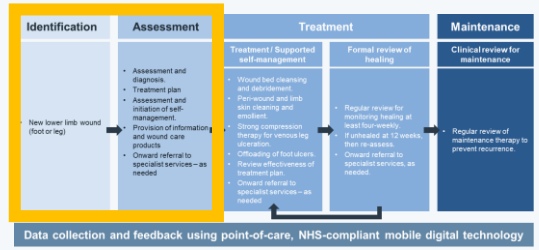
There are also other approaches (MDT triage, Care Co-ordination Hubs) whereby clinical leads are looking at how they can collectively work together to address healthy inequalities in lower limb and foot care.

> *"The foot quite often gets forgotten about because when they talk in lower limb people interpret that to be the leg they don't necessarily remember that there's a foot attached to it as well."*

Having the right services and specialities involved at the beginning of a patient journey means patients are more likely to enter the right pathway. Lower limb wounds and lymphoedema require very different treatment though sometimes these patients do enter the lower limb service and receive sub-optimal care.

Recommendation C6: a) Improve links to Lymphoedema services. Consider if the model could be extended to cover patients with Lymphoedema where that service does not exist. Discussions suggest significant levels of unmet need b) Improve links to podiatry and vascular services. Consider how the model could be extended to cover patients with foot ulceration without diabetes where that service does not exist. Discussions suggest significant levels of unmet need.

Clinical and Service Delivery – Conclusion 4: *The e-referral process into the service is problematic. Clinicians overcome the difficulties with verbal communication and other 'off system' workarounds.*



Clinical staff put workarounds in place to expedite and assure the referral process.

FImpS have reported the electronic referral process into lower limb service as problematic – SystmOne is cited as the main issue, however there are other issues raised which are not related to technology. For example, issues are caused by the referrer not knowing what information is essential to refer into the lower limb service, and the service not having capacity to educate and inform the range of referrers.

> *"What people need to know before accepting a referral varies – if they can access the patient record and it is up to date, a simple summary referral is acceptable"*

> *"If the referral is coming from a care home you need a lot more information, then you have to piece together the story and ask questions"*

In future, this could be resolved by adding a referral template into the electronic patient record (subject to agreement about exactly what information needs to be captured, as well as technical changes to embed the template and appropriate staff training in its use.

Currently however, staff are using a variety of workarounds, either separately or in combination. For example one FImpS (Mid and South Essex) requests that a photograph is uploaded to the referral form. They will not accept a referral without the photograph as it helps determine the type and complexity of the wound. It also helps with prioritisation.

Another FImpS (Wye Valley) cites relationships as key to the referral process. For example, If referred by a GP, TVNs draw on relationships with practice nurses to expediate the process.

> *"We do everything we can to make it easier for practice nurses because we need them to refer. They have so many other things on"*

Where relationships are not as well developed, patients may wait longer for a referral. That is because the information, process and technological barriers are not overcome. An additional delay can occur if, for example, a care home or a hospital refers to a GP rather than a lower limb service as it has been found the information becomes diluted.

> *"We need the person who sees the patient not to then send the referral request to the GP, who then sends it to their secretary – and all the time that information is being diluted – by the time it gets to the lower limb service its often quite different"*

In addition to delays in practices processing the referral, incomplete referral information is cited as another reason why the referral process is problematic.

> *"Its unfair on the patient when the information is incomplete, they are delayed receiving the care they need and its all about time with ulcers"*

> *"We do our best to get the information but it can be really frustrating when we call a round to teams who are literally based in the same building"*

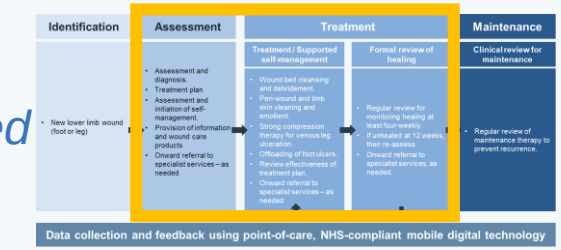
One FImpS [Wye Valley] has put in place a telephone service in between referral and assessment.

> *"Whilst the aim is not to address the gaps in referral information it can help to further substantiate. It which makes you more likely to accept the referral."*

Recommendation C7: Embed a simple referral template in the electronic patient record and make it easy for staff to complete. Consider attaching a digital wound image as clinical staff say this is invaluable.

Recommendation C8: Raise awareness and further educate referrers on how to refer into the lower limb service whilst making it as easy as possible for them to do so.

Clinical and Service Delivery – Conclusion 5: *The model has contributed to a standardisation of practice both within and across sites. However, there is continued variation in practice across all elements of the pathway.*



There is variation in practice at site level but increased alignment / convergence as sites use the national model. This contrasts to significantly greater variation before introduction of the programme.

Assessment

There is a high level of confidence in the 90-minute assessment.

> *"Our biggest learning has been in relation to process e.g. the results achieved by having patients attend a comprehensive 1st Assessment"*

A Team Leader said:

> *"Investment in the initial assessment pays off – a 90 minute comprehensive assessment with a senior nurse sets the rest of the pathway up for success"*

Clinical staff believe that this is having an impact on healing rates (5/7 sites). The use of Doppler to inform diagnosis and appropriate compression therapy on initial contact with the lower limb service are also cited to be essential.

One FImpS (Hull) has a care co-ordination function at the beginning of the pathway and a protocol for off loading for foot ulcers first if more than one Lower Limb wound exists.

Very few lower limb services are seeing patients with leg ulcers within 2 weeks of being referred. This means that the clinical recommendation for lower limb wound care is not being met.

FImpS are also reporting against the CQUIN standard which suggests patients receive a full assessment within 4 weeks in community nursing.

Treatment

Strong compression therapy is used for people with venous leg ulceration though there is variation in practice. The gold standard for compression therapy is 40mm of mercury though the data is inconclusive as to how often this is being used.

The variables impacting use of strong compression are confidence of staff in applying it (even when trained), availability and timely access to strong compression bandages and whether the patient has a comorbidity.

Most FImpS found compression therapy was a significant factor in healing – that when compression therapy is used, it is more common for a patient (with no complications) to be healed with 12 weeks.

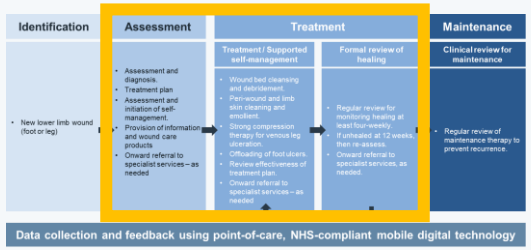
A Tissue Viability Nurse said:

> *"Nurses recognise the importance of compression and put patients into compression sooner. When patients receive the optimal level of care they heal quicker"*

Some FImpS said they have had patients healed with their venous leg ulcers before they even reached vascular teams. (4/7 sites)

For patient who go to hospital however, compression is not continued. This is a problem as the lower limb service does not cover the hospital setting therefore people have to go back to the community service for new compression.

Clinical and Service Delivery – Conclusion 5: *The model has contributed to a standardisation of practice both within and across sites. However, there is continued variation in practice across all elements of the pathway.*



Self care / supported self management

Self care is a key part of healing – though it is introduced in different ways and at different points in the clinical pathway in different sites. This variation may impact healing rates.

One FImpS (Wye Valley) has put in place a telephone service in between referral and assessment to ensure patients know what is expected of them (self care).

A District Nurse said:

> *"Lower Limb patients can be drained psychologically – have to get people on board with what's expected of them and what support they will have – not everyone wants compression therapy or sticks at it."*

There is opportunity to include personalised treatment pathways in the model – incorporating as much self-care as possible.

Formal review of healing

Every 4 weeks – nurses re-assess, provide education on self management, refer to other services. A Team Leader said:

> *"We monitor Friends and Family [survey test results] and could see patient satisfaction rates were high with very positive comments and feedback"*

> *"If a referral has been made to the vascular teams and patients have healed, its not always made clear to the patient that there's still an underlying condition"*

When a wound is healed, even when a patient is referred staff don't differentiate between treatment and maintenance. The reasons given is that ulcers are a symptom of an underlying disease and even when the disease is treated they can reoccur.

In order to address this, one FImpS (London) refers patients on to a 'Well Leg' service which they can use for up to 6 months after treatment. All FImpS agree with the value of this type of service, but not all have on in there area to refer to. A Team Leader said:

> *"Well leg services are very effective and most certainly reduce the number of people coming back to us - but they are no longer commissioned"*

Referral to specialist services

Some FImpS refer all patients onto vascular services and some do not. Those that do are now considering involving vascular services earlier. A TVN said:

> *"Having a vascular nurse at MDT would help us make more accurate referrals. Referring everyone means it takes longer for patients to be seen (waiting list) and not everyone needs it"*

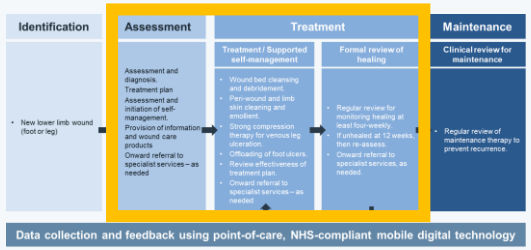
The underlying disease needs to be addressed but referring to the right specialist service is key. Engaging specialists via an MDT has been found to be effective.

[further referenced in conclusion 6]

Recommendation C9: Continue to standardise practices across the clinical pathway, building on successes and good practice already achieved.

Recommendation C10: The National Programme should develop a tool (handbook, implementation guide) to support rollout to other sites (including but not limited to those sponsored by AHSNs). This should be based on the key learning points from the seven sites, including but not limited to the learning points in this review.

Clinical and Service Delivery – Conclusion 6: *Most sites can make a direct referral to vascular services. This link provides direct benefit to both patients (more timely access to specialist services) and staff (reduced time requirement).*



The lower limb service can make a direct referral to a vascular (or other) specialist service. This has removed the barrier of having to go back to GP for referral.

> *"It stops the whole process being clunky and removes delay for the patient. The work is now seamless from seeing us through to where they need to go"*

> *"We need the referrer, the person who sees that patient, not to send the information to the GP who then sends it to their secretary (delays) and all the time that information just gets diluted (quality)."*

There is a direct benefit to staff (reduced staff time) and to the patient (more timely access to specialist services).

> *"Referral into vascular has made a huge difference - referral from nurses or from a care home"*

The issues arising that reduce the benefit of direct referrals being realised, is that a large number of patients do not keep their vascular appointments, and the amount of time it takes to organise if a patient wants to be referred to a vascular service out of area.

With regards to patients not keeping their appointment, clinical staff believe it is because they have healed by the time the appointment is due (12 weeks healed,18 weeks for appointment).

A Vascular Nurse said:

> *"1 in 4 patients keep their appointments - it's a complete waste of our time. If we could move the diagnostics (for the underlying condition) to the community at least they would know if they need the appointment"*

Some FImpS refer all patients to vascular – some do not

A TVN said:

> *"Not everyone who comes to the lower limb service needs to be referred – that's not right for the patient and its not right for the vascular service - they couldn't possibly see everyone"*

The model suggests all patients with lower limb wounds should be referred to vascular services. A patient who is healed before they receive a vascular outpatient appointment is less likely to attend.

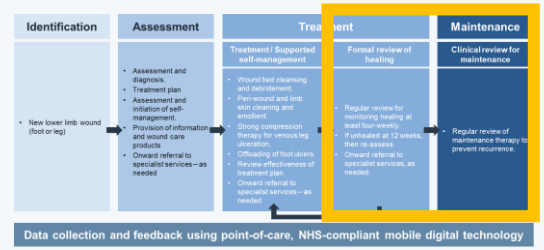
It wasn't raised as an issue by sites but the NWCSP central team are working with Royal College of Surgeons to produce a resource which is going to be the referral forms into vascular services or arterial and for venous levels (venous disease).

The aim is to provide a standardised referral form which can be adapted to local areas. In parallel, some FImpS are working on their own referral form.

Recommendation C11: Ensure the required information is passed on to vascular services. Precise information to be transferred will need to be locally agreed, based on national recommendations. Sites should work towards ensuring that the receiving vascular service can see the full dataset about the patient (electronic patient record).

Recommendation C12: The model suggests all patients with venous and/or arterial disease (not all lower limb wounds) should be referred to vascular services. There is a need to both refine referrals, to ensure they are limited to those who need them, and to inform those who are referred as to the importance of attending the appointment.

Clinical and Service Delivery – Conclusion 7: *FImpS often do not differentiate between treatment and maintenance phase. This may lead to 'healed' patients not being recognised as such, and so underplays the benefits of the service.*



As a result of becoming a FImpS there are now agreed pathways for referral to vascular and other specialist services.

Even though a patient might be healed and an onward referral made, clinicians don't differentiate between the treatment and maintenance phase. This is because patients within the lower limb service often have a underlying disease or contributing condition that needs to be managed once the wound healing has occurred.

> *"You don't' really get discharged from a lower limb service. If you have an ulcer you may get others unless you work really hard. People's lifestyles are a factor and if you're a carer your on your feet much of the day"*

The view that a wound or ulcer is the symptom of an underlying disease is consistent with the implementation model. What staff do about that in practice needs discussion and guidance agreed.

In terms of the clinical pathway, it is not clear if all sites carry out "A regular review of maintenance therapy to prevent recurrence".

One FImpS (London) refers patients to a Well Leg Service (up to 6 months). No other FImpS has the service even though they have ran them in the past.

Other reasons cited as to why staff don't differentiate between the treatment and maintenance phase is because they have little oversight over the next stage of the process for the patient.

> *"The patient might be waiting up to 18 weeks to see vascular services. That's 7 weeks from when we've last seen them. Were talking abut a 30 min review within that time if they stay with us, that's all it is"*

Furthermore, there is no clear definition of healing amongst practitioners. Wound care is shared care between a range of professionals and there are different views between these professionals on what constitutes healing.

For example, there are different views on what is treatment (focus on healing and self care) and what is maintenance (focus on prevention of reoccurrence).

> *"Often patients have complex needs and the clinical pathway is not a linear . There's stops and starts, sometimes treatment for infection, a hospital admission, a fall and the treatment starts all over again. It makes it difficult to know where they are at "*

In discussions with clinical staff some did not differentiate between healing and maintenance. If 'healing' isn't being recognised, it is not being recorded.

What is different about wound care is that the caseload of lower limb service might not decrease. It is likely to increase as referrers are further educate on who would benefit.

There is an amendment to be made in the model between 'reducing the burden of wounds' and 'reducing overall prevalence of disease.' This will need to be unpacked.

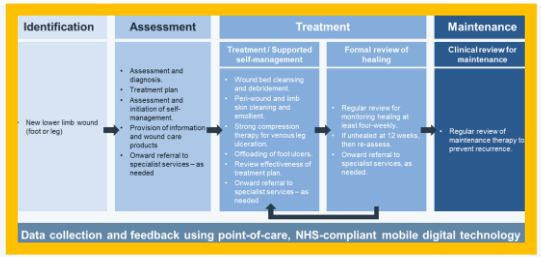
As currently set up, the model realises the first benefit not the second, as it will pull through unmet need. This is obviously better for patient outcomes, but will skew financial impact unless it's made explicit.

There may be an indirect benefit of FImpS not discharging patients from lower service in that they might be preventing recurrence. This is anecdotal.

Recommendation C13: Consider how to help staff differentiate between the treatment phase (focussing on healing) and maintenance phase (focussing on prevention of recurrence) of care. It is important to stress to both staff and patients that a wound is different to an underlying condition for which another service is required.

3b. Workforce, education and training

Workforce Education and Training - Conclusion 1: *Having core roles funded by the programme has enabled the service to become more established in all FImp Sites. This has been identified as a critical element of their success.*



Having core roles funded (clinical, programme and DDI posts) has been critical in building the lower limb service team. These roles together have overall, provided a starting point for other developments to evolve.

A Senior Executive Officer said:

> *"The programme manager role has been absolutely key as she has been outside the clinical management arena and been able to focus on getting assessments embedded into treatment rooms and staff trained to deliver them."*

One FImpS found the core roles to be very automous – a total project completely outside of the host organisation. At times this made it difficult to access support services (communications) and personal development support.

These sites implemented the programme, education, training and technology roles together – the core roles complement each other and set the foundation for implementation. For example, the FImpS were established during the pandemic – clinics were closed and staff redeployed. The service was set up remotely, not at all how nurses normally work. The core team overcame a lot of barriers to establish the sites.

The experience of the post holders was also cited as a differentiator.

> *"The post holders all highly experienced and have relationships and networks to draw upon though more strategic support below SRO level may be beneficial.*

> *"There was an sense of purpose and an urgency to deal with wounds at pace."*

Having the programme role to co-ordinate and drive the changes, the clinical role to implement the interventions and manage the team, the education and training role to equip staff with the competency required and the DDI role to identify data sources and drive developments of digital applications has been critical to the success of the sites. Where one or more of these roles don't exist the impact has been diluted.

All TVNs engaged as part of the interim evaluation said having the strategy has helped them develop personally and as a team with more knowledge and skills.

It has also provided more equitable coverage of the local population

A Team Leader said:

> *"Before becoming a FImp we had 2 TVNs and were struggling with lower limbs. We now have 4 TVNS in line with number of localities"*

A Community Trust Director said:

> *"Becoming a FImp allowed us to develop our wound care improvements and take the service to another level. Two professional lead roles also came about as a result of the work"*

The additional roles in the team are not directly funded by the National Wound Care Strategy Programme but have come about because of it.

A Programme Manager said:

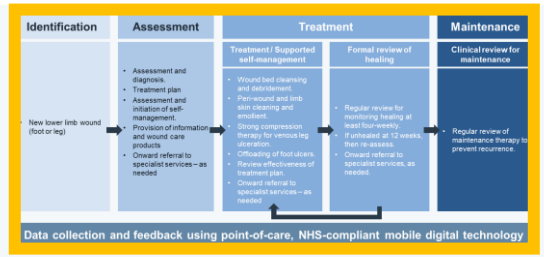
> *"The strategy drove the us to think differently – it came along at the right time for some FImp when covid hit and nurses were being deployed. We took the opportunity to do something different could not believe the initial impact"*

The core roles complement each other and also allowed the service to be built out.

Recommendation W1: Consider how FImpS can build on / capitalise on being part of a national programme. This could be by the NSCWP central team facilitating support on sustaining services and enabling FImpS to share their successes with each other.

Recommendation W2: Implement the clinical, programme, education and training, and technology roles together – the core roles compliment each other and set the foundation for implementation.

Workforce Education and Training - Conclusion 2: *All FImpS highlight competency based education and training for clinical staff as critical to effective wound care. However, many staff – across almost all sites (6/7 sites) - are struggling to complete the training which is on offer.*



At the onset of the programme the NWCSP central team found huge variation in who thought wound care was part of their role and the level of education and training they received. There was a need to set the expectations of the knowledge and skills of wound care that was required. HEE led the work to develop the first core capability framework in wound care for England.

The ambition overall is unrelated to the FImpS, though gives the background to what was then offered to FImpS. Working with clinical leads and programme leads, the national lead looked at what would be the minimum required knowledge and skills within a dedicated Lower Limb Service. It was determined it would be Tier 2.

Two of the seven sites have mandated training - but all are taking it very seriously.

- **Essex** – mandated training. But could take staff a long time to get through it (timeframe not clear).
- **Manchester** – have also mandated training, but have not yet implemented the model (in design phase).
- **London** – is planning to mandate and already actively training the core lower limb service team and extended reach to district and community nurses.

A Vascular Nurse said:

> *"One of the ways we've been successful in rolling out education and training is by saying the changes are national and demonstrating how they are making a difference locally""*

Another FImpS is embedding education and training in a new academy developed by the host organisation.

> *"We are doing this to raise the profile of wound care and tell the message of education through to teams, wound care works."*

All FImpS are however struggling to complete education and training required for lower limb wound care. Staff shortages mean they cannot find backfill, face to face training is required for teaching of the doppler and compression bandaging and this is dependent on senior staff availability.

One further issue is that training can only be mandated to NHS staff (within Trusts) not for practices or others. The Clinical model / pathway crosses multiple employers therefore consideration required how this can happen.

The national guidelines have supported FImpS to raise the profile of education and training and linking it strategically. Essex and Manchester are also using the core capability framework to assess the capabilities of their workforce.

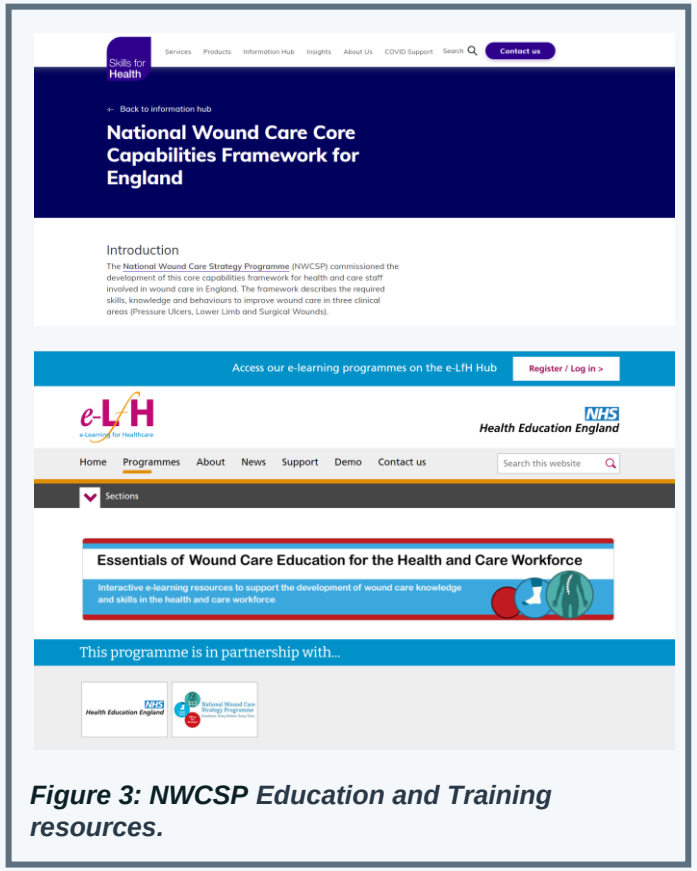
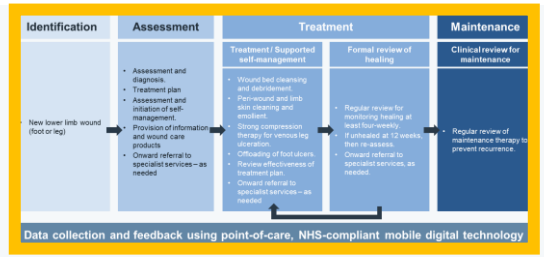


Figure 3: NWCSP Education and Training resources.

Workforce Education and Training - Conclusion 2: *All FImpS highlight competency based education and training for clinical staff as critical to effective wound care. However, many staff – across almost all sites (6/7 sites) - are struggling to complete the training which is on offer.*



Around half of the FImpS have some level of in-house education and training in addition to accessing the national NWCSP / HEE resources. This is either wound care training offered as part of the host organisation's competency based training package, an external provider such as Accelerate, or product based training offered by industry suppliers.

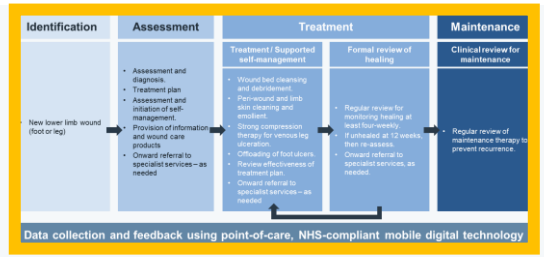
Training is online. Clinical staff retain some elements and conduct these face to face. Even the training online can be difficult for staff to access and some have reported persistent issues with login and password errors. These issues have been discussed with the NWCSP central team and are being addressed.

An education curriculum specifically for the lower limb service is currently being developed with clinical leads. This will be published in June 2022.

Recommendation W3: Consider making education and training part of the overall model – and associated business case - such that 'implementation' is defined as including training as well as the clinical pathways. This should help sites to ensure sufficient capacity for training – including ringfenced time and backfill for staff.

Recommendation W4: Use the standardised, freely available, NWCSP/HEE education resources to reduce variation in delivery supplemented by in-house education and training for those aspects that need to remain flexible.

Workforce Education and Training - Conclusion 3: *A core part of the education and training requires a senior member to observe the trainee in practice and sign off as competent. Senior staff are struggling to commit the time therefore the benefits are also delayed.*



Some aspects of education and training require staff to be observed in practice. This results in a barrier to effective rollout of training and therefore to staff development, as senior staff often struggle to find time to carry out observations.

A Team Leader said:

> *"One of the TVNs - in addition to caseload - has a link role for education and training. They just don't have sufficient time to do it justice"*

> *"We need to ensure that there is sufficient capacity to observe staff in practice. If we don't have time to complete training (and sign off as competent), then they [staff] are going to have no confidence that we will be there for them in practice"*

Another barrier is staff confidence in performing the interventions. When a patient presents with a lower limb wound the first recommendation is to assess for 'red flags' and provide immediate skin and wound care. In the absence of red flags, it is recommended that mild compression therapy be applied for leg ulcers. The benefits of early mild graduated compression are suggested to outweigh the risks.

A Tissue Viability Nurse said:

> *"Training is one thing, but even when that's complete people lack confidence with compression bandaging. They need to know they can access support."*

A District Nurse said:

> *"A patient can lose their leg if compression bandaging isn't done properly, you can't take any changes. If we are unsure we ask a TVN to see the patient"*

One FImpS (Hull) has invested in two professional lead roles focusing on education and quality including wound care. These roles have been highlighted as fundamental to rolling out the model to another locality.

It has been suggested by some FImpS that review of staff practice (and subsequent sign-off of staff as competent in relevant areas) does not necessarily need to be undertaken by a senior member of staff. The NWCSP central team could provide a view on this and communicate clearly and consistently to staff across sites.

If the lower limb service can expand the range of people who can assess / comply compression, then the benefits can be realised faster.

The TVN role appears to be playing a quality assurance role with other professionals on a day to day basis. Podiatry, district nurses, TVNs, GPs, practice nurses, vascular, lymphoedema and dermatology teams all have a part to play in wound care and any one of these could make direct contact with a TVN for support.

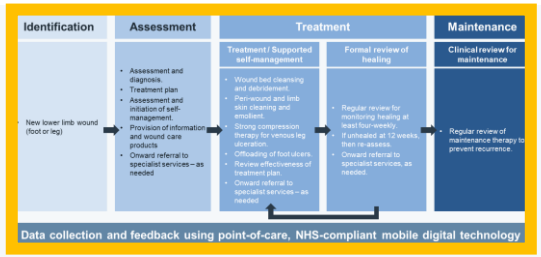
> *"District nurses have our mobile and call us often when they are in a patients home. We do our best to pick as that's where the learning is – in the moment"*

Because of the demand for the service, there is a case for making the Education and Training lead role an additional post within the core FImpS team. This would allow sites to both to reduce the bottleneck of people waiting to be signed off as competent and to expand the offer to other professionals across the clinical pathway.

> *"Education and training is the bedrock of wound care. We want to standardise and improve quality so the patient receives the same level of care where every they access it"*

Recommendation W5: Consider making the Education and Training lead an additional post within the core team. It currently does not have sufficient time dedicated to it in most sites. The Education and Training lead should have ringfenced time to observe and sign off staff as competent. Current roles are often combined with a team leader role, running clinics, caseload.

Workforce Education and Training - Conclusion 4: *All lower limb wound care is 'shared care' (i.e. multiple professionals involved). However, evidence from the sites is that not all professional roles across the clinical pathway are engaged in education and training.*



The Tissue Viability Nurse role is central to lower limb wound care and other professional roles such as podiatry, district nurses, GPs, practice nurses, vascular, lymphoedema and dermatology teams all have a part to play at points in the clinical pathway.

Currently education and training is taken up by TVNs and nurses working directly in the lower limb clinic. The NWCSP central team is involved in work to change the perception that wound care is the role of nurses.

In practice, FImpS report that other professions are more involved compared to a year ago (via MDTs, care co-ordination meetings) though that they are not actively engaged in education and training.

A Team Leader said:

> *"It's has been challenging at times to get people motivated due to the constant pressure they are under managing backlogs etc from the pandemic. "*

A Chief Nurse said:

> *"We need all professional services to input into the clinical pathway and undergo the education and training"*

The standardised NWCSP / HEE education resource for multi professionals is freely available and mapped to the National Wound Care Core Capabilities Framework for England. This is a high-quality resource that could be further promoted and linked to team and organisational development plans.

A barrier to engaging a broader set of professionals in education and training is that each FImpS is working in slightly different ways.

> *"Some practices don't get involved in wound care – district nurses have to look at every single wound"*

> *"Other practices rely on practice nurses and health care assistants to look after people with ulcers. The GP rarely gets involved"*

> *"A Vascular surgeon is at the MDT" versus "Vascular services do not get involved though we do refer direct"*

In the community, some district nurses are trained in lower limb wound care though do not have capacity to assess or apply compression therapy.

A TVN said:

> *"We need further guidance on roles and responsibilities of services involved in wound care in particular those outside the clinic "*

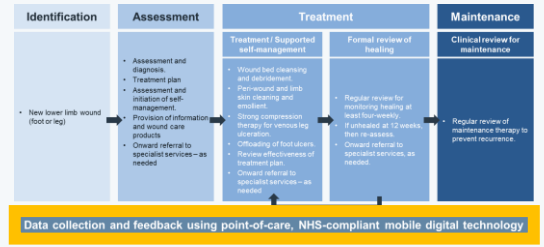
There is a need for further awareness and promotion of wound care, and the associated education and training requirements for professionals, in primary care and community nursing teams. There are pockets of awareness and good practice examples (London, Hull) though further support is needed.

Most FImpS are taking a phased approach to implementing the service - starting with the clinic based service, then rolling out to community and primary care. FImpS could target key professional roles for education and training and help gain support so they can prioritise it. It is also important that professionals working in acute care settings are offered education and training. It may be an initiative to be considered by the NWCSP central team.

Recommendation W6: Target professional roles for education and training and ensure they receive it. Re-visit the FImpS stakeholder engagement plan (beyond host organisation).

3c. Data, Digital and Information

Digital, Data and Information – Conclusion 1: *Lack of consistent data both within and across sites creates a strategic risk to the Programme*



All FImpS recognise technology can help to improve patient outcomes and service delivery and that data collection is an important part of this.

However, there is an inconsistent approach to data gathering and the use of technology to enable this.

- *Assessment and tracking;* a range of apps are in use which enable a variety of data points to be collected about the wound and patient as part of the 90 min comprehensive assessment and follow-up appointments. They do not yet feed into or interact with electronic patient record systems used in community, primary care or provider organisations.
- *Referrals;* While FImpS have reported the benefits of direct referrals into vascular services, the information required to enable the referral needs to be further defined, extracted from one system and shared with another. Ideally an electronic patient record would be used to facilitate the referral giving specialist services access to the full patient dataset. Some FImpS request a digital wound care image is attached as this gives important information as to the type and severity of wound. Other FImpS do not consider this useful, and rely on information the referrer and receiver of the referral agree between themselves, prior to populating the electronic referral.
- *Workflow:* In SystmOne the referral data is unstructured and does not create workflow. The information has to be printed as a PDF. If there are gaps, staff either do not accept the referral (and send back) or obtain the information in verbal form leading to more work.
- *Staff time and data quality:* Often clinical staff have to double their efforts (re-enter data), attach a PDF printout to another system, or rely on BI teams to do it. This impacts data quality and usage.

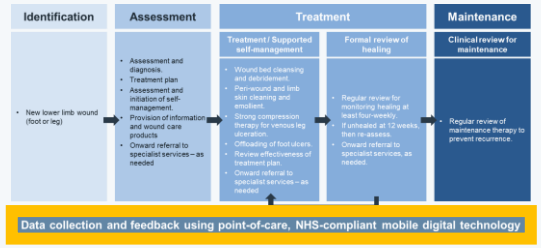
Technologies used include: eKare, Healthy.io, WoundMatrix, WoundPad, SystmOne.

Recommendation D1: FImpS should consider 'buddying' support to help staff overcome difficulties ad share best practice. Explore alongside the behavioural change work underway to encourage effective recording.

Recommendation D2: In the absence of robust and automatic data capture (using digital solutions) sites should – as a minimum – ensure consistent manual collection of a smaller number of key metrics, in order to evidence benefit and (importantly) motivate staff in relation to it. This should be a transitional approach, in place for the shortest time possible. Should manual data collection be required, we suggest that sites focus on;

(i) Number of patients referred to the service
(ii) Number of patients assessed
(iii) time between referral and assessment
(iv) A comprehensive assessment in line with the NWCSP Lower Limb recommendations (such as 90 min assessment, ABPI by doppler, undertaken by a certified competent healthcare professional)
(v) At 4 weeks, formal review of healing
(vi) For those unhealed at 12 weeks, a comprehensive assessment in line with the NWCSP Lower Limb recommendations.
(vii) healing rates (12 weeks, 24 weeks, 52 weeks, > 52 weeks) by wound type
(viii) recurrence rates and recurrence intervals by wound type
(ix) Referral to specialist services (e.g lymphoedema, vascular, dermatology) and timing of referral.
(x) Maintenance data ((data on when the patient is healed and exits active treatment, and is actively managed to the maintenance phase of the pathway, with a regular review for renewed prescription of hosiery and/or actively managed in other ways, such as Well Leg clinics)
(xi) data on prevention and maintenance programmes (at risk/healed patients)
(xii) additional costs of the programme.

Digital, Data and Information – Conclusion 2: *The data FImpS do have is not always used to inform practice. This is in part because staff who are recording data are spending a disproportionate amount of time doing it (double entry to overcome interoperability issues).*



Sites reported receiving and inputting data at each stage of the clinical pathway.

At the referral stage some sites have access to electronic patient record systems, some do not. Most lower limb services at some point in the pathway have access to the electronic patient record (6/7 sites).

Most FImpS report issues with data entry at each stage of the pathway though in particular referral in, assessment and referral (see section 4a above). Clinical staff have to double their efforts (re-enter data), problem solve and create manual workarounds to receive the patient into the lower limb service from a referrer.

A Senior Nurse said:

> *"There ends up being so much information in the referral form so we're good with clinical governance [but] we don't know what to do with it. We rarely go back to it but are sure it could be of some use later on"*

During assessment a significant amount of information is collected - social, clinical, psychological. A TVN said:

> *"The assessment is very comprehensive, covers every aspect of a patients life. They often want us to look at the wound but we need to know about them, what they are worried about. An ulcer won't heal if their lifestyle doesn't allow it"*

Another dataset has been created.

At team level, some FImpS (Wye Valley, London) have created dashboard and reports for their host organisations and the national programme.

These dashboards about the service could be made routinely available to clinical teams, but often are not.

A Band 5 Nurse said:

> *"We have nothing to do with the data. The BI lead pulls together reports and dashboards and chases us if we haven't been recorded something. I don't know what It is used for"*

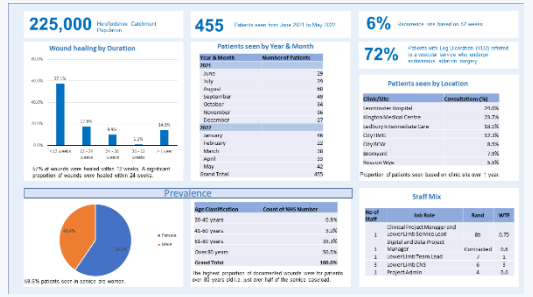


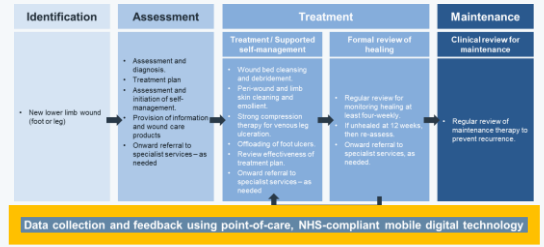
Figure 4: FImp site dashboards

Core service information is used as performance data for organisational reporting but not necessarily to inform improvements to clinical practice. This means staff who had doubled their efforts to input data get none of the benefits from having done so. This creates the obvious risk that staff will lose motivation to enter information consistently and accurately when they do not see its value.

A Team Leader said:

> *"Staff are sometimes "blinded by the job" in front of them and in the "weeds of delivery" though earmarking even 5 min a day to team around what the data is saying is worth it"*

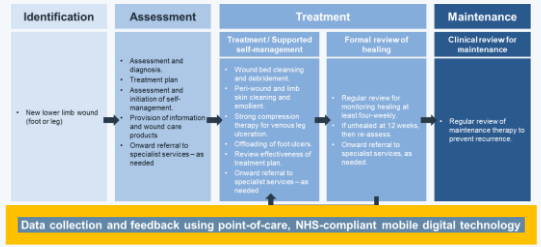
Digital, Data and Information – Conclusion 2: *The data FImpS do have is not always used to inform practice. This is in part because staff who are recording data are spending a disproportionate amount of time doing it (double entry to overcome interoperability issues).*



FImpS who have wound care apps (part of WMDS), even in pilot phase have a lot of information available to them. From site visit discussions and from observing staff use wound care technology, the wound care image was cited as most beneficial. One observation is that the technology needs to be used consistently at ever patient appointment in order to track the healing journey. Therefore one action is to look at whether a scan was generated at each appointment. If not, and for example a tape measure was used, what action can be taken to ensure the scan works in future.

Recommendation D3: Sites should make any dashboards or other data about the service routine available to their clinical teams. If there are concerns related to quality of data, teams should be invited to 'use it to improve it.' This recommendation should be included within future versions of the national model and, where possible, examples of clinically-led Quality Improvement using the data should be collected and shared across sites.

Digital, Data and Information – Conclusion 3: *Data required to construct a robust business case (for future phases of the programme) sits in various places within each provider organisation. This presents a barrier to effective future rollout.*



Some FImpS highlighted that metrics have only developed recently. This creates a risk in relation to the service and implementation case, as it prevents teams from building up a robust picture of their service, for use in subsequent local business cases.

In addition, we have observed that some data sits in the acute provider and that this can be a barrier. For example, cost data often sits in finance teams not directly in clinical teams. Data cannot easily be be extracted from one system and matched with data from another system.

Some FImpS do not have direct access to clinical records.

A DDI Lead said:

> *"Our BI lead has to link in with the university hospital (where a procedure takes place) to obtain information on surgery. Our system doesn't let us extract healing rates or integrate with other systems"*

Most FImpS do not directly collect information on healing rates. This is an important metric for the NWCSP central team as this provides initial evidence of the impact of lower limb wound recommendations.

A Programme Manager said:

> *"Our system doesn't let us extract healing rates or integrate with other systems. Our BI lead has to link in with the university hospital (where a procedure takes place) to obtain information on surgery. "*

A DDI lead said:

> *"In our Trust, healing rates is not a metric. We have specialist teams in different areas and varied responsibility for care delivery"*

A Team Leader said:

> *"Healing and recurrence datasets cannot be compiled without support from national wound care strategy team. We don't have the resource to do it."*

One FImpS reports that the use of apps would help to collate data more easily and hence would facilitate data extraction due to concentrated storage. The 4 main suppliers of wound care apps are in the process of amending heir software to collect data against the national clinical metrics. This does not however account for the information that needs to be extracted and consolidated from other systems.

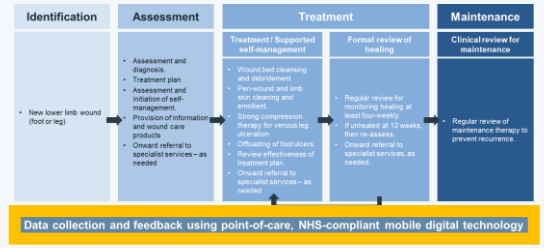
To accelerate the process and take account of FImpS who do not have wound care technology in place a small number of metrics and analysis could be agreed. The NSCWP central team is best placed to co-ordinate and provide guidance.

As as a result of being part of the national programme and demonstrating early successes, FImpS have had opportunity to bid for additional support. In doing so, they are asked for a range of datapoints which they cannot provide without support from the NWCSP central team.

The NWCSP central team should consider how to maximise support with business case applications and evidencing impact.

Recommendation D4: The National Programme should consider what changes / improvements can be made to its template business case materials, in order to maximise its helpfulness to sites in making the case for the programme locally. This could include consideration of what metrics and analysis are required, and where (within each provider) they will most likely be gathered

Digital, Data and Information – Conclusion 4: *The use of digital applications is variable across the programme. This is leading to both sub-optimal service provision and driving the strategic risk to the programme which arises from insufficiently robust data capture.*



At the onset of the programme it was anticipated that all FImpS would have a Wound Management Digital Solution (WMDS). However, sites were mobilised during the pandemic and had to change some aspects of their original plan.

The strategy for WMDS has been communicated by the NWCSP central team to first tranche implementation sites, and made available on the NWCSP website. However, one of the challenges has been explaining to stakeholders what WMDS is and why it is different to what currently exists. For example, GPs have an app that enables a picture to be shared and notes to be made during a patient consultation. A WDMS is a system that supports the treatment of a wound over time, tracking and monitoring tissue viability and the measurement of a wound and shows the healing journey through each stage of the clinical pathway. This does not currently exist in currently functionality in electronic patient records.

FImpS would benefit from a WDMS that provides the following:

1. Provides the platform to deliver clinical decision support
2. Provides the ability to view a cohort of patients within the service and monitor their healing journeys (this allows clinicians to focus their efforts on those that need them)

As part of the strategy for WDMS the NWCSP central team has provided a functional overview, list of suppliers and initial support on information standards. Each FImp had the autonomy to select and appoint a supplier. Four suppliers of WMDS are represented across the sites and each FImpS engages directly.

FImpS have encountered a number of barriers during the set up and implementation of digital application and there are some themes highlighted below:

> *"Unblocking national issues with clinical system provider to ensure speedy integration with our digital app."*

> "Lack of IT support for integration of new pathways into digital patient record and extraction of metrics to support benefits of change."

> "The amount of development time needed for the wound care app."

> "Sites having the option to pick and chose what they focus on."

These barriers have resulted in variable use of digital applications across programme. As a consequence, there is a both a sub-optimal service provision and driving the risk to the programme which arises from insufficiently robust data.

Early findings (self reported by clinical staff) has shown the use of the technology to be effective in tracking a patient healing journey and reporting on performance metrics. The main barrier is that the technology does not interact with the corporate systems and this directly impacts front line staff who have to enter the data twice.

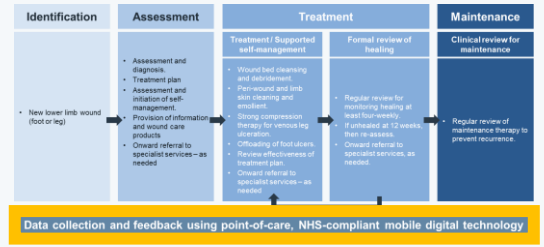
Having an app that feeds into a corporate system – rather than having to re-enter data would reduce nursing time, making things more efficient and reduce costs.

Whilst FImpS have had autonomy in developing their wound care apps there is an opportunity for others to benefit from the development work by specific digital solutions being embedded into the clinical pathway. This would help to drive consistency in their usage and allow others to benefit from the upfront investment (staff time).

The FImpS that have worked on digital solutions have called them pilots – a suggestion is to stop calling them pilots and 'useability studies' instead.

Recommendation D5: There is an opportunity to use examples of digital technology from individual sites, rolled out to all, to promote collection and analysis of data. This is more feasible now national implementation models exist and WDMS suppliers are changing their software to incorporate the national metrics.

Digital, Data and Information – Conclusion 5: *Sites have been selective in which aspects of the model they have implemented. Those focusing on digital may have missed out on clinical and service delivery benefits others have gained during the first year.*



Sites that focused on changing their clinical practice experienced benefits almost immediately (Hull, Wye Valley, London, Mid Essex, Livewell).

Introduction of the 90-minute assessment with a competent healthcare professional was found to set the rest of the pathway up for success. Clinical staff believe this, combined with appropriate and timely use of compression therapy has impacted healing rates (5/7 sites).

A Team Leader said:

> *"Our biggest learning has been in relation to process e.g. the results achieved by having patients attend a comprehensive 1st Assessment "*

These FImpS found having core resources in place (clinical, programme and DDI leads) helped the lower limb service to build the right foundation, put the most important interventions in place, and in doing so they started to deliver improvements.

A Programme Manager said:

> *"Having clear well embedded clinical pathways ensure consistency, minimises variations in practice and therefore improves patient outcomes. Ensure all key stakeholders are involved from the start. Start small and expand as you are able to demonstrate success."*

Without changes being made to local pathways (through implementation of the recommendations) the DDI lead would have known the data required to enable the pathway. There were good examples of the clinical, programme and DDI roles working together on an issue, then applying that learning to the next challenge.

The core team were embedding changes into existing pathways and this required continuous testing and collaborating to get it right.

Sites that have focused specifically on implementing the data, digital and information element of the model, found it more difficult to engage clinical staff.

A DDI Lead said:

> *"It has been very challenging to get engagement from clinical staff. It is not a priority for them and we can't do it without them."*

These sites focused on developing their lower limb wound care strategy and engaging health and care professionals across a larger more complex geographical area. This was a more difficult task to achieve than sites who implemented on a smaller scale and enabled an ambulatory clinic based model in select sites.

The sites that did implement on a smaller scale have experienced the benefits

A Team Leader said:

> *"Our biggest learning has been the results achieved by having patient attend a comprehensive 1st Assessment"*

In reality, with staffing shortages and a changing strategic landscape within which FImpS are working, a smaller PDSA style approach has proved to be successful.

Recommendation D6: Leverage opportunities to improve healing rates by incorporating aspects of the clinical recommendations other FImpS have proved works (the 90 min comprehensive assessment and compression therapy) and having a digital technology focus on this part of the pathway. Hull, Wye Valley and Livewell have demonstrated these practices work.

4

Implications for the final assessment

Implications for final evaluation (December 2023) and programme effectiveness

To ensure that the final evaluation is as robust as possible, the following issues need to be addressed, to facilitate data gathering and analysis and enable the final evaluation.

1. **Healing rate and recurrence data.** Healing rates and recurrence rates are the two most critical measures for assessing the overall value of the service in terms of both patient outcomes and value for money / economic impact. The final evaluation should encompass an analysis of healing rates across periods of time (12 weeks, 24 weeks, 52 weeks, > 52 weeks) as well as recurrence rates. This should include more granular data for example, patient background, age, gender, the type of wound and the prevalence . This data is beginning to emerge but not enough of it exists as yet to draw robust conclusions.
2. **Impact initiative data**. In order to assess which specific elements of the model have greatest impact, it is also important to record to what extent each of the specific initiatives are undertaken in each site. It is imperative to link implementation measures to outcomes. This will enable the Programme to assess which levers to prioritise as roll-out expands, and to further develop variations on the 'best practice' implementation model for sites with particular characteristics (for example those serving particular populations) if required. It will also facilitate greater standardisation of clinical practice in the specific focus areas which are most impactful.
3. **Referral data**. Information must be recorded on when people were managed as part of another services (lymphoedema, vascular, dermatology)and what the criteria were for this. Track and analyse where patients are being referred to another service unnecessarily and amend practice so that this is not a default. This is currently not standardised. It must also include information on where people were unable to access these services effectively because of incorrect diagnosis and overall late referrals.
4. **Maintenance data** is not being recorded in many instances. This should be standard practice as well as recording where patients are referred to and what happens to them post healing**.** Capturing this data will enable further insight into maintenance practices and reduction in recurrence rates**.**
5. **Implementation costs** should be recorded to more readily ascertain the variability amongst different sites and where improvements can be made, rather than a generalised assumptions used in this analysis. Costs which should be captured include clinician time, wound care products used, staffing skill mix, training and education (for both wound treatment and consultations), digital costs (WMDS, EPR redevelopment) as well as costs associated with running the clinics themselves.
6. **Education and training** should be incorporated as part of the implementation. If possible, the programme should establish an additional Education & Training post within the core team at each site. By training up and having more staff certified as competent, more patients will be assessed within the desired timescales, in the desired manner and treated as per best practice guidelines.

In addition to the above there is potential to identify cases earlier and increase referrals through increased awareness, engagement with the referral system. The lower limb service could also be expanded to include those with lymphoedema.

FImpS Survey Feedback:

What has been your greatest learning from the programme so far (selected)?

> Our biggest learning has been in relation to process e.g. the results achieved by having patients attend a comprehensive 1st Assessment

> Getting people together really has shown we can elevate wound care as a strategic priority work area. Executive sponsorship is key.

> People getting to grips with the technology and understanding the importance of collecting this data as much as possible as a by-product of necessary clinical activity.

What advice would you give to other areas joining the programme (selected)?

> Do not hesitate to join the programme - it really provides the driver to make change and improve outcomes for patients

> Liaise with the [NWCSP] strategy [team] as they are very helpful, have some really good resources and keep in contact with other sites to share ideas and offer support to each other.

> Make sure you accurately document your outcomes.

Key messages from this review – to inform wider communication (1/2):

Key messages for sites (including both clinical and non-clinical staff)

Key messages from this review	Potential implications for you
Clinical teams across all sites are convinced about the value of the programme, and can point to a range of benefits for both patients and staff.	Continue to implement the dedicated lower limb wound care service interventions – in particular the 90 min comprehensive assessment with a senior staff member within an agreed time from referral, and ensure timely use of compression therapy, post assessment. *(FImpS have proved these impact healing rates)*
The data which will be required to make the case for the new service is (currently) fragile. Gathering comprehensive, robust data will be essential in supporting sites to make the case for the service to continue.	Data should be recorded for instances when a patient has healed or when they come back with another wound. This is critical information required to evidence the impact of the lower limb wound care service.
There are a small number of changes which clinicians can make, in order to make the model even better. These include prioritising education and training, refining referrals in and out of the service and continuing to standardise practices across the clinical pathway.	Targeting key professionals in the local pathway for education and training, ensuring timely sign-off as competent, consider who needs an onward referral to vascular/other (not everyone)and inform those who are referred how important it is to attend.
This review includes a number of recommendations to help the NWCSP central team to provide the best possible support to sites. These include an implementation tool to support rollout to other sites and a condensed set of metrics to help FImpS evidence impact	Contribute to the implementation tool and make direct links with other FImpS to share learning, consider a condensed set of metrics in collaboration with the NWCSP central team to evidence impact.

A

APPENDIX 1
– survey questions

APPENDIX 1: KLOE Survey questions

1.1	Overall	What are the biggest learnings from your experience so far? (e.g people, process, technology, other)	Free text
1.2	Overall	How would you rate the support to the programme provided by your organisation?	1-5 scale + FT
1.3	Overall	What further assistance would you find it beneficial to receive from your organisation?	Free text
1.4	Overall	How would you rate the support to the programme provided by your staff?	1-5 scale + FT
1.5	Overall	How would you rate the support to the programme provided by the NWCSP National Programme Team?	1-5 scale + FT
1.6	Overall	What further assistance would you find it beneficial to receive from the NWCSP National Programme Team?	Free text
1.7	Overall	What advice would you provide to other areas joining the programme?	Free text
2.1	Clinical	What clinical model are you working towards? (e.g see implementation models v18)	Free text
2.2	Clinical	What implementation approach are you taking and why? (e.g direct, pilot, phased, in parallel to another approach?) If implementation is being phased what are the phases ?(clinics, then podiatry, referral pathways etc)	Free text
2.3	Clinical	How have you engaged with commissioners about the implementation?	Free text
2.4	Clinical	What patient engagement have you undertaken and how has it informed the development of your service?	Free text
2.5	Clinical	Describe any work you needed to undertake in order to translate the Lower Limb recommendations into a specific service model for your organisation. How much 'customising' did you undertake?	Free text
2.6	Clinical	What results did you see from implementing (healing rates etc) and how long did results / benefits take to show? What data do you have on these?	Free text
2.7	Clinical	What barriers have you encountered in implementing the new service model?	Free text
3.1	People	Which groups of health and care workers have a role to play in improving lower limb wound care in your organisation? What is the role of each group?	Free text
3.2	People	Is there a gap between the current capabilities of these workers and the capabilities they need to undertake their role in lower limb wound care ? If so, how does your organisation plan to address this gap?	Free text
3.3	People	Do you think knowledge and skills have increased across your workforce? How are you measuring this?	Free text
3.4	People	What changes have been made to the workforce to improve wound care? (e.g reconfigured teams)	Free text
4.1	Technology	How is data currently being collected?	Free text
4.2	Technology	Describe uptake of the WMDS and progress with implementation. What barriers and enablers exist re implementation of WMDS?	Free text
4.3	Technology	In your view, what is the quality of the data being reported? How could it be improved?	Free text
4.4	Technology	Is an eReferral Service (eRS) in use for referral to specialist services?	Yes/No/Other (FT)
4.5	Technology	Are 'Advice and Guidance' referrals being made using eRS?	Yes/No/Other (FT)

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