

TECHNOLOGY ENABLED DIABETES FOOT ULCER MULTIDISCIPLINARY CLINIC (2019-2024)

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Nottingham University Hospitals
NHS Trust

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Challenges of Conventional Foot Clinics

- **High case load** - 5500 to 6000 patient episodes per year
- **Information overload** - mixed digital and paper clinical care records
- **Risk of discontinuity of care** – broken links in a multi professional service
- **Clinical inertia and recall bias** – delayed treatment decisions
- **Lack of real time objective monitoring data** – obscures true clinical status
- **Treatment oversight is difficult** – unclear view of wound care assessment and range of treatments
- **Admin burden** - complex workflow with upload of images and paper clinic notes

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Technology Solution

- Web based central application and hosted on Trust servers
- Multiple point of care imaging devices, 3D and 2D measurement and a digital care record
- Configured to our workflow and data needs
- Integrated with hospital and community document systems
- Central software application server can be accessed from any Trust Computer
- Complies with information governance, data and security standards

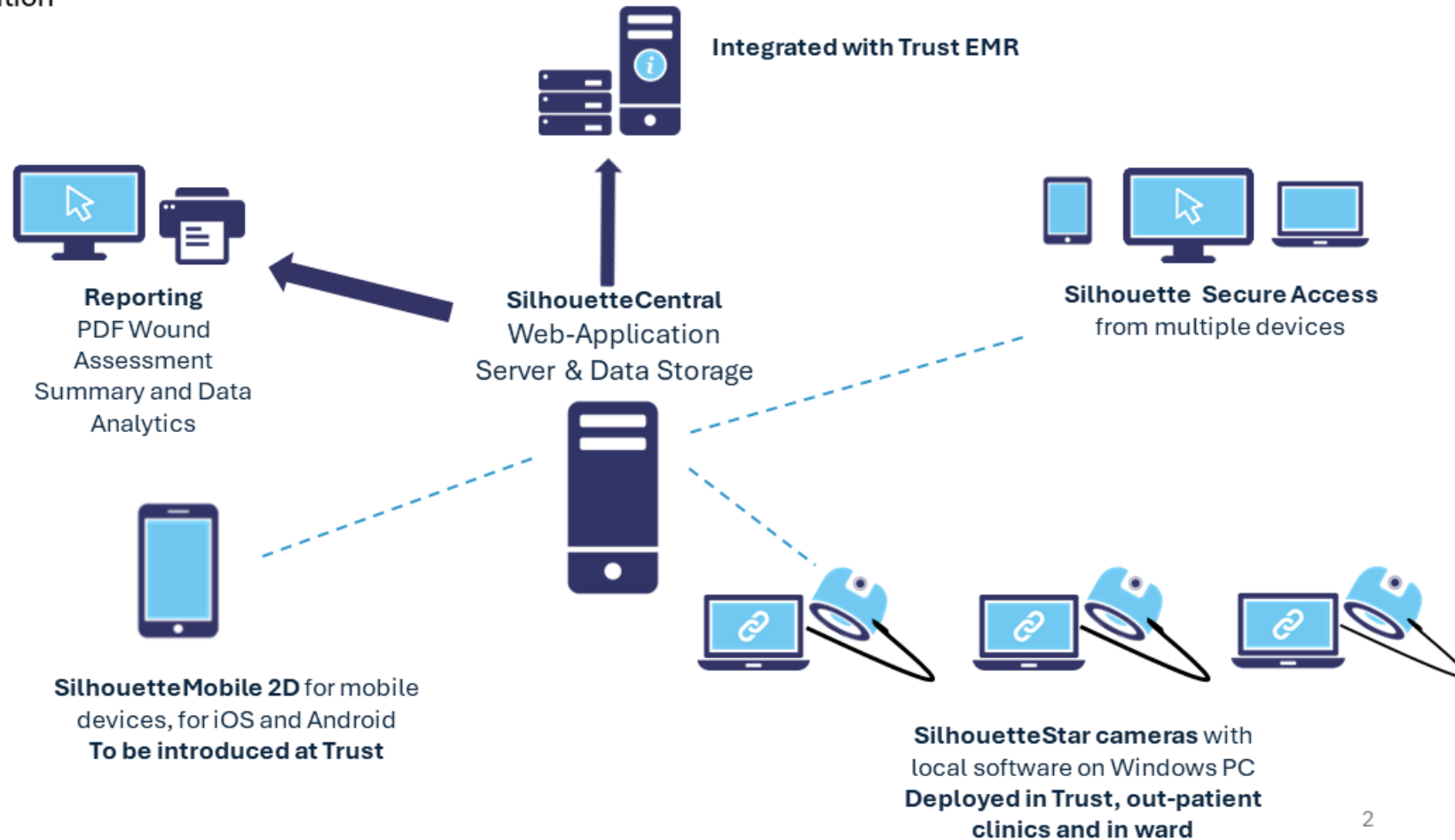
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Silhouette Enterprise Solution (ARANZ Medical)

v4 New Generation



2

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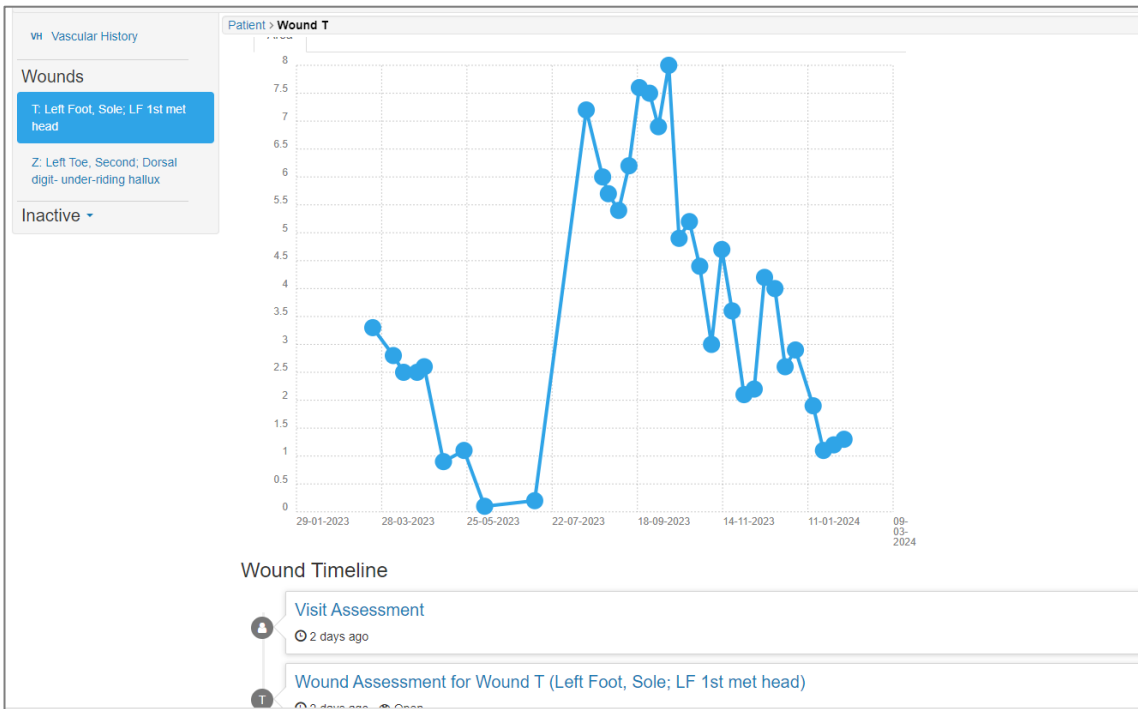
Silhouette System Screen – Patient Dashboard

The screenshot displays the 'Silhouette System' Patient Dashboard. On the left is a navigation menu with the following items: Overview (selected), Details, Charcot Neuroarthropathy, Foot Surgery History, Neuropathy Assessment, Vascular Assessment, and Vascular History. Below the menu is a 'Wounds' section containing two entries: 'T: Left Foot, Sole; LF 1st met head' and 'Z: Left Toe, Second; Dorsal digit- under-riding hallux', with an 'Inactive' status indicator. The main area features a 'Wounds' panel with a '+ Wound' button and a human silhouette. The silhouette is labeled 'Right' and 'Left'. Two blue circles, 'Z' and 'T', are connected by lines to the left foot area of the silhouette. Below the silhouette is a 'Patient Timeline' section with two entries: 'Visit Assessment' (dated '2 days ago') and 'Wound Assessment for Wound Z (Left Toe, Second; Dorsal digit- under-riding hallux)'.

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Wound Assessment for Wound T (Left Foot, Sole; LF 1st met head)

2 days ago (05-02-2024 08:43)

Wound State	Recurring
Open	Yes

Wound Images

Images

05-02-2024 08:43

Area: 1.3cm²

Wound healing charts, showing wound area changes over time

Wound images gallery, showing wound status changes over time

Key Benefits of Technology Enabled Service

- Paperless digital imaging system and MDT care record
- One stop clinical information store house for the multidisciplinary team
- Comprehensive PDF reports, shared electronically across pathway
- Data accessed immediately from any location to facilitate MDT discussions
- Reduction in clinical inertia and increased patient engagement
- Reduction in admin workload for consultants and secretarial team
- Empowered Specialist Podiatry Team
- Scope to extend to community and host virtual clinics in the future

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Key Challenges during the journey

Four key factors identified:

1. Securing capital budget for implementing the technology – Nottingham Hospitals Charitable funding was a big helping hand to the project
2. Engaging Clinical and Digital Services, creating will and capacity to do “new” - Trust digital agenda was a key driver for change
3. Slow progress with data informatics – close working relationship with technology provider is slowly getting us there
4. Organisational inertia to implement the technology outside of hospital settings – progress with data informatics could help move forward the dialogue between providers



BACK

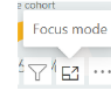


Foot care service

Commissioner

Results on this page are mapped to healthcare **provider** from the specialist **foot care service** that submitted the ulcer to the NDFA.

Use focus mode to enlarge the visual



Make selections:

Diabetes type

All

Population

All

Ulcer

- Multiple ulcers
- All
- Area >=1cm²
- Bacterial infection
- Depth (to tendon or b...
- Ischaemia
- Less severe ulcers (Sl...
- Multiple ulcers

Measure

% alive and ulcer free at 12 w...

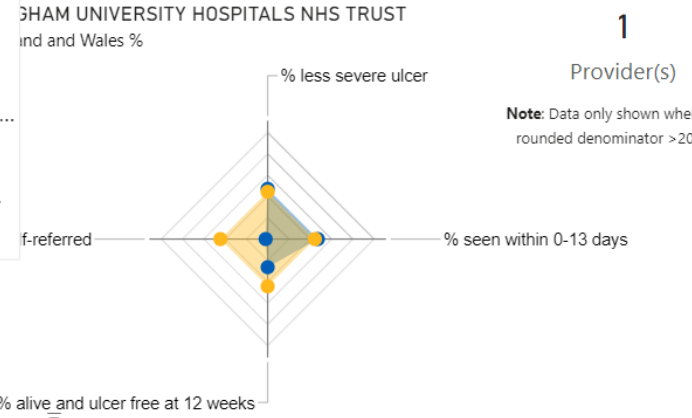
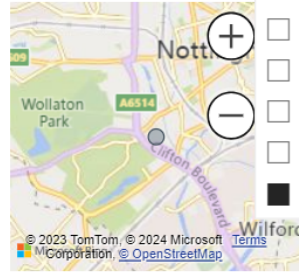
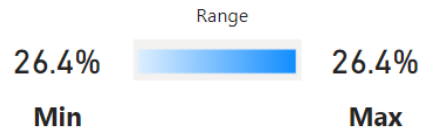
Audit year

All

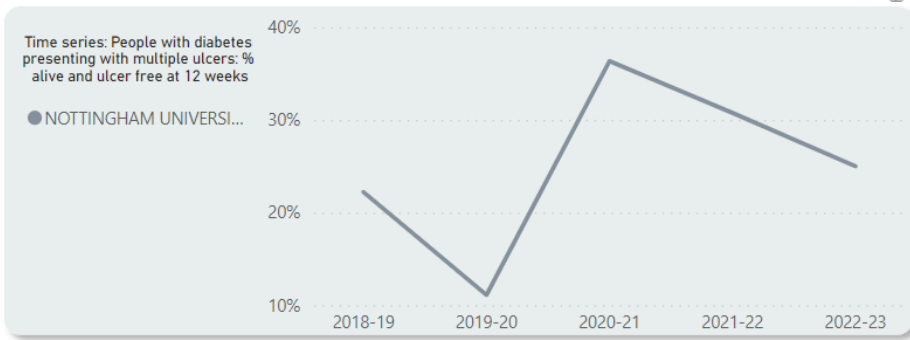
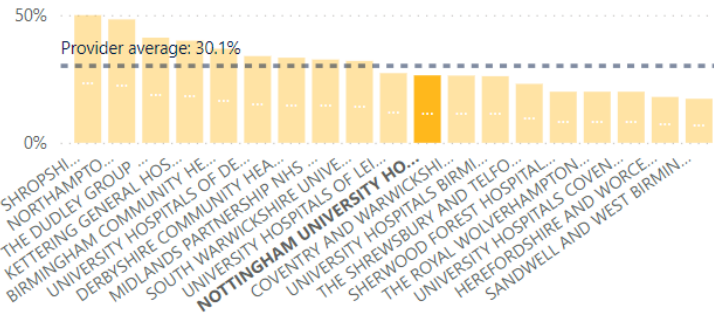


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People with diabetes presenting with multiple ulcers: % alive and ulcer free at 12 weeks (all years)



Right click on a circle on the map above or a bar on the chart below and select "drill through" to view data for that chosen provider.



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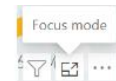


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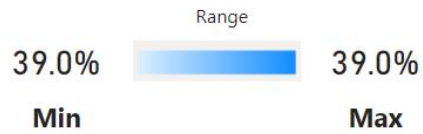
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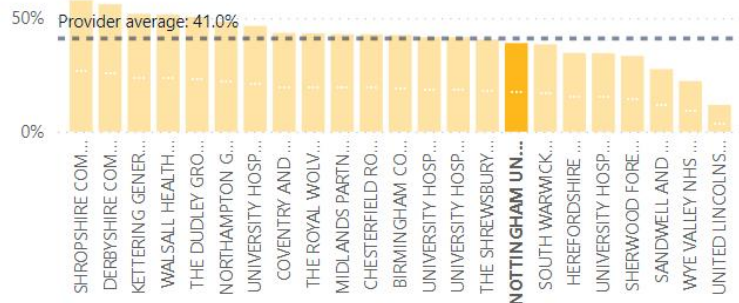


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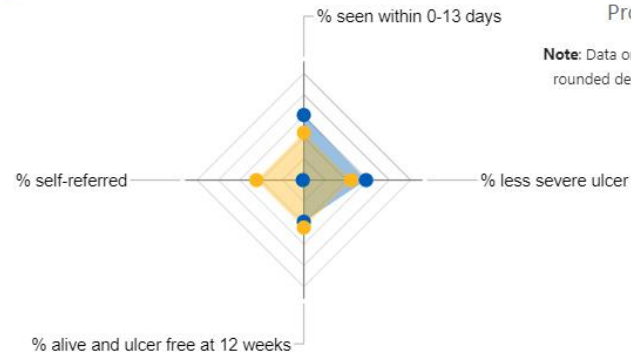
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● Organisation % ● England and Wales %

1

Provider(s)

Note: Data only shown where rounded denominator >20



Time series: People with diabetes: % alive and ulcer free at 12 weeks



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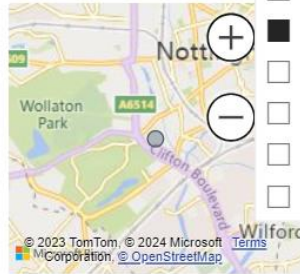
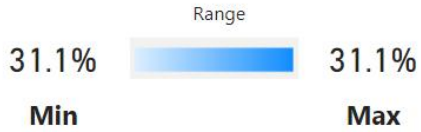
Audit year

All



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People with diabetes presenting with bacterial infection: % alive and ulcer free at 12 weeks (all years)

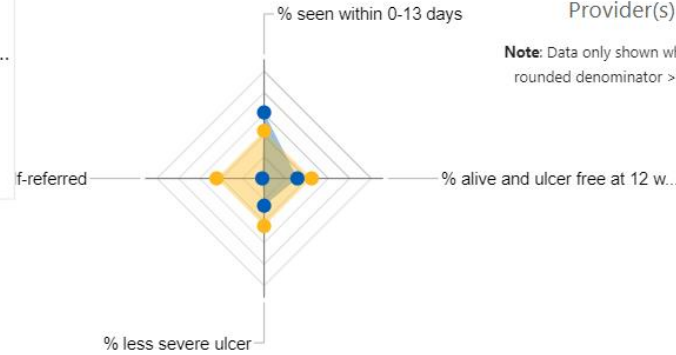


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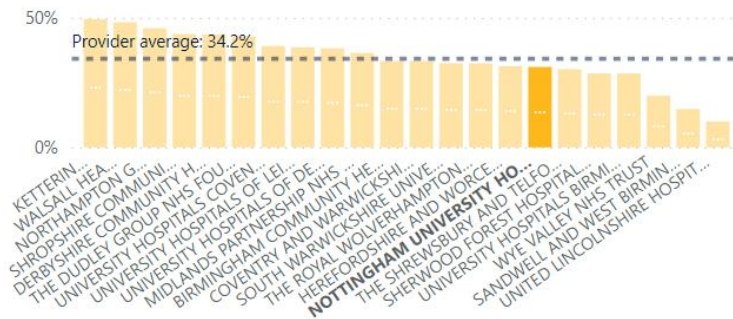
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Time series: People with diabetes presenting with bacterial infection: % alive and ulcer free at 12 weeks

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Conclusion

- Seismic shift from data gathering to data interpretation
- Improved consultation experience for patients and health care professionals
- Digital and almost paperless clinic is now a key asset of the service
- 99% of the clinical reports are dispatched on the day of the clinic visit
- Administrative cost savings
- Improved 12-week healing rates for multiple ulcers

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Acknowledgments

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- NUH Charity
- Aranz Medical (Tom Morgan and Tom Rochford)
- NUH Digital Services Team

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Thank You for the Kind Attention Dr Kamal Chokkalingam



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