

The VAC Veraflo Therapy system for acute infected or chronic wounds that are failing to heal

HealthTech guidance

Published: 27 January 2021

www.nice.org.uk/guidance/htg566

Your responsibility

This guidance represents the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, healthcare professionals are expected to take this guidance fully into account, and specifically any special arrangements relating to the introduction of new interventional procedures. The guidance does not override the individual responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and/or guardian or carer.

All problems (adverse events) related to a medicine or medical device used for treatment or in a procedure should be reported to the Medicines and Healthcare products Regulatory Agency using the [Yellow Card Scheme](#).

Commissioners and/or providers have a responsibility to implement the guidance, in their local context, in light of their duties to have due regard to the need to eliminate unlawful discrimination, advance equality of opportunity, and foster good relations. Nothing in this guidance should be interpreted in a way that would be inconsistent with compliance with those duties. Providers should ensure that governance structures are in place to review, authorise and monitor the introduction of new devices and procedures.

Commissioners and providers have a responsibility to promote an environmentally sustainable health and care system and should [assess and reduce the environmental impact of implementing NICE recommendations](#) wherever possible.

Contents

1 Recommendations	4
Why the committee made these recommendations	4
2 The technology	6
Technology	6
Innovative aspects	7
Intended use	7
Costs	7
3 Evidence	9
Clinical evidence	9
Cost evidence	12
4 Committee discussion	16
Clinical-effectiveness overview	16
Relevance to the NHS	17
Outcome measures	18
Other patient benefits or issues	19
NHS considerations overview	20
Cost modelling overview	21
Further research	22
5 Committee members and NICE project team	23
Committee members	23
NICE project team	23
Update information	24

This guidance replaces MIB189 and MTG54.

1 Recommendations

- 1.1 The VAC Veraflo Therapy system shows promise for treating acute infected or chronic wounds that are not healing. However there is not enough good-quality evidence to support the case for routine adoption.
- 1.2 Research in the form of a randomised controlled trial is recommended to show clinically meaningful benefits for the VAC Veraflo Therapy system (wound instillation with negative pressure therapy) compared with negative pressure wound therapy alone. A key outcome should be time to wound closure.

Why the committee made these recommendations

Acute infected or chronic wounds are normally cleaned, dead or infected tissue removed, and dressed. Chronic non-healing wounds are usually treated with advanced wound care (such as adsorptive or moisture-donating advanced wound dressings). Some wounds are treated with negative pressure therapy, which uses a pump to draw out excess fluid from the wound. VAC Veraflo Therapy system would generally be considered as an alternative to negative pressure wound therapy without wound instillation.

The VAC Veraflo Therapy system comprises a dressing that covers the wound, attached by tubes to a machine, which delivers the therapy. It uses negative pressure therapy, but also slowly introduces cleansing fluid onto the wound bed (wound instillation therapy). The fluid stays for a time and then is slowly drawn away from the wound, along with wound and tissue fluid. The fluid is delivered in automated treatment cycles allowing the wound to be repeatedly cleaned without needing to remove the dressing.

The clinical evidence for VAC Veraflo Therapy system is mostly low quality. The best available evidence does not show any clinical benefit over negative pressure wound therapy without instillation. Also, the evidence is from the US and does not reflect the way VAC Veraflo Therapy system is used in the NHS. There was not enough evidence to compare VAC Veraflo Therapy system with advanced wound care, and the comparison is of limited relevance because advanced wound care is used in a different part of the care

pathway.

Although there are potential benefits for patients and the NHS, more evidence is needed to be certain of VAC Veraflo Therapy system's clinical effectiveness and potential for cost savings compared with negative pressure wound therapy in the NHS. Therefore NICE recommends further research.

2 The technology

Technology

- 2.1 VAC Veraflo Therapy system (3M+KCI) uses negative pressure wound therapy and wound instillation with topical solutions to promote wound healing. Wound instillation is a controlled process in which topical solutions are slowly introduced to the wound bed, where they remain for a defined period before being removed using negative pressure. Treatment is delivered in automated treatment cycles, allowing wounds to be repeatedly cleansed without needing to remove the dressing.

VAC Veraflo Therapy system has the following components:

- VAC Ulta Therapy Unit – delivers VAC Veraflo therapy.
- Exudate canister – single-patient use, disposable canister (500 ml or 1,000 ml), which collects fluid.
- VAC Veralink Cassette – instillation cassette which connects the topical wound solution container and dressing tubing to the VAC Ulta Therapy Unit.
- VAC Veraflo Dressing kit of clinician's choice (VAC Veraflo Dressing, VAC Veraflo Cleanse Dressing or VAC Veraflo Cleanse Choice Dressing). The VAC Veraflo Dressing kits include the appropriate dressing as well as VAC VeraTRAC Pad with tubing, VAC Advanced Drape, and 3M Cavilon No Sting Barrier Film.
- Topical wound solution of clinician's choice indicated for topical wound treatment and compatible with VAC Veraflo Dressings and disposable components (most commonly saline; other examples include Dakin's solution and Prontosan).

VAC Veraflo Therapy system received a CE mark in March 2017 as a class IIb medical device. Each component part of the system, including sterile foam dressing kits, tube sets, and electrically powered accessories, are also

individually CE marked.

Innovative aspects

- 2.2 VAC Veraflo Therapy system differs from other negative pressure wound therapies because it is designed to apply and remove a cleansing solution, as well as giving automated cycles of negative pressure wound therapy. The technology allows for repeated cleansing without needing to remove the dressing.

Intended use

- 2.3 VAC Veraflo Therapy system is intended to be used to treat acute infected or chronic wounds that do not respond to standard care and need additional therapy to promote healing and wound closure. Clinical scenarios that result in acutely infected or chronic non-healing wounds include surgical site infections, diabetic foot ulcers, and pressure ulcers, which NICE has published recommendations and advice for.
- 2.4 The technology is used by healthcare professionals, such as surgeons, podiatrists, and tissue viability nurses, in hospital. Healthcare staff using the technology will need training, which is provided by the company.

Costs

- 2.5 The costs for VAC Veraflo Therapy system (excluding VAT) include:
- VAC Veralink canister (average cost for 500 ml and 1,000 ml cannisters £34.06)
 - VAC Veralink Cassette (£19.37)
 - VAC Veraflo Dressings (average dressing cost £84.36)
 - rental of the VAC Ulta Therapy Unit (£16 per day).

It is assumed that consumables are changed 3 times a week.

For more details, see the [website for VAC Veraflo Therapy system](#).

3 Evidence

Clinical evidence

The main clinical evidence comprises 19 studies

- 3.1 The evidence assessed by the external assessment centre (EAC) included 19 studies, all of which were full-text peer-reviewed publications. Of the included studies, 9 were comparative studies (3 randomised controlled trials and 6 observational studies) and 10 were single-arm observational studies. The comparative evidence included a total of 636 people, of whom 365 had VAC Veraflo Therapy system, 222 had negative pressure wound therapy, and 49 had dressings. For full details of the clinical evidence, see [section 3 of the assessment report in supporting documentation](#).

There are not enough data to make a meaningful comparison with advanced wound care

- 3.2 Of the 19 studies included by the EAC, only 2 compared VAC Veraflo Therapy system with dressings (Chowdry and Wilhelmi 2019; and Deleyto et al. 2017). Both studies were retrospective, and the EAC said that their methodology and reporting were not high enough quality to have confidence in the results. The EAC concluded that there was not enough evidence to be able to assess the clinical benefit of VAC Veraflo Therapy system over advanced wound care.

The randomised controlled trial by Kim et al. (2020) is the most robust evidence

- 3.3 The EAC considered the randomised controlled trial by Kim et al. (2020) to be the most informative study. It was in scope, made a relevant comparison (VAC Veraflo Therapy system compared with negative pressure wound therapy), had a

relatively large sample size (n=183, randomised), and a relatively high methodological quality. The study included people with acute (28%) or chronic (72%) wounds of various types. These included diabetic ulcers (43%), pressure ulcers (17%) and surgical wounds (13% dehisced and 13% non-dehisced). The EAC considered the other randomised controlled trials by Yang et al. (2017) and Kim et al. (2015) to be of limited relevance.

The observational comparative studies are generally retrospective and of limited methodological quality

3.4 The EAC considered all the comparative observational studies to be of poor methodological quality. It concluded that it was not possible to confidently say that the intervention caused the reported outcomes. Common weaknesses included:

- poorly reported patient selection
- small sample sizes
- use of historical control groups without an adequate description of how these were selected
- lack of statistical matching
- lack of confidence in how endpoints were measured, recorded and reported.

The EAC considered that none of the single-armed studies provided data that could reliably inform estimates of relative treatment effects for wound care in the NHS. This was because several of the studies reported descriptive outcomes only and there was also substantial heterogeneity in study populations and wound characteristics.

Heterogeneity in the study populations and variation in care pathways make it difficult to generalise data to the NHS

3.5 The comparative evidence covered a range of populations. Some studies

included people with a specific wound type, while others involved a range. According to the EAC, the heterogeneous nature of the study populations, combined with the relatively small patient numbers for each wound type made interpretation of results in specific patient groups difficult. Also, none of the studies were in the NHS or reported on UK populations.

The available evidence suggests that VAC Veraflo Therapy system reduces bacterial bioburden but the clinical significance of this is unclear

- 3.6 One randomised controlled trial reported a statistically significant ($p=0.02$) reduction in bacterial bioburden (the number of bacteria in the wound bed measured in colony forming units) compared with negative pressure wound therapy (Kim et al. 2020). This was measured from the time of initial surgical debridement and first dressing change with VAC Veraflo Therapy system. This was supported by data from a smaller randomised controlled trial ($n=20$; Yang et al. 2017) and the comparative observational study (Goss et al. 2012), which also reported a reduction in bioburden with VAC Veraflo Therapy system after 7 days of therapy. The EAC highlighted that the clinical significance of this outcome was unclear.

It is not certain if VAC Veraflo Therapy system has better outcomes than negative pressure wound therapy

- 3.7 One randomised controlled trial reported no significant difference in its primary endpoint: the number of follow-on surgical debridements for VAC Veraflo Therapy system compared with negative pressure wound therapy (Kim et al. 2020). Apart from a reduction in bioburden, there was no significant difference between VAC Veraflo Therapy system and negative pressure wound therapy for any other secondary outcomes. These included the number of inpatient operating room debridements, time until wound closure or coverage, the proportion of wounds closed, and the number of wound complications. The EAC concluded that there was no evidence to support the claims for VAC Veraflo Therapy system of a reduced need for debridement or other follow-on treatments, and improvements

in wound healing, compared with negative pressure wound therapy.

The evidence to support claims of a shorter hospital stay is weak

- 3.8 There was weak evidence to suggest that VAC Veraflo Therapy system is associated with a shorter hospital stay than negative pressure wound therapy in some populations. These included people with acute wounds of the lower limb (Omar et al. 2016), people with infected extremity and trunk wounds (Gabriel et al. 2014, Kim et al. 2014) and people with surgically dehisced wounds (Kim et al. 2020; subgroup analysis only).

There is no published evidence on health-related quality of life or patient-reported outcome measures

- 3.9 There was no evidence on the following clinical management outcomes: number of dressing changes, number of amputations or skin grafts, staff time, and use of other consumables. There was no published evidence on health-related quality of life or patient-reported outcome measures.

Cost evidence

The company's comparators are negative pressure wound therapy and advanced wound care in 4 clinical scenarios

- 3.10 The company presented a cost calculator model that compared VAC Veraflo Therapy system with negative pressure wound therapy or advanced wound care. The model evaluated 4 clinical scenarios (lower limb, mixed wounds, prosthetic implant and surgical site infections) and combined the data to estimate a total cost for the whole population (the base case). The model assumed that surgical debridement was needed after treatment and that operating room visits and operations were for debridement only. It also assumed that consumables needed changing 3 times per week. Nurse training time on VAC Veraflo Therapy system was believed to be negligible and was not included. The main clinical parameters

driving the model related to length of hospital stay, length of therapy, and the number of surgical debridements needed. Parameters were derived from 7 comparative studies. When all 3 parameters could not be sourced from the same study, the company applied scaling factors using data from another study. The 3 sources of costs in the model were from the therapies themselves, surgical debridement and hospital stay.

The company's estimates show cost savings over the comparators

- 3.11 The company's base case results estimated a cost saving using VAC Veraflo Therapy system of £3,251 per patient compared with negative pressure wound therapy. It was £8,312 per patient compared with advanced wound care. The main driver for these cost savings was a shorter hospital stay in the VAC Veraflo Therapy system arm. The company's sensitivity analyses reported that the technology was cost saving in all of the individual scenarios that were used to inform the base case (from £300 to over £13,000). Results from a one-way deterministic sensitivity analysis found that changing individual parameters did not affect the overall direction of cost savings, but that cost savings were most sensitive to parameter or cost changes in length of stay. For full details of the cost evidence, see [section 4 of the assessment report in supporting documentation](#).

The overall modelling approach used by the company is not appropriate

- 3.12 The EAC said that combining results from different clinical scenarios is not a usual method of establishing a base case. It said that a more appropriate approach would be to use a broader population as the base case, followed by scenario analyses for different subgroups. The EAC did not believe the model population was well defined, noting that the different populations included were likely to overlap. The EAC also noted that the company had used simple averages to estimate parameters in the base case, and these had not been weighted by study sample size or by underlying prevalence. The EAC did not agree with the company's method of estimating missing clinical parameters using scaling factors based on data from different studies. The EAC believed that, because of the

amount of structural and parameter uncertainty, the results from the company's sensitivity analyses were uninformative.

There is a lack of confidence in the informing clinical data

- 3.13 The EAC noted that most of the clinical parameters used in the company model were derived from retrospective studies with low methodological quality. Some of the studies involved people who did not match the scenario described. Three of the studies used by the company were excluded by the EAC in the clinical evaluation because they used a previous version of the technology (VAC Instill).

The EAC's changes to the model result in VAC Veraflo Therapy system costing more than negative pressure wound therapy

- 3.14 The EAC revised the company's model to address some potential limitations by:
- Including 2 new scenarios using relevant data from 2 additional studies (Kim et al. 2020 and Omar et al. 2016). The randomised controlled trial by Kim et al. (2020) was regarded by the EAC as the most robust evidence and was the closest to being considered appropriate for populating parameters on clinical effectiveness.
 - Only using data reported within a single study for each scenario. In the absence of data, length of stay was assumed to be the same as length of therapy. When a study did not report the number of surgeries or debridements in both arms, no debridement costs were incurred.
 - Updating technology costs to reflect current prices and excluding additional procedural costs that the company had included for the 'prosthetic implant subgroup'.
 - Modifying some inputs concerning resource use and rounding techniques.

The EAC's base case (which used data from Kim et al. 2020 only) found VAC Veraflo Therapy system to be more costly than negative pressure wound therapy for all cost domains (length of stay, therapy and debridement), with

an overall cost difference of £480 per patient. The EAC did not report a base case for VAC Veraflo Therapy system compared with advanced wound care because there were not enough data to inform this analysis.

It is not certain that VAC Veraflo Therapy system is cost saving

- 3.15 Although the EAC made changes to the company model that aimed to improve accuracy and consistency, its analyses had similar limitations to the company's because there was not enough clinical evidence. The EAC's scenario analyses showed that VAC Veraflo Therapy system was cost saving in all scenarios except for the EAC base case and that cost savings were mainly from shorter hospital stay. Results from probabilistic sensitivity analyses on the base case scenario showed a point estimate cost difference of £471 (95% credible interval -£1,085 to £2,015). The EAC highlighted that, because the credible interval crossed zero, it is not possible to draw conclusions from this analysis. The EAC's probabilistic sensitivity analysis at a scenario level showed that cost savings with VAC Veraflo Therapy system were highly likely in 3 out of 9 scenarios. But there was considerable uncertainty in the other 6 scenarios. Based on these results, the EAC concluded that the cost saving potential is highly uncertain.

4 Committee discussion

Clinical-effectiveness overview

VAC Veraflo Therapy system shows promise but there is not enough evidence of its clinical benefits

- 4.1 The committee noted that the evidence for VAC Veraflo Therapy system compared with negative pressure wound therapy was mainly from retrospective observational studies of low methodological quality. It agreed that, given the substantial heterogeneity in different patients (including age and comorbidities), wound types and wound characteristics, such studies are not an appropriate basis for estimating relative clinical effectiveness. It also noted that the most robust evidence (the randomised controlled trial by Kim et al. 2020) showed no statistically significant clinical benefit for VAC Veraflo Therapy system compared with negative pressure wound therapy. The clinical experts explained that, in their experience, VAC Veraflo Therapy system has shown benefits over standard negative pressure wound therapy for appropriately selected people with difficult to heal wounds. The clinical experts said they had seen a reduction in dressing changes, faster tissue granulation, shorter wound healing time, and a shorter time to surgery. The committee felt that the technology showed promise and plausibility based on clinical expert advice, but that this was not supported by the available evidence. The committee concluded that there was not enough good-quality evidence to make a definitive judgement about the benefits of this technology compared with negative pressure wound therapy or advanced wound care in the NHS.

Negative pressure wound therapy (without instillation) is the relevant comparator for VAC Veraflo Therapy system

- 4.2 The committee heard from clinical experts that VAC Veraflo Therapy system would normally be used in place of, or as a temporary alternative to, negative pressure wound therapy. The clinical experts explained that advanced wound

care was of limited relevance as a comparator because it would be used earlier in the care pathway, and sometimes also after treatment with VAC Veraflo Therapy system or negative pressure wound therapy. The committee considered negative pressure wound therapy to be the most appropriate comparator.

The evidence is heterogenous in terms of patient population and reporting

- 4.3 The committee noted that the patient populations in the evidence are heterogeneous, involving a mixture of people with different wound types and comorbidities. The clinical experts agreed that the patient population eligible for VAC Veraflo Therapy system is complex and broad. They also highlighted that the clinical pathway for people with non-healing wounds is not clearly defined and that clinical practice varies. The clinical experts said that the decision to offer VAC Veraflo Therapy system requires specialist knowledge and experience. They added that it is used slightly differently in each of their clinics because of the different types of wounds they treat and the different aims of therapy. One expert said that in their clinic VAC Veraflo Therapy system is used after debridement, especially for people who have an infection to help with healing. They also said that VAC Veraflo Therapy system is most commonly used in people with diabetic foot problems before limb salvage. The committee was aware that outcome reporting is particularly problematic in this field because of the heterogenous population and setting, as well as the use of non-standardised definitions and measurements. The committee concluded that the complexity of the population, together with the heterogeneity of the available evidence, makes generalisation of study results difficult.

Relevance to the NHS

The best available evidence does not reflect NHS practice

- 4.4 None of the available published studies were done in the UK. The most robust evidence for VAC Veraflo Therapy system came from a multicentre randomised controlled trial done in the US (Kim et al. 2020). One of the clinical experts

explained that wound management in the US is likely to be very different from the NHS. The trial (Kim et al. 2020) involved specialist tertiary centres where the aim of treatment is to surgically debride wounds to acute status. Microbiology is then reviewed every 48 hours until definitive or reconstructive surgery can be done to close the wound. In these centres debridement may be done several times until microbiology results are sterile. The clinical experts said that this does not happen in the NHS. They also noted that in most of the included studies chronic wounds were debrided back to an acute wound status before VAC Veraflo Therapy system treatment was applied. Because of this, they said caution was needed when interpreting its clinical efficacy in chronic wounds based on these studies. The clinical experts also explained that in the NHS many people with wounds eligible for treatment with VAC Veraflo Therapy system are not treated by acute surgeons but by tissue viability nurses and vascular clinicians. Other clinical experts also agreed that the care pathway evaluated in Kim et al. (2020) did not fully reflect their experience of using VAC Veraflo Therapy system in the NHS. The committee concluded that the evidence does not fully reflect NHS practice and that data from non-UK studies are likely to have limited generalisability to the NHS.

Outcome measures

Length of hospital stay may not be an appropriate primary clinical outcome

- 4.5 The clinical experts said that, given how the technology is used in the NHS, length of hospital stay is likely to be a poor choice of outcome and does not take into account other important clinical outcomes including quicker time to surgery (plastic surgery), better overall wound healing, and reduced negative pressure wound therapy time. One expert said that the technology could increase the patient's length of stay but reduce the overall impact on other services because of faster healing. It was also noted that length of hospital stay may be confounded by other factors, such as hospital discharge procedures and the availability of community care. The clinical experts agreed that, to fully understand the clinical benefits of the technology in the NHS, the entire wound healing journey should be considered. They also agreed that wound closure is the

most important outcome. The committee concluded that the outcome of length of hospital stay may not be an appropriate primary clinical outcome.

There is no evidence on important clinical outcomes

- 4.6 Some important clinical outcomes from the scope had not been reported in the evidence. In particular, none of the published evidence reported health-related quality of life and patient-related outcome measures (such as pain). The committee agreed that this was a substantial omission, and that how VAC Veraflo Therapy system affects patient experience is poorly understood. One clinical expert also explained that improving the quality of granulation tissue in the early healing stages was an important benefit of the technology that was not captured in the evidence. The committee concluded that further research would be helpful on the technology's effect on these outcomes.

Other patient benefits or issues

VAC Veraflo Therapy system has plausible benefits for people over standard negative pressure wound therapy

- 4.7 The clinical experts said that people who are offered treatment with VAC Veraflo Therapy system have usually had a non-healing wound for months and that this is likely to have made their quality of life poorer. They explained that when people see the rapidly improved appearance of their wound, which can happen after treatment with VAC Veraflo Therapy system, it can give them much-needed hope. The experts said that in their experience people tend to accept and respond well to therapy. They said other potential benefits were fewer dressing changes, and less wound exudate, odour and spoiling of clothing and bed linen.

VAC Veraflo Therapy system may benefit people with protected characteristics under the Equality Act

- 4.8 The committee heard that people who are older or physically disabled are more

likely to have chronic and complex wounds. People with certain family origins (South Asian, Chinese, black African and African-Caribbean family origins) are more prone to poor wound healing because of their increased risk of diabetes. Age, disability, and race are protected characteristics. The committee also heard, however, that people with serious mental health or cognitive impairment may have difficulty keeping the system in place. The committee concluded that people with disabilities, including those with serious mental health or cognitive impairment, would not be disadvantaged by the recommendations. This is providing that clinicians act in the interest of their patients, in line with their usual responsibilities.

NHS considerations overview

VAC Veraflo Therapy system is intended to be used temporarily to promote wound healing

- 4.9 The clinical experts explained that in the NHS VAC Veraflo Therapy system is used as a temporary treatment at a specific point in wound healing to speed up wound healing. They explained that it's usually used for about 2 weeks and that when the wound bed improves, treatment is changed to standard negative pressure wound therapy or standard wound care with dressings. One expert explained that once a wound has a good level of granulation tissue it can be treated with conventional dressings. They said that people are routinely discharged with open wounds that are then managed in community care. The other experts noted that in their experience VAC Veraflo Therapy system is used as a bridging therapy and helps reduce the time between surgical treatments by preparing the wound bed for reconstruction.

VAC Veraflo Therapy system should be used in hospital by specialist healthcare professionals trained in using it

- 4.10 The clinical experts said that, because of the complexity of the wounds, a multidisciplinary team, including a trust specialist trained in using VAC Veraflo Therapy system, should decide when to offer treatment with VAC Veraflo

Therapy system and when to stop it. The clinical experts thought that this level of specialism was not widely available in community care. Also, using the system in community care is difficult because of the frequency of dressing and other consumable changes. The clinical experts said that it is only offered in secondary or tertiary care. One clinical expert added that offering VAC Veraflo Therapy system in a community setting should not be ruled out if appropriate support mechanisms are in place.

A standard dwell time of 10 minutes and cycle length of 3.5 hours should be considered for VAC Veraflo Therapy system

- 4.11 There was no evidence on the best dwell time and cycle length for VAC Veraflo Therapy system. The clinical experts explained that the instillation fluid needs enough dwell time to infiltrate the wound and for the exudate to mix with the solution for it to be effectively removed. They said that the VAC Ultra device comes with standard manufacturer recommended settings, but that it also enables healthcare professionals to modify settings based on clinical judgement. The clinical experts noted that in their experience the standard setting of 10 minutes dwell time and a 3.5 hour cycle length recommended by the manufacturer is normally appropriate for most wounds. One said that in some situations they increase the number of cycles to every 1 hour to 2 hours at the beginning of therapy to speed up wound healing. The committee concluded the standard settings recommended by the manufacturer were appropriate.

Cost modelling overview

Any cost modelling using the available evidence is likely to be flawed

- 4.12 The key clinical parameters that drive cost savings estimates in the economic modelling, such as surgical debridement and length of stay, were very uncertain. This is because the evidence was mainly made up of retrospective observational studies from outside the UK, and because of uncertainties in the relationship between length of stay and length of therapy. The committee noted that there

were no well-designed studies in the NHS. It concluded that more research was needed to establish the clinical and cost benefits of VAC Veraflo Therapy system in the NHS and that in the meantime any cost modelling was likely to be flawed.

Further research

Randomised controlled trials of VAC Veraflo Therapy system in the NHS are needed

The committee concluded that further research is needed to address uncertainties about the clinical effectiveness of VAC Veraflo Therapy system compared with negative pressure wound therapy alone in the NHS. It advised that research should compare VAC Veraflo Therapy system with negative pressure wound therapy in randomised controlled trials in NHS hospitals. The clinical experts said that there are difficulties with running high-quality trials in wound care. These include nursing time, funding, and difficulty recruiting enough patients because of a possible lack of equipoise (that is, clinicians and trial participants may be unwilling to risk randomisation to a treatment that they believe to be inferior). Despite the challenges, clinical experts said that high-quality randomised controlled trials were still possible and necessary. The committee agreed that the most important outcome should be time to complete wound closure. Other outcomes should include health-related quality of life (including pain outcomes) and length of therapy with VAC Veraflo Therapy system and its impact on length of hospital stay.

The committee also encouraged data collection from registries. It agreed that large-scale real-world data collection in the form of registries may help future decision making around the adoption of VAC Veraflo Therapy system. For example, in providing confidence in assumptions made in the economic modelling.

5 Committee members and NICE project team

Committee members

This topic was considered by NICE's medical technologies advisory committee, which is a standing advisory committee of NICE.

Committee members are asked to declare any interests in the technology to be appraised. If it is considered there is a conflict of interest, the member is excluded from participating further in that evaluation.

The minutes of the medical technologies advisory committee, which include the names of the members who attended and their declarations of interests, are posted on the NICE website.

NICE project team

Each medical technologies guidance topic is assigned to a team consisting of 1 or more technical analysts (who act as technical leads for the topic), a technical adviser and a project manager.

Rebecca Brookfield

Technical analyst

Kimberley Carter

Technical adviser

Victoria Fitton

Project manager

Update information

Minor changes since publication

December 2025: Medical technologies guidance 54 has been migrated to HealthTech guidance 566. The recommendations and accompanying content remain unchanged.

ISBN: 978-1-4731-7527-3