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Bringing Humanising Influences to Critical Care Through the Natural Environment: Collaborative Evaluation of the new Critical Care Garden at James Cook University Hospital

Summary Report

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Introduction

Over a period of around 9 years until his death in 2017, my brother, Ian, had numerous admissions to ICU at James Cook University Hospital, Middlesbrough. An autoimmune condition led to many episodes of critical illness during which time he suffered paralysis and an inability to breath without mechanical ventilation. Ian endured very long stays in ICU between periods of remission. As a family, we spent many hours by his bed including numerous Christmas days. I had never visited an intensive care unit before. The experience is traumatic on many levels but, in addition to the immense stress and uncertainty of the situation we found ourselves in, the impact of this stark clinical environment is profound.

I am a designer and artist. Since setting up my studio in 1996, I have worked on numerous public art projects across the UK. My work includes large-scale glass, light and sculptural installations in architectural and landscape settings. Over the years, consistent feedback on the projects I have completed has been that people find the works 'uplifting'. Inspired by nature, spaces are transformed through light; colour; beautiful forms and materials, with the effect of positively impacting our experience and mood. They bring a bit of joy!

Physical environments really do impact how we feel, and my experience of ICU made me acutely aware of potential challenges and barriers to recovery that could result from spending time in these highly clinical surroundings. Along with bio-scientist, Professor Paul Chazot of Durham University, I am co-founder of the Enlighten Project. For several years now we have been exploring how changes to the physical environment, particularly in health and critical care settings, can improve well-being and recovery. Through this work I met some amazing staff at James Cook University Hospital and learned of their desire to create a garden for critical care. I was delighted to be able to help with this mission! The budget was limited – funded by charitable donations and unlike previous art and design commissions, this project had no formal commission process. It came about because a group of us were passionate about making it happen and volunteered our time and skills to achieve it.

I embarked on a design process over the course of a year that involved regular meetings with staff and former patients. Along with many practical considerations, my approach to the design was evidence-based and guided by biophilic design principals. Choice of materials, lighting and sculptural forms have been carefully considered with the aim of creating a gentle, sensory experience – a healing space.

One year on we can begin to reflect on the impact of the garden. As time has passed, doctors have started to recommend visits to the garden as part of a patient's treatment plan. Nursing staff I have spoken to mention that they notice patient's breathing rates slow down as they spend time in the space – a clear indication of becoming more at ease.

For a more formal evaluation of the garden, the Enlighten Project invited Dr Sheila Quaid of Sunderland University to carry out a qualitative study, the main findings of which are presented here. Practical perceptions of what works well, what could be improved, and more general observations of the experience of the garden have been recorded. I think this study clearly demonstrates the benefits of humanising our healthcare spaces through evidence-based art and design. Healing Spaces North East CIC seeks to continue this important work, positively transforming healthcare environments.

Dr Laura Johnston

Healing Spaces

March 2024

Foreword

"Staff were brilliant, they saved my life, I can't ever forget that. I'm very grateful to them" (Former Patient)

This evaluation begins with a heartfelt tribute to NHS staff. The above quote is just one of many from former ICU patients. It is illustrative of the feelings that all participants and all members of ICU community had for the staff who cared for them.

Funding for this project was awarded by UKRI Participatory Research Fund (2022/23) through University of Sunderland and as a result I established a collaboration for knowledge exchange and research with Durham University and the Enlighten Project in 2022/23. This study sits within a broader ongoing discussion about the case for natural spaces in hospital environments. The process for evaluation started over a year ago following the completion and installation of the new garden for the ICU unit at James Cook University Hospital. I was approached by the designer and artist Dr Laura Johnston who designed the garden, and she asked if I could provide some sort of evaluation of the usefulness of the garden. The initial idea was to find out how the garden was being experienced and, if possible, to find out whether this garden does indeed make a difference to the mental well-being of patients in a crisis and contributes positively to their recovery experiences.

The early part of the process consisted of visits to staff in the ICU unit that were facilitated by Dr Laura Johnston, and I met with nursing staff, occupational therapy staff and clinical consulting staff. The first attempt at an evaluation was quite simple in terms of a comments box and hospital staff on the ICU unit were asked to place comments within a sealed box surrounding the use of the garden and how their patients had found it. These initial discussions and consultations with staff were incredibly important, and useful in the creation of a more in-depth qualitative approach. The methodology is carefully designed to sensitively explore perspectives and gain insights from stakeholders, practitioners and to elicit how former (post occupancy) patients experienced and felt about the garden. Initial findings detailed here will contribute to further explorations in the future with current occupancy patients. The ongoing aim beyond this evaluation is to produce further applicable evidence of health outcomes achieved from the provision of natural environments in hospitals. By using an iterative process, I created interview formats for all three participant groups. The data came from this series of qualitative interviews with the three groups: stakeholders, practitioners and former patients who had experienced the garden in question. The method and process are detailed in the evaluation.

I was able to participate and engage with the ICU community through ICU Steps Tees group in Middlesbrough. This organization was created by former patients who have experienced critical care. This amazing self-help group offers mutual support to former patients, relations and friends and people close to them. The group meets regularly, at least every month. My connection with them was arranged and facilitated by the designer and artist Dr Laura Johnston. Through a series of visits, I engaged and participated in their activities, and I learned how important it is for former patients to have a comfortable and safe space to talk about their experiences. It was through this connection and participation in the group that I was able to meet several former and some very recent patients who had spent time in the James Cook University Hospital ICU and had used the garden. They responded very positively to the project.

Further to this, as a researcher I gained new and insightful experiences. During an interview with a senior clinical consultant, she referred to the unique environment of ICU. Once the interview was completed, she asked me if I had ever been in an ICU ward and my answer was that I had never had that experience. She suggested that as the researcher I should see and feel the daily reality of ICU. She then invited me to spend an afternoon with her and a team of consultants and a team of senior nursing staff on the ICU ward just for the purpose of gaining an inside view and experiencing the environment. This was a momentary experience but one of the highlights of my research experience to date. More importantly this gave me a clear insight into the sensory and technical environment in which people are dealing with the most traumatic moments of their lives.

The techniques used in this initial evaluation provide preliminary proof of concept for developing an ongoing evaluation of the same garden, and potentially more hospital gardens. The methodology works, and therefore, can be developed for larger scale and ongoing qualitative studies of hospital gardens in the UK. As we move forward, we intend to use the data from these interviews to refine the process, return to James Cook and gather further insights from current occupancy patients and incorporate further hospital gardens.

Dr Sheila Quaid

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Background

"Not being able to see out of the window, and the knots in the wood being the only view. I shall never forget the rapture of fever patients over a bunch of bright-coloured flowers" – Florence Nightingale

A short stay in hospital is something most of us will experience throughout our lives. It is both a familiar and foreign environment, in equal measure for the average person. Over centuries and decades, hospitals have evolved, concurrent with developments in modern medicine and technology on which we rely.

Victorian and Edwardian hospitals championed green spaces as contributors to healing. Over time, these spaces have arguably been 'designed out' of hospitals. The argument that having access to outdoor space facilitates recovery is long documented and growing in evidence. This is particularly so for those patients receiving critical care, confined to the ward for months at a time, reliant on hospital staff for even the most basic act, and under constant artificial light and noise. It is this sentiment which underpins this evaluation.

Opened in August 2022, the critical care garden at James Cook University Hospital aims to provide patients some respite from the clinical environment, offering a place to reconnect with loved ones and the outside world. Designer and artist Dr Laura Johnston designed the space, with her expertise in sculpture and the study of light at the heart of its design. In the time since the installation of the garden it has been used for an 18th birthday party, a wedding, a party to celebrate the one-year anniversary of the garden, and a Christmas gathering and celebration with staff and colleagues. It was profoundly moving and impactful in the lives of ICU patients and their friends, partners, and families to mark these significant events in this beautiful and tranquil space.

This subsequent project aims to evaluate the impact of the Critical Care Garden at James Cook University Hospital. The evaluation will gather multi-layered insight relating to:

1. Understanding patient, visitor and staff experiences of the garden and impact on a range of outcomes from biomedical, to mental health/well-being, to recovery.

2. Critically reviewing the garden's successes, whilst providing clear, actionable recommendations for the James Cook University Hospital Garden, along with future considerations in the event similar projects are undertaken in other hospitals or spaces of care provision.

The overall evaluation is a collaboration between South Tees NHS Hospital Trust, HEIs and senior stakeholders within the critical care field. An inter-disciplinary approach is employed, combining insight curated by Professor Paul Chazot from a scientific and biomedical perspective, with qualitative and anecdotal evidence gathered by Dr. Sheila Quaid. This report details findings and recommendations relating to qualitative exploration.

Executive Summary

- Underpinning the idea of a garden specifically for critical care patients, was a clear informed understanding that the ICU experience is unique and distinct from other hospital wards.
- In addition to a design-led approach, the collaborative effort between those responsible for the garden's design and those working in the hospital with experience of critical care was significant in ensuring the space was fit for purpose.
- Practitioners felt the garden had clearly been designed with clear thoughtfulness and consideration to the critical care experience, drawing on examples of distinct areas of the garden, areas of light and shade, along with the overall flow of the space.
- The decision to take patients to the garden was firstly dependent on staff availability, and secondly whether the patient will be able to spend enough time in the garden to positively outweigh the organisation that is needed to get them there. An hour was generally considered the upper limit for a garden visit. This represents a new clinical decision in the Intensive care setting.
- The act of removing oneself from a particular environment, into a new one to reduce feelings of stress or anxiety seems obvious within the context of daily life but is near impossible for patients in critical care.
- The garden overwhelmingly provided such an opportunity for patients.
- It is common for visitors to use the garden, rather than have friends and family of patients spend time on the ward.
- The most significant impact of the garden on patients' wellbeing and emotional state, is that the garden represents a return to their lives and thus, an increased motivation and hope to get better, mitigating some of the negative impacts of sustained time on the ward.
- Time spent in the garden, it was noted, was the only time in which patients could experience privacy in a way we might typically expect.
- It was noted that visits to the garden represented the only time in the critical care patients' experience in which hospital staff were not 'doing' something for them, which was felt to be important in increasing their sense of independence.
- The garden was considered a space which facilitates and builds rapport between staff and patient, by reframing the relationship.
- Highly significant biological benefit, was the observed impact of being outside to experience the cyclical nature of night and day i.e., assisting the circadian rhythm so it can be normalised, going some way to counter the artificial environment of the ward.
- Practitioners especially, consistently reflected on the garden as a therapeutic space, a space of healing both emotionally and physically. They expected this to have a long-term benefit for patients, via the garden mitigating some of the psychological effects of the ward and reframing the experience even in only a small way, from unfamiliar, overwhelming, and chaotic.

- While measuring biomedical impact, or scientific impact on recovery is difficult, there was overwhelming anecdotal evidence that usage of the garden leads to quicker and more seamless recovery due to their ability to reintegrate back into their life more effectively. Impact of time outside on sleep, reducing delirium and reinstating the circadian rhythm are all known contributors to recovery, which the garden facilitates.
- The garden was considered a space which facilitates and builds rapport between staff and patient, by reframing the relationship.
- Participants reported an increased sense of motivation to recover following visits to the garden. Nurses and hospital staff reported clear increases in emotional wellbeing and ability to care for/build rapport with patients.

The summary above offers a snapshot of compelling evidence that natural environments have overwhelmingly positive outcomes. All in all, this helped provide a middle ground between the hospital and their regular life.

For many patients, the thought of leaving the hospital can induce fear or trauma response, they are grieving their former life, unsure if they will ever get back there and are extremely uncertain about the future. Hospital staff and patients alike, agreed that the garden gently reintroduces patients back into socialising, having agency over themselves, provides a space where they do not 'need' nurses to do everything for them, where they get to experience privacy for the first time in weeks or months. Responses indicated that the garden offered a reintroduction to society, at their own pace and comfort, during one of the most traumatic experiences of their life.

Considerations and recommendations for future success

An ability to demonstrate the impact:

- Moving away from positioning the garden as a 'nice to have' and towards something that has clear and significant implications on recovery and subsequently meaning a small short-term investment can have long-term financial impacts for the NHS.
- Buy-in from all levels within the ICU environment:
- Better communication of the benefits to move reorientation and rehabilitation using the garden into something considered priority.
- Ultimately, while practical barriers to usage will always be present (such as practitioner time/capacity to facilitate usage), having those within the ICU environment at all levels be committed to this idea will help mitigate some of those barriers and provide justification for usage/ expansion.
- At the time of interviews staff were overstretched and it's sometimes easier to simply provide care on the ward, with a universal understanding of the benefits this should bring to a culture of using the garden being preference and priority.

Addressing the bureaucracy of the system:

- This garden only came to fruition because of a select group of very determined individuals. For the garden to be created formal channels (such as applying for distinct space or funding) were deliberately avoided. Instead, a disused hospital space was used (which thankfully turned out to meet the needs) and the garden relied on donations.

- While the approach was both admirable and ultimately successful, this approach is unlikely to be sustainable in the event gardens are rolled out elsewhere. There won't always be an empty space waiting to be salvaged. Nor will there always be people around to donate, meaning the quality of these gardens will vary greatly and thus, have varying degrees of success.
- For expansion to be successful, there needs to be openness from senior NHS stakeholders to allow those involved with the creation of such gardens to state their case and follow formal channels.
- The ability to apply for funding through formal channels will also ensure any gardens are as effective as possible. While the designer was ultimately happy with the garden and saw the success of it, control over certain elements was removed due to financial constraints, and certain elements were ultimately not included as a result of such constraints.

Collaboration between design and practicality:

- This is imperative to the success of any garden as it creates a space that balances sufficient usage of the space with creation of something conducive to healing, ultimately anyone can create a garden, but the design-led approach in this instance contributed a great deal to the feeling created within the garden. Not everyone can create a beautiful space that evokes emotion and that people actively want to spend time in.

Section 1: justification and development of the ICU garden

"A day in ICU costs the NHS thousands of pounds, so any way you can speed up that process is beneficial to all." (Stakeholder)

Broad justification

As outlined in the introduction of this report, there has been a longstanding discussion within the medical community and further afield about the benefits of natural spaces in aiding patient recovery. Those under critical care are arguably the group of patients for whom the emotional and physical impacts of these natural spaces would most benefit.

Regarding the James Cook University Hospital Garden, the stakeholder group demonstrated a longstanding sentiment that a) there was a lack of outdoor space for critical care patients generally, and b) that other outdoor spaces around the hospital were wholly unsuitable for those on the ICU.

Thus, developed the idea of the James Cook Critical Care Garden, facilitated through a handful of key individuals from medical, academic and design backgrounds which foresaw a clear benefit in the **creation of such a space**.

The garden's primary objectives are to:

- **Provide a space that significantly contrasts with the artificial environment of ICU and reconnect patients with a more organic and natural setting.**

The evidence collated and presented thematically in the sections below suggests that this objective was met.

- **Improve some of the physiological impacts of being on the ICU, including sensory deprivation, sleep issues, delirium etc.**

The evidence collated and presented thematically in the sections below suggests that this objective was met.

The garden also has a secondary objective to:

- **Provide staff with a space to feel calm, to re-charge, take a moment to recuperate during their shift and socialise with other staff.**

Covid-19

Ultimately, the Covid-19 pandemic served as the driving force behind the critical care garden, which exacerbated established problems within ICU, such as a high-pressure environment for staff, and bringing with it new problems such as families no longer being able to visit relatives on ICU.

"People realised there was a need because during Covid we were completely segregated. Even the staff couldn't sit together. It was almost like you didn't have anywhere to be, those long hours in PPE on the unit, it was exhausting mentally and psychically, you just wanted to break free. That's how I felt, but how must it have felt for patients" (Stakeholder)

Section 2: Understanding the ICU experience

The ICU environment

When asked to describe the ICU environment, artificial and unfamiliar were examples of words overwhelmingly given by participants.

Participants reflected that the experience of 'waking up' in ICU is extremely jarring and distressing for patients, who tend not to know how or why they ended up on the ward. For some patients, a significant amount of time may have passed, causing severe confusion and fear.

"I went into a different hospital for a very simple surgery, sadly things went wrong and I was transferred to James Cook Intensive Care. I'd been in there for four days on a ventilator, I lost four days of my life and that was very hard afterwards to come to terms with" (Former Patient)

The description of the ward being 'artificial' and 'unfamiliar' generally referred to the function of the ward, in that both lights and machinery are on 24 hours a day. At the outset, this can contribute to a patient's confusion and fear. However, sustained exposure to this can have a range of impacts, explored in more detail later in this section.

Overall, participants felt strongly that ICU was not wholly comparable to the experience of other wards, true for both patients and staff alike. Patients came to the ward as a result of a traumatic event, however being on the ward can be in itself traumatic, with lasting impact.

Biomedical impact of ICU

The ICU environment can have significant biomedical effects on patients, mostly as a result of the artificial environment and 24-hour nature of the ward. This environment, compounded with heavy sedation and other medications can create severe symptoms among patients.

"There was one moment where the tiles on the ceiling, I thought they were moving, I thought the room was moving, I thought it was a dream, but it took me a while to understand what was happening." (Former Patient)

It is impossible to say whether medication, the environment, or trouble sleeping for example is the sole reason for a symptom such as delirium. It was much more widely accepted in the discussions that these elements are interconnected and work together to form a patient's symptoms. Sensory deprivation was also commonly noted, as a result of patients being immobile and present on the ward for substantial stretches of time. Significant trouble sleeping was also mentioned, because of the consistent lights and machinery.

Emotional and wellbeing impact of ICU

"Confusing, frightened, disorientating" (Former Patient)

In addition to the biomedical impact of being on ICU, stakeholders and practitioners noted a significant impact on patients' wellbeing, emotional and mental state whilst on the ward.

Practitioners also reflected on the long-term impact of ICU, which tended to refer to the emotional rather than medical or biological. A stay in ICU, whether short or more substantial, can cause lasting impact on the person due to the traumatic and chaotic nature of the experience, despite staff efforts to make their stay as comfortable as possible. Some practitioners gave examples of ex-patients struggling with avoidance, dissociation, or symptoms of PTSD.

"Everything you do for yourself; we are doing that for patients. Even down to brushing their teeth, re-positioning them as they sleep. We have to support every organ in the body" (Practitioner)

Long-term impact of ICU

Practitioners also reflected on the long-term impact of ICU, which tended to refer to the emotional rather than medical or biological.

We fix people in one way, but not in another. We fix the sepsis, or whatever they've come into the ward with, but we damage them in another way, with sleep deprivation, delirium, the sounds and things. There are long-term effects." (Practitioner)

A stay in ICU, whether short or more substantial, can cause lasting impact on the person due to the traumatic and chaotic nature of the experience, despite staff efforts to make their stay as comfortable as possible. Some practitioners gave examples of ex-patients struggling with avoidance, dissociation, or symptoms of PTSD.

Impact on visitors

Unsurprisingly, the ICU experience can also have a negative impact on patients' family, along with staff on the ward. Hospital staff noted that family members can often be highly distressed, reflecting that the environment can be significantly more emotionally draining compared to other wards.

"Relatives on the ward tend to be very upset, especially if their loved one has been in a major accident, they're a lot more distressed" (Practitioner)

Section 3: usage of the ICU garden

Patients

Patients with a range of symptoms and/or reasons for being on ICU will visit the garden. Their ability to do so and thus, approval of this by hospital staff is dependent on a series of key indicators.

The most obvious indicator of readiness to use the garden is their point of recovery. Medically unstable patients, those on heavy sedatives, those requiring constant ventilator usage or those that have recently received a medical procedure are understandably not able to visit the garden.

"They wheeled me down in my bed with all the equipment, and I would say from that moment, going into the garden, it was a turning point of my improvement." (Former Patient)

Time spent in the garden varied for patients depending on their point of recovery at the time. Anything between twenty minutes for patients just becoming well enough to visit the garden, up to an hour for those that are able to stay that long. Also, patients may occasionally stay longer in the garden in order to host family and friends visiting, rather than have them visit the ward. This was felt across the board to be a much better experience for both visitor and patient, particularly for children visiting the hospital who can become quite distressed by the ICU environment and observing incredibly sick patients. One patient had even had their family dog visit the garden.

"It doesn't have to be for a lengthy amount of time. It might seem like a small thing, but it's a very big thing for them" (Practitioner)

Staff

As detailed in the initial section of this report, the secondary objective of the garden was to create a space for staff to unwind and take much needed breaks, in order to provide a general sense of wellbeing.

"If you look after your staff, your staff do a better job. By giving them a space like this they'll do a better job, if they've got time for a break and somewhere nice to go. My office doesn't have any windows, so for me it's therapeutic, you can have a proper break here" (Practitioner)

Stakeholders, who include senior hospital staff noted that the garden is well used by patients, visitors, and staff alike, reporting that staff use the garden while on breaks, or after hours (though this was less common).

Barriers to using the garden

There were several barriers to using the garden, usually practical, which reduced the opportunity for its usage among patients and visitors. Time constraints and logistical barriers were often noted as interlinked.

It was common for hospital staff to report having responsibility for more than one patient. It was sometimes possible for one patient to use the garden, ensuring the other was being looked after by another member of hospital staff. However, in instances in which the ward was particularly busy, staff were typically unable to take either of their allocated patients to use the garden.

Practitioners talked often about the logistics of having patients in the garden, which typically requires at least two staff members to make the short journey from ICU. Therefore, the decision to take patients to the garden was firstly dependent on staff availability, and secondly whether the patient will be able to spend enough time in the garden to positively outweigh the organisation needed to get them there.

Section 4: response to, and perceptions of the critical care garden

Response to the garden

Bright

Escape

Airy

Tranquil

Welcoming

Words consistently used to describe the garden...

Time spent in the garden was felt to have a significant impact on patient wellbeing, emotional state, belief in ability to recover and their motivation to do so. Participants collectively reflected on how this ultimately influenced recovery.

Emotional benefits of the garden

Overall, all the core benefits of the garden stem from one overarching element, that is, the act of removing patients from the artificial and overtly clinical environment of ICU. Being away from the clinical space serves to provide a feeling of calm and serenity, which can ultimately have a motivating effect on patients.

"It brought a bit of colour back to my face as well [being outside] and made me think, there is life still going on.... It gave me hope and determination that I can do this, I can move on, get better" (Former Patient)

A reconnection to the outside world cannot be understated in importance regarding patients. The environment created makes a switch, between the sensory stimulation found on ICU, with constant machinery, lights, and movement, to a positive sensory experience with nature at its center.

Participants talked consistently about increased feelings of 'hope', and this sentiment was felt by some to be reflected in the elements of the garden itself.

"We had a patient who was very depressed... he had been in critical care for 70 days. After he came back, [from the garden] he said to us, I can't thank you enough for making me go down there" (Practitioner)

Time spent in the garden, it was noted, was the only time in which patients could experience privacy in a way we might typically expect. Of course, hospital staff remained in the garden during patient visits, but were able to move away to allow patients to experience time alone or give privacy to them and their visitors.

Perceived medical benefits of the garden

When describing the biomedical impacts of the ward, such as sensory deprivation or delirium, there tended to be an acknowledgement that these symptoms were exacerbated by sleep issues. When reflecting on the physical impact of time in the garden, sleep was most commonly noted.

Perceived long-term impact of the garden

When asked to reflect on long-term impact of the garden on patient recovery, there was an acknowledgement that this by nature is difficult to measure. However, practitioners especially, consistently reflected on the garden as a therapeutic space, a space of healing both emotionally and physically. Stakeholders and practitioners alike felt that providing patients with at least some positive experiences during their time on ICU, would aid their recovery and ability to reintegrate back to their previous life more seamlessly than those without access to the garden.

Perceptions of design-led approach

"Having the artist on board was truly transformational. If you sit in the garden at night-time, with the lights on, with the peace and quiet it is truly amazing. Had we not had the input of the artist, we would have had 'a place' but it's now an 'amazing place' and that's the benefit of having a designer right from the beginning" (Stakeholder)

The main benefit of the design-led approach can be summarised as the interaction between the two, distinct requirements of the space. Firstly, the space must be usable, practical and logistically sound, offering patients and staff the most seamless experience in terms of ability to access and use the garden. Secondly, in order to see the desired benefits on patients, the design required stylistic and creative consideration to impact wellbeing, connection to nature and so forth.

The space had clearly been designed with the patient in mind, particularly in regard to the bench height and also the height of plants etc. Patients were able to see and experience all elements of the garden without issue.

"I think the sculptures are very important, they're beautiful... I personally think the sculptures do help" (Former Patient)

Section 5: Designer and artist Dr Laura Johnston reflection on the garden

Laura Johnston's work focuses largely on 3D and sculptural design with specialism in glasswork, with particular exploration into the way glass and light can impact people's wellbeing, and how this connects to the natural environment. Over the course of her career, she has designed many spaces which anecdotally have provided a feeling of uplift among users.

Laura's motivation to lead the design of the JCUH critical care garden, was also a personal one, having experienced ICU as a visitor over a sustained period of time due to illness within her family. With this in mind, Laura's prior experiences of ICU meant she was already familiar with the emotional and medical impacts of the ward, ultimately driving her motivation to create a space that sufficiently contrasts this environment.

Laura demonstrated an understanding of the broader ramifications of leaving one's environment, even if only for a short while.

Reflecting on the development of the garden, Laura described the approach as holistic in nature which was imperative to the garden's success. Again, the collaboration between practical and design elements was ultimately responsible for the creation of an effective space.

Laura noted that the research and design process enabled the creation of a truly unique space, with bespoke sculptures and designs adding to the facilitation of a very specific environment.

While the overall response to the garden would arguably deem it a significant success, designer and artist Dr Laura Johnston was able to critically reflect on both the process and the outcome.

Ultimately, the garden was largely paid for via donations rather than formal funding streams and while the garden is clearly an effective space, formal funding streams and mitigation of budget constraints would have provided more control over design elements.

This was particularly true for the 'soft elements' of the garden, mostly relating to the planting scheme.

Section 6: Final considerations for future success

- For expansion to be successful, there needs to be openness from senior NHS stakeholders to allow those involved with the creation of such gardens to state their case and follow formal channels.
- The ability to apply for funding through formal channels will also ensure any gardens are as effective as possible.
- The case for the garden has been made clear, but the added layer of design-led approach was integral to the garden's positive impact. Not only creating a space that was suitable, but one that used art to invoke emotion, offer escapism from the confines of the ward.
- Ultimately, while practical barriers to usage will always be present (such as practitioner time/capacity to facilitate usage), having those within the ICU environment at all levels be committed to this idea will help mitigate some of those barriers and provide justification for usage/ expansion.
- For visitors to use the garden rather than have friends and family of patients spend time on the ward. This was felt across the board to be a much better experience for both visitor and patient, particularly for children visiting the hospital who can become quite distressed by the ICU environment and observing incredibly sick patients.
- With all this context in mind, there is a clear need to create or provide a sense of normality for ICU patients. Normality in a biomedical sense, experiencing outside, natural light to help with their sleep and circadian rhythm. But patients talked about normality in an emotional sense, spending time away from the ward (its lights and noises) to be with family and friends.

Concluding Thoughts

The evaluation report presents compelling evidence that natural environments have overwhelmingly positive outcomes. This project is a small-scale initial evaluation of one garden in one hospital in the northeast of England. The limitations of qualitative research were related to the small-scale nature of the investigation. Nevertheless, the evaluative process has provided proof of concept, and a sound methodology that will be scaled up for a larger ongoing project. My role as PI on this project and researcher/ interviewer has offered one the most rewarding pieces of research that I've been involved in. This project has given a depth of insights, a rich data set, emotionally difficult moments at times but ultimately the beginning of with a clear plan for further evaluation.

Dr Sheila Quaid

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To find out more, please contact:

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To see the full report go to:

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