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# Arts-based approaches to public engagement with research

## Lessons from a rapid review

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# Preface

There is growing interest in the use of approaches to public engagement with research that use the arts to facilitate engagement. However, there is a lack of systematic and consolidated learning about how arts-based approaches work in practice and about their effectiveness. To help respond to this gap in the knowledge base, The Healthcare Improvement Studies (THIS) Institute at Cambridge University commissioned RAND Europe to conduct a rapid review of the evidence, considering the following key questions:

- Why are arts-based approaches used for public engagement with research, and what do researchers aim to achieve by using arts-based approaches?
- What does arts-based engagement with research look like in practice, and what influences how it unfolds?
- What is known about the effectiveness and impact of arts-based engagement approaches, and are some types of approaches more likely to be used for particular research topics and contexts?

In this report, we first outline the context for the review, its aims and the methods used (section 1), and present a profile of the reviewed literature (section 2). We then discuss the findings in relation to the key questions outlined above. In section 3, we consider why arts-based approaches are adopted for public engagement with research (3.1) and what they seek to achieve (3.2); how decisions are made about which approach to use, how arts-based approaches work in practice, and who contributes to and benefits from these approaches (3.3-3.5); and what influences how they unfold (3.6). Section 3.7 considers what is known about the outcomes and impacts of arts-based engagement. Section 4 presents case-vignettes of arts-based engagement, and section 5 ('Conclusion') reflects on the insights gained.  A separate Annex document accompanies this report. This includes: Annex A, which provides further detail on the study design and methods; Annex B, the interview guide for expert interviews; and Annex C, which provides further details on the outcomes and impacts of the arts-based public engagement approaches covered in this review.

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# Summary


**There is growing interest in the use of arts-based approaches for public engagement with research but a lack of systematic and consolidated learning about their use and effectiveness. This review responds to the gap.**

## Context and aims

Researchers, research funders and policymakers are increasingly interested in supporting effective ways of engaging the public with research. In part, this is related to efforts to increase the public understanding of research and the relevance and impact of research on society. Public engagement has the potential to promote dialogue, critical thinking and the exchange of ideas and experiences that are relevant to efforts to maximise research impact. It creates opportunities for learning and sharing expertise between researchers and the public, and can help empower people from diverse stakeholder groups to contribute, understand and respond to research. The term 'the public' can refer to patients, the lay public and communities, as well as to other stakeholders such as healthcare staff, research funders, policymakers, students and the wider research community.

Within the wider theme of public engagement with research, there has also been a growing interest in using arts-based methods for engagement. This is associated with efforts to make research content more relatable and accessible to audiences who may not relate well to more traditional engagement methods. Some examples of more traditional methods include dissemination through journal articles, or workshops that rely on verbal or written communications centred on technical content. However, despite a growing interest in the use of the arts for the purpose of public engagement with research, there is as yet little consolidated and systematic evidence on whether and how these approaches work in practice.

Against this context, The Healthcare Improvement Studies (THIS) Institute at Cambridge University commissioned RAND Europe to conduct a rapid review of the evidence base on the use and effectiveness of arts-based approaches for public engagement with research. THIS Institute aims to use this learning to help inform its public engagement activities.

The review examines the following key questions:

- Why are arts-based approaches used for public engagement with research, and what do researchers aim to achieve by using arts-based approaches?

- What does arts-based engagement with research look like in practice, and what influences how it unfolds?
- What is known about the effectiveness and impact of arts-based engagement approaches, and are some types of arts-based approaches more likely to be used for particular research topics and contexts?

### Methods and associated caveats

In order to answer the questions on arts-based public engagement with research as set out above, we conducted a literature review that followed the principles of a rapid evidence assessment and complemented this with interviews with six experts in the field of arts-based public engagement. We reviewed 54 publications in total, of which 44 were academic journal articles and 10 were grey literature sources. The primary interest of this review was in the use of arts-based engagement approaches in a health and healthcare context, but we also drew on learning from some other sectors (including some particularly innovative approaches that, although applied outside the health and healthcare field, appeared readily applicable within it). The pool of papers to include was jointly decided on through prioritisation with THIS Institute and in light of the review's inclusion criteria and scope.

This approach has helped ensure a comprehensive exploration of key approaches to pursuing arts-based public engagement with research and associated influences on their processes and impacts.

However, there are some caveats to bear in mind when interpreting the findings from our review. We consulted a limited number of leading experts on the topic but recognise that there are other individuals whom we did not consult and whose views could help refine some of the insights gained. For example, we did not have the capacity within the scope and timescale of this study to interview those on the receiving end of arts-based engagement efforts as members of an engaged audience, although we incorporated insights from the literature on this front. We also reviewed a substantial body of literature but cannot claim to have reviewed all documents on the topic, and much of the literature we drew evidence from refers to engagement efforts that have not been rigorously evaluated. While almost all the literature we identified and included in this review relates to researcher-led projects, this may not necessarily represent the breadth of arts-based engagement in practice. For example, there may be projects using arts-based approaches for engagement with research that are led by stakeholders other than researchers, but this was not explored within the scope of our review. These and other caveats are expanded on in the full report.

Despite these caveats, we believe that the diversity of issues explored in our review and the stakeholder perspectives considered ensure a well-informed resource of practical value for those considering using arts-based approaches to stakeholder engagement with research.

## Profile of the reviewed literature

The majority of included publications are journal articles identified through searching the academic literature (N=44, 81%), and within this set, the majority present the results of original research studies (40 publications). We identified only four review articles that met our inclusion criteria. The remaining ten publications were identified through a search of grey literature and include three reports, three blog posts and four other web-based resources including web-based guidance, a summary of an academic article, a news article and a web-based case study. The majority of the reviewed publications have a primary interest in the topic of arts-based

public engagement with research (N=42, 78%), while the remainder have a primary interest in studying an issue in a specific research area but also use and describe arts-based engagement approaches as part of the study. A diverse range of arts-based approaches are considered, spanning theatre (N=13); video, film and animation (N=11); other types of diverse visual displays, e.g. infographics and digital graphics (N=9); photography (N=8); drawing, painting or sculpture (N=7); performing arts other than theatre, e.g. dance and audio-drama (N=3); games, including video games, board games or street-based games (N=3); immersive art installations (N=3); and other approaches used less frequently, including some that incorporate literary-arts elements, e.g. storybooks, comic books and poetry (N=7). Some publications cover more than one arts-based approach, so the numbers cited do not match the number of publications reviewed.

The included publications focus primarily on diverse research areas in healthcare (N=36), including healthcare service delivery (either generally or for specific health conditions), public health and health promotion. This is complemented with learning from publications considering the use of arts-based engagement approaches in other societal contexts (N=7), for example, in relation to issues such as homelessness, youth violence and urban planning, and from publications that examine the use of arts-based engagement in the social and natural sciences as research disciplines more generally (N=6). A small number of articles (N=5) focused on arts-based engagement in general without reference to a particular research discipline. The publications included in the review draw on learning from approaches used in diverse country contexts, e.g. the United Kingdom (UK), Canada, the United States (US), Australia or studies covering multiple geographies. Further detail on the profile of the reviewed literature can be found in the full report.

## Why do researchers choose to use arts-based approaches to public engagement with research, and what do they aim to achieve through their use?

Based on our analysis of the literature, there are two key reasons why researchers select an arts-based approach for engaging the public with research. The first reason relates to a desire to find more effective ways of engaging stakeholders – particularly when a broad and diverse audience needs to be engaged with on complex or sensitive topics or when specific communities who may not find traditional research outputs accessible need to be reached. The second driver relates to some funders' external expectations of using non-traditional approaches to public engagement, including arts-based approaches, in the belief that this can increase research impact.

Through the use of arts-based approaches, researchers aim to achieve one or more of the following:

- To effectively raise awareness about a research topic and research findings.
- Based on awareness-raising, to pursue impacts on specific stakeholders – such as to mobilise change in behaviours amongst specific stakeholder groups or changes at policy level.
- To use insights from arts-based public engagement efforts to inform the research process and direction.

## What does arts-based engagement look like in practice?

Approaches to arts-based engagement span:

**The visual arts:** photography and Photovoice (a method that uses photography to help participants capture and reflect

on issues of interest and that emphasises community engagement and the promotion of social change), videos (film and animations), digital media, drawing, paintings, sculpture and a variety of visual-based public displays designed to engage the public in research as their core interventions.

**Performing arts:** theatre, storytelling through audio dramas, and other expressive art forms such as dance, body mapping (a visual technique through which bodily experiences of participants are considered and shared), and music.

**Games:** video games, a board game, and street-based games.

**Immersive art installations:** these can incorporate multiple arts-based techniques and be exhibited as pop-up installations, for example, at festivals.

**Other approaches that were identified less frequently in the literature:** e.g. comic books, storybooks, oral histories, poetry.

Engagement efforts may adopt a single approach or combine multiple types of arts-based interventions. Decisions about which types of arts-based interventions to use are tied to the aims of the associated research or engagement activity, the specific stakeholder groups that are relevant and the topic and wider engagement context. However, the relationship between these factors is not straightforward, and the selection of a specific approach to use is typically driven by a collection of project-specific factors that need to be considered on a case-by-case basis. We found no robust evidence to suggest that some approaches work better for specific types of research topics, engagement aims and stakeholder contexts.

Most arts-based engagement approaches include some key stages, such as conception, planning and establishing collaborations and securing funding, producing the arts-based intervention, and delivering the arts-based engagement approach to an intended audience. Some also include a stage of critical reflective discussions or workshops and some form of evaluation – although often based only on an element of audience feedback, rather than more comprehensive and robust evaluation processes and methods. There can be variety in how different stages manifest themselves, and the stages in the engagement effort may not progress in a strictly linear fashion– some approaches entail a degree of emergence and feedback such that the original design of an approach may be revised and improved through time, new partners added to the effort, or the scope of a topic revisited.

Collaboration between stakeholders can occur across all stages, but the way in which researchers collaborate with artists or other stakeholders such as patients, local communities and the wider public, healthcare professionals, other professionals (e.g. IT engineers and technical experts in content production), and research funders can vary. This depends on factors such as the aims of a project, the resources available for collaboration, researcher views on the role that different stakeholders should play in designing, developing and delivering the arts-based engagement approach, and on the nature of relationships between collaborators.

In addition to the core arts-based intervention (i.e. the artistic output, such as a theatre performance, immersive art installation or photography exhibition), various

complementary activities may be included to support the intervention. This could include training elements for those who participate in the development and delivery of an arts-based approach. Some examples include training researchers on an arts-based method, training artists about a research topic, or educating an audience about how a piece of art will be delivered, e.g. how forum theatre – a type of interactive drama where the cast and/or audience can intervene in the flow of events – works. It can also include critical reflective discussions or workshops to provide a space for stakeholders to engage more deeply with the art and the research, often after delivering the arts-based output.

## What influences how arts-based public engagement with research unfolds?

A variety of features of the arts-based public engagement approach and the context in which it unfolds influence the process of engagement and impacts thereof. The key types of influences identified in the literature relate to:

- The features of the arts-based engagement approach and its associated interventions.
- Resource availability and infrastructure.
- Relationships and collaboration-related influences.
- The skills and experience of stakeholders involved in the design, development and delivery of the engagement approach or as its recipients (i.e. as audiences).
- Additional influences relating to the ability to achieve impact from a delivered engagement intervention(s), such as building in evaluation components and stakeholder support for dissemination and uptake-related activities.

Table 1 below provides further detail on key issues that matter in relation to these influences.

**Table 1. Key influences on arts-based public engagement with research**

| Type of influence | Key messages |
|---|---|
| Features of the arts-based public engagement approach and of its associated interventions | **Relevance and accessibility of content:** The arts-based engagement approach pursued needs to resonate with the interests, experiences, values and beliefs of intended audiences and be sensitive to the context in which it is being deployed. The appropriate approach needs to be decided on a case-by-case basis.<br>**Complexity of components**: Overly complex intervention designs can hinder effective engagement. There is a need to balance breadth and depth in the scope and scale of issues being covered. Some arts-based engagement interventions may need an upfront explanation to a target audience prior to their implementation to manage challenges associated with the complexity of an engagement approach and research topic.<br>**Style of delivery**: It is important to balance the emphasis on an engagement approach's scientific and artistic elements. |

| Type of influence | Key messages |
|---|---|
| Resource availability and infrastructure | **Financial resources:** Maintaining relationships and interactions with diverse stakeholders involved in the design, development and/or delivery of arts-based public engagement interventions can require a significant financial investment. It is important to mitigate against a mismatch between researcher or research institution ambitions related to an engagement exercise and the degree of stakeholder interaction that can take place in light of available resources. Resource constraints can mean that intensive engagement and co-production can sometimes be compromised for a more transactional approach that is focused more on responding to a specified brief.<br>**Time:** Arts-based engagement approaches are rarely quick to develop and implement, especially considering the relationships that need to be built with diverse stakeholders. It is also important to ensure timely intervention delivery to an intended audience.<br>**Facilities:** The facilities used to deliver must be fit for purpose – accessible, aligned with the budget of a project, and suitable for the theme that is being engaged with. Sometimes the most appropriate setting is one that intended audiences are familiar with and see as a safe and comfortable space. In other cases, it may be appropriate to take stakeholders outside of their comfort zone deliberately – depending on the aims of engagement, the research topic and the targeted stakeholder groups.<br>**Governance and administrative infrastructure**: Important governance and administrative considerations include clarity in contractual arrangements between collaborators, agreements on intellectual property issues related to resulting artworks, attention to ethical concerns regarding data security and privacy issues for participants in engagement efforts, and timely payment of contributors. The governance of arts-based public engagement projects also needs to ensure appropriate rewards and/or recognition for participants, including acknowledging their contributions and providing feedback. There can be challenges to ensuring sufficient support for arts-based public engagement activities at the institutional level, as research institutions tend to prioritise traditional outputs, such as publications. |

| Type of influence | Key messages |
|---|---|
| Relationships and collaboration-related influences | **The ability to recruit and retain the right stakeholders:** Many arts-based public engagement projects in the healthcare field require the involvement of diverse stakeholders across research, artist, healthcare professional, patient and the wider public, and at times policy and research funder communities. These stakeholders can contribute to the design and development of an intervention and its delivery. Many projects require the involvement of researchers from different disciplines across the natural and social sciences. Representatives of target audiences are sometimes involved in the design and development of an intervention and not just as recipients, and bring lived experience to an arts-based public engagement approach. Engaging the right stakeholders and nurturing their contributions throughout time is important for bespoke interventions that are fit for purpose, although the extent to which continuous engagement can be nurtured depends on resources available. Investing time and effort to ensure an appropriate communication approach to mobilise stakeholder engagement is important, including getting the language used to recruit stakeholders right, and in some cases getting the buy-in and support from senior leaders in a setting where individuals to be engaged with are based.<br>**The importance of consulting stakeholders on the design of arts-based public engagement interventions, and on implementation and adoption issues:** Two-way, interactive engagement can help support a collective and immersed engagement experience but can be challenging to achieve. It is important to invest in building relationships of trust and mitigating against power-imbalances (e.g. between researchers, artists, community representatives), and creating shared understandings of a research topic and the engagement tasks at the onset of the engagement effort. Clear communications can be supported by enabling stakeholders to express their contributions in ways that they are familiar with (which sometimes requires non-verbal or non-written communications or translation and interpretation activities to address linguistic barriers) and through the use of facilitators to help avoid or deal with misconceptions or misunderstandings. Whereas the overall requirements for an arts-based engagement effort can be planned, the interactions between involved stakeholders need to allow for a degree of emergence and unpredictability. Researchers sometimes need to relinquish a degree of control that they may be accustomed to and allow sufficient freedom of expression and experimentation to artists involved in developing engagement interventions.<br>**Context-awareness and context-sensitivity:** The design and delivery of arts-based approaches for public engagement with research need to be done with sensitivity to the cultural, political and socio-demographic context in which a research topic is being explored and stakeholders engaged. |

| Type of influence | Key messages |
|---|---|
| Skills and experience of stakeholders | **Technical and social skills**: Both technical skills (e.g. in the sciences and arts) and social skills (e.g. collaboration skills) are important for successful arts-based public engagement projects.<br>**Prior and lived experience**: Some of the literature identifies previous public-engagement and participatory-research experience to be enablers of arts-based public engagement efforts. Important and relevant skills for the design, development or delivery of the intervention can also come from lived experiences of those involved (e.g. communities that are being engaged with).<br>**Training and skills-building**: Many arts-based engagement projects include an element of training or skills-building, for example, in relation to explaining an engagement process, research topic or arts-based intervention to stakeholders prior to its development or delivery. Talking to people who have designed, developed and delivered arts-based public engagement approaches in the past can help those seeking to develop capabilities in this space. Some approaches also include training or skills-building resources into the dissemination approach (e.g. training resources to accompany an arts-based intervention). |
| Influences related to realising impact from engagement | **Building in evaluation mechanisms:** The success of an arts-based public engagement intervention is important for understanding impact and informing future efforts. However, many arts-based public engagement projects are faced with financial resource- and data-related challenges to robust evaluation.<br>**Timely feedback and financial support for uptake-related activities:** The availability of timely feedback and adequate financial support (e.g. for applying findings from an engagement project within target communities) is also important for efforts to maximise impact.<br>**Stakeholder support for dissemination activities and promotion:** Stakeholder support with dissemination and investment in promoting the results of the engagement effort can support efforts to achieve impact. |

## What is known about the effectiveness and impact of arts-based engagement approaches?

The evidence base on the effectiveness of arts-based approaches for public engagement with research is limited by a lack of systematic evaluation. These types of engagement approaches are challenging to evaluate, not least because their aims are not always clearly established at the onset of an approach, as different stakeholders can bring different interests into the process. The emergence that characterises the development of some arts-based interventions can add an additional layer of complexity for evaluators. There are also various practical barriers to robust evaluation, such as resource constraints and the fact that many arts-based engagement approaches are confined to particular contexts – meaning that it is difficult to produce generalisable evidence or do comparative evaluations and randomised controlled trials.

An analysis of the evidence base suggests some key considerations for evaluators. These include the need for evaluating interventions in real-time and not only after the fact to ensure that formative feedback can be of value for improving the development and delivery of the intervention; tailoring the evaluation methods and approach to the stakeholders and context in which it is being undertaken; ensuring appropriate evaluation skills within the

evaluation team; and considering a diversity of outcomes and impacts affecting different stakeholders.

Despite the limitations in the existing evidence base, we identified a diverse range of both intended (desirable) and unintended outcomes and impacts (both desirable and undesirable) from the use of arts-based engagement approaches in research (see Table 2). This includes evidence on outcomes and impacts for the research studies that may use an arts-based approach to engage the public with research (and the teams and institutions with which they are associated), artistic collaborators and members of the community targeted by the engagement efforts. Multiple outcomes and impacts can be associated with the same project.

**Table 2. Types of outcomes and impacts from using arts-based engagement approaches with research**

| Category of outcomes/and or impact | Examples of specific outcomes and/or impacts |
|---|---|
| Helping researchers to meet their goals for public engagement (i.e. achieving engagement as a goal in itself) | • Increased audience awareness of the empirical evidence or developments on a particular topic<br>• Creation of spaces for debate and dialogue around pressing societal issues<br>• Increased research accessibility (for instance, in cases where language, literacy, or cultural barriers exist)<br>• Increased audience engagement with research content (e.g. by stimulating the senses and tapping into emotions)<br>• Raising the profile of the research study, programme or institution |
| Improving the quality or effectiveness of current and future research and public engagement activities | • Creating new knowledge or alternative ways of thinking about the research topic<br>• Building sustainable relationships to support further research or other opportunities<br>• Building capacity and implementation support for arts-based engagement efforts<br>• Informing the design of further engagement efforts or dissemination strategies<br>• Creating high-quality artistic outputs and enriching experiences as the basis for public engagement |
| The achievement of wider research impact through arts-based public engagement activities | • Empowerment of individuals to manage their own lives or contribute to their communities<br>• Change in (or intention to change) individual behaviour within the target community<br>• Impact on local culture or community resources<br>• Practice, programme or service change (or impact on policy debate) |

| Category of outcomes/and or impact | Examples of specific outcomes and/or impacts |
|---|---|
| Unintended consequences | Positive:<br>• Social support, improved well-being or therapeutic benefit through the normalisation of experiences for members of the target audience or those involved in co-production of the arts-based engagement approach<br>• New projects or collaborative opportunities following on from initial activities for stakeholders<br>• Leveraging further funding for arts-based engagement efforts<br>• Increased visibility for a researcher/team/research institution or research topic outside a researcher's discipline<br>• Improved visibility and profile for artists<br>• New connections for researchers with local communities, e.g. with charities and local service providers<br>• Identification of new topics for research or engagement based on audience suggestions/appetite<br><br>Negative:<br>• Negative emotional impacts or distress for a target audience or for stakeholders involved in co-developing an engagement approach, as a result of engaging with sensitive issues at an emotional level or due to reliving experiences<br>• Concern about personal experiences being used to create publicly-available outputs<br>• Feeling of helplessness among target audience to impact on improvement on the topic highlighted through the engagement |

## Conclusion

The insights gained through this research should help those seeking to pursue arts-based engagement approaches with research, by providing insights about what such approaches can achieve, and the various considerations that can affect their development and success and need to be borne in mind during design and delivery.

We were struck by the lack of robust evaluation in this space. At the same time, we found that the use of arts-based approaches is highly context-dependent. With this in mind, the most meaningful evaluations are, in our view, likely to be those that seek not to generalise about which approach works best for a specific purpose but instead focus on understanding how to ensure an appropriate and informed *process* for selecting any given approach; how to support implementation fidelity (but also a degree of flexibility when this is needed); and to learn about how a selected approach might be executed and delivered with maximum chances of success, including how bottlenecks can be overcome along the way and emergence dealt with. This could help inform practical guidance.

We were also struck by the prominence of specific influences on the engagement process. Whereas many of the influences on arts-based engagement processes are likely to apply to public engagement with research more generally, we identified some influences whose role may be accentuated in the context of using arts-based approaches. For example,

this includes influences related to building relationships of trust and navigating power dynamics between researchers and artists; or between researchers or artists engaging with marginalised or Indigenous communities. Similarly, considerations of autonomy versus control in the design of an engagement approach may be particularly prominent when using the arts for engagement purposes, and insights gained from our research highlight the importance of balancing the scientific and artistic elements of an intervention and providing a degree of flexibility and freedom to artists to express themselves. We were also struck by the extent to which financial barriers to achieving co-production seemed to feature in the literature, and amongst the experts we interviewed, including in the context of a mismatch between the ambitions of different stakeholders (e.g. researchers, research institutions and artists).

Finally, it is worth reflecting on the fact that the use of arts-based engagement approaches can have both positive and negative outcomes. Just as the arts are often selected to facilitate a more accessible, creative and close connection between a target audience and a research topic, they may also bring out experiences in stakeholders that may be challenging to process at an emotional level. These considerations must be borne in mind when designing arts-based engagement approaches, and mitigation and management mechanisms to deal with potential unintended and undesirable consequences should be included in the approach.

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# 1 Introduction

## 1.1. Context and approach

### 1.1.1. There is growing interest in public engagement with research and in arts-based engagement approaches

Over the last two decades, we have witnessed a growing recourse to public engagement with healthcare research [1, 2]. In part, this is related to increased policymaker and research-funder interest in creating a culture of public engagement within research institutions in order to increase research relevance, accountability and research impact, as well as public trust in science and access to knowledge and information [1]. Research institutions are also pursuing public engagement activities as part of the impact agenda and to deliver on their *"civic and social purposes"* [1, p. 7].

Our understanding of what constitutes public engagement with research is evolving, but engagement remains a somewhat ambiguous concept. Defining it is not straightforward, and definitions have evolved over time [2].

The National Institute for Health Research (NIHR) in the United Kingdom (UK) and INVOLVE (a national advisory group that supports greater public involvement) consider public and patient engagement and explain the concept of engagement as referring to roles where "*information and knowledge about research is provided and disseminated*" [3, p. 7]. The Healthcare Improvement Studies (THIS) Institute builds on the definition of engagement set out by NIHR and INVOLVE but considers 'engagement' in somewhat broader terms, seeing it as an interactive process of "*listening and sharing expertise, helping to empower people to contribute to, understand, or respond to research; helping researchers recognise and respect people's perspectives, priorities and contributions; and promoting critical thinking and dialogue about research and its role in improving healthcare*" [4, p. 8]. Through the THIS Institute lens, engagement can account for (i) dissemination, information and knowledge-sharing activities that aim to raise awareness or mobilise specific actions or behaviours in response to research findings, and (ii) for activities where engagement aims to leverage the views, expertise and experiences of the public to help inform thinking about the direction or evolving content and process of a research study. This conceptualisation chimes with the definition proposed by the National Co-ordinating Centre for Public Engagement (NCCPE), which specifies that engagement is "*a two-way process, involving interaction and listening, with the goal of generating mutual benefit*" [5].

Although the literature often uses the terms 'engagement' and 'involvement' interchangeably, 'engagement' should be seen as distinct from 'involvement', where

"*members of the public are actively involved in research projects and research organisations*" [3, p. 7]; for example, as members of panels or project advisory boards contributing to research design, data collection, analysis or interpretation. Engagement is also distinct from 'participation', which refers to roles "*where people take part in a research study*" [3, p. 7].

*Who* the public is in 'public engagement' will be context-specific. For example, in the healthcare field, this often refers to patients, carers and the lay public, but it can also include other stakeholders such as local authorities, policymakers and research funders who have a stake in the research work [6].

Within the wider theme of public engagement with research, there has also been a growing interest in using arts-based engagement methods. This is particularly relevant when researchers seek to engage audiences who may not relate well or have access to 'traditional' methods of engagement (such as research dissemination through journal articles and technical reports, or workshops or approaches focused on engagement through verbal or written communications on technical content). The use of the arts as an engagement approach takes place as part of efforts to make research content relatable and accessible [7-9]. As we discuss later in this report, arts-based approaches to public engagement come in a variety of forms, including the visual arts (e.g. photography, film and video animation, drawing, painting and sculpture), performing arts (theatre, storytelling through audio dramas, dance and music), the use of games and immersive art installations, and other less common approaches (poetry, storybooks, comic books). However, although there is growing interest in the research community on how to use arts-based approaches for public engagement with research, there is as yet little consolidated and systematic evidence on whether and how these approaches work in practice.

### 1.1.2. This review aims to examine the evidence base on the use of arts-based approaches to public engagement with research

Against this context, THIS Institute has commissioned RAND Europe to conduct a rapid review of the evidence base on the use and effectiveness of arts-based approaches to public engagement with research. The findings of this review aim to help inform THIS Institute's approach to engaging the public with its research activities. The review is interested in the 'public' in a broad sense – including patients and the general public, but extending beyond them to include other stakeholders such as healthcare staff, students, policymakers or research funders.

The review examines the following key questions:

- Why are arts-based approaches used for public engagement with research, and what do researchers aim to achieve by using arts-based approaches?
- What does arts-based engagement with research look like in practice, and what influences how it unfolds?
- What is known about the effectiveness and impact of arts-based engagement approaches, and are some types of approaches more likely to be used for particular research topics and contexts?

## Reader's guide

In the contents that follow, we first overview the methods used and associated caveats (section 1.2) and then provide a profile of the reviewed literature (section 2). In section 3, we discuss why arts-based approaches are used, i.e. what drives them (section 3.1) and

what their use aims to achieve (section 3.2), and then consider how these approaches work in practice and what influences how arts-based public engagement with research unfolds (sections 3.3-3.6). Section 3.7 then considers the state of the field in relation to evidence about the effectiveness, outcomes and impacts of arts-based engagement approaches. In section 4, we present case vignettes of the use of arts-based engagement in practice. Finally, in section 5 ('Conclusion'), we reflect on the insights gained.

## 1.2. Study design and methods

### 1.2.1. An overview

In order to answer the questions on arts-based public engagement with research as set out above, our literature review approach followed the principles of rapid evidence assessment (REA) [10]. This approach is consistent with the principles underlying systematic review methodology (i.e. having clearly defined research questions, systematic and replicable search strategies, and explicit inclusion and exclusion criteria, as set out in Table 3), but makes some allowances for the rapid delivery of information as required by restricting the scope and coverage of the review to focus on the most relevant literature. This review was complemented by interviews with key informants with expertise in the field. The REA process consisted of searching academic and grey literature, screening the titles and abstracts of the identified articles against the inclusion and exclusion criteria, and undertaking a full-text review and analysis of articles that met these criteria.

In the context of this review, we use the term 'public' in its broadest sense to include a wide range of stakeholders (not only patients, carers and the lay public, but also other stakeholders such as local authorities, policymakers and research funders who have a stake in the research work). Our search strategy and further details on the methods used for this review are set out in Annex A (in the Annex document that accompanies this report).

**Table 3: Summary of inclusion and exclusion criteria**

| Include | Exclude |
|---|---|
| **Articles of any type published in the period 2010-2020 focused on:**<br>• The use of arts-based methods including those relating to visual arts, literary arts, performing arts (e.g. theatre, music and dance) and applied arts (e.g. cinematography, video games, digital media, graphic design as applied to visual abstracts, data visualisation, animations, infographics) as per search terms<br>• The engagement[1] of stakeholders[2] in research[3] (including articles focused on research studies resulting in the development of arts-based outputs for educational, public health or other purposes)<br>• The context of the UK or other high-income country<br><br>**[1] Where engagement is defined as:**<br>• *A two-way process involving listening and sharing expertise, helping to empower people to contribute to, understand, or respond to research; helping researchers recognise and respect people's perspectives, priorities and contributions; and promoting critical thinking and dialogue about research and its role*<br><br>**[2] Where stakeholders include:**<br>• *Any adult stakeholder (including but not limited to the general public, patients, carers, healthcare staff, policymakers and funders)*<br><br>**[3] Where research refers to:**<br>• *All stages of research and evaluation on any topic* | **Articles not focused on arts-based methods explicitly, such as those focused on:**<br>• Citizen science alone<br>• TV, radio or social-media advertising e.g. for study participation<br>• Photography for factual data collection e.g. environmental features<br>• Informational videos, videos for participant recruitment, educational YouTube videos[4]<br>• 'New media tools' e.g. podcasts, blogs[4]<br>• Archives of patient narratives – in audio or video format[4]<br><br>**Articles focused on arts-based methods applied:**<br>• To the involvement of the public in the conduct of research (including in participatory action research)[5]<br>• As a research tool<br>• With school aged children exclusively<br>• As therapy<br>• To the dissemination of information in the form of knowledge or guidance not explicitly linked to research studies (e.g. evaluations of a public health campaigns or professional education/training programmes using arts-based methods - but where the content is not directly linked to research)<br>• To service design or planning rather than research<br>• In low-or-middle-income country settings<br><br>**Study protocols**<br><br>*[4] Unless they make use of arts-based approaches (e.g. drama or animation)*<br><br>*[5] Unless it also describes wider arts-based public engagement in relation to the study. For example, an article describing a Photovoice study that involves community members as co-researchers (using socially engaged photography as a research method to explore a particular issue within their community) would only be included if it also described the sharing of the findings with the wider community and/or policymakers through a photographic exhibition or other arts-based public engagement efforts.* |

The sources we discuss in this report fall into two categories: (i) those with a primary focus on the topic of arts-based stakeholder engagement; and (ii) those where the primary focus is on the topic covered by a particular research study (e.g. a particular healthcare issue), but where arts-based engagement approaches are described in the context of that study. The analyses presented in the core body of this report draw on both types of sources.

Case vignettes illustrating key insights from our review in practice are presented in section 4 (these are drawn from both the literature and insights from interviews with experts).

The experts on arts-based stakeholder-engagement that we interviewed as part of this scoping work were identified via the professional networks of THIS Institute (who commissioned this review) and based on leads from the information sources reviewed by the research team. These interviewees have agreed to be named in this report. They are:

- Dr Marie Nugent, University of Leicester, public engagement manager
- Sarah Douglas, The Liminal Space, artist and director
- Alice Carey, Wellcome, research funder
- Bella Eacott, Performing Medicine, research manager at a performance company that produces arts-based engagement interventions
- Dr Rhys Bevan Jones, Cardiff University, psychiatrist, researcher and artist
- Dr Jana Wendler, Playfuel, artist, game designer and researcher.

The topic guide for these interviews is presented in Annex B (within the Annex document that accompanies this report). Throughout the report, interview evidence is referenced in the form of "INT#"; the numbers do not follow the order list presented above. Interviewees are anonymised in relation to specific points discussed and views expressed to respect informed consent.

### 1.2.2. Caveats

This research was primarily based on a rapid evidence review of the literature and complemented with expert interviews, which added depth and nuance to the literature findings. We believe that in combining these methods, we have ensured a comprehensive assessment of key approaches to pursuing arts-based public engagement with research and associated influences on their processes and impacts. However, the following caveats should be borne in mind when interpreting the findings, due to both the nature of the rapid evidence review method adopted and the evidence base itself:

- We consulted some of the leading experts on the topic: researchers, artists, a public-engagement professional and funder involved in engaging the public using arts-based approaches, and those researching the topic of arts-based engagement. However, we recognise that further consultation with a greater number of individuals could help refine some of the insights on areas for consideration in developing engagement strategies by organisations such as THIS Institute. For example, we have not interviewed those on the receiving end of arts-based engagement efforts as members of an engaged audience or contributors to the development of arts-based engagement-approaches.
- Our research reviewed a substantive body of literature from a diverse range of sources, but we cannot claim to have reviewed all documents on the topic of interest. In total, and as elaborated on in section 2, we reviewed 54 source documents (44 journal articles and 10 grey literature sources). The literature reviewed was limited to that published in the last ten years (from 2010 to the present), so it is possible that some relevant publications were omitted on this basis. However, we did include a comprehensive scoping review paper on the topic within our review, which covered literature published prior to 2010.

- While our review's primary focus was on arts-based public engagement in the context of health and healthcare research, and our search strategy was devised with this focus in mind, we did include some articles identified through the search that related to arts-based public engagement with research in other sectors. In consultation with colleagues at THIS Institute, such articles were included on the basis that they reported on particularly innovative or interesting approaches that appeared applicable in the health and healthcare research context. However, given the focus of our search strategy, it is possible that there are other approaches used in different sectors that have not been picked up through this review.
- Similarly, we excluded from the review articles that focused on arts-based public engagement undertaken in low-and-middle-income country settings (in order to limit the scope of the review and prioritise those articles likely to most relevant in considering the application of such approaches in UK settings). Hence it is possible that we have missed some learning from studies conducted within this wider geographical context.
- Almost all the literature we identified through our searches and included in this review relates to researcher-led projects. However, this may not necessarily represent the breadth of arts-based public engagement being undertaken in practice; there may also be arts-based approaches for public engagement with research led by stakeholders other than researchers.
- In addition, it is worth noting that the terms 'engagement' and 'involvement' are often used interchangeably in the literature identified, and the distinction between the two types of activity is often not clear cut (for example, sources often report on approaches that incorporate elements of both). In order to maintain the focus of the review on the literature that was most relevant to the scoping aims, and to best inform THIS Institute's engagement strategy, we undertook a two-stage screening approach for article inclusion (an initial screening of titles and abstracts which erred on the side of inclusion, followed by the final selection of articles based on the agreement between three THIS Institute colleagues regarding their inclusion). While this process helped to ensure the relevance of included articles, it may have excluded some documents with valuable insights to offer on the topic, but which may not have been prioritised given the rapid evidence assessment approach.
- As identified in the literature itself, much of the evidence covered by the review is limited by a lack of formal/systematic evaluation. The quality of the studies included is also variable. In many of the publications reviewed, the information provided on the nature of the approaches and their impacts lacked detail. Findings on the impacts of arts-based approaches to public engagement were also often based on the authors' reflections rather than on detailed, evidence-based, validated measurement or were limited to evaluating audience responses through follow-up surveys – often with low response rates and corresponding risk of bias.

Despite these caveats, we believe that the diverse range of issues explored in this review, and the variety of perspectives considered, ensure a valuable and well-informed resource, highlighting practical and actionable issues to consider in the development and implementation of arts-based approaches to public engagement with research.

# 2 Profile of the reviewed literature

In total, we include 54 publications in our review. Here, we briefly summarise the key characteristics of the reviewed sources and then reflect on the quality of the literature covered by the review.

## 2.1. An overview of the sources

- **Type of publications:** The majority of the included sources (N=44; 81%) are journal articles identified through a search of the academic literature. Of these 44 publications, 40 (91%) present the results of original research studies, while 4 (9%) are review articles (one scoping review, one review of unpublished arts-based approaches, one literature review supplemented with expert interviews and one article that combined a rapid review with a descriptive case study). The remaining 10 sources (19% of the total) were identified through a search of grey literature, including 3 reports, 3 blog posts, 4 other web-based resources - comprising web-based guidance, a summary of an academic article, a news article and a web-based case study. Three of the grey literature sources described a single case study, while four overviewed multiple approaches. The latter were either brought together through desk research (two sources), based on a workshop, or summarising a researcher's experience in arts-based methods. Three sources set out guidance or other resources to support the planning and conduct of arts-based public engagement.
- **The extent to which a publication focuses on arts-based engagement as a primary area of interest:** We considered whether a publication primarily focuses on the topic of arts-based public engagement with research, or whether its primary focus is on another topic (e.g. studying an issue in a specific health-research area) whilst also using and describing arts-based engagement approaches as part of the study and publication. Based on our assessment, 45 sources (83% of the total pool) fell into the first category (i.e. had a primary focus on arts-based engagement), including 35 academic and all 10 grey literature sources. Eight articles (15%) fell into the latter category, considering arts-based engagement, but not as a primary focus (all of which were academic sources). One article (2%) focused on reporting the findings of a programme evaluation that used arts-based methods for data collection and sharing evaluation findings. It evaluated both the programme and the arts-based evaluation approach (and we have classified it as having an equal focus on both components).

- **The context (research topic area) that publications focus on:** We classified publications by the research topic area that they focus on. These topic areas are highly diverse, but can at a broad level be classified into the following areas: health and care service delivery and/or specific clinical conditions (N=20, 37%); public health or health promotion (N=16, 30%, of which all but one focused on addressing health inequalities among marginalised communities, with the other focusing on epidemiology); natural or social sciences as research disciplines (N=6, 11%, including astrophysics, particle physics, acoustic science, integrative and comparative biology, nutrigenomics/genetics and bioethics); or using arts-based engagement with research to address other societal issues (N=7, 13%, such as homelessness, youth violence, widowhood, integration of international students and urban planning). For a few publications, the focus was not on a specific field, but rather these publications discussed arts-based engagement more generally (N=5, 6%, including material relating to a planning/evaluation framework, guidance material relating to the conduct of arts-based engagement, and a description of a platform linking artists with researchers across disciplines).
- **Country context:** The largest share of articles focuses on arts-based engagement approaches implemented in the UK (N=18, 33%), followed by those set in Canada (N=11; 20%), the United States (US) (N=9; 17%,), and Australia (N=5; 9%), with one set in Taiwan. Of the remaining articles, seven (13%) are international in their focus (i.e. reporting on efforts implemented in multiple countries) and three provide guidance on the planning or evaluation of arts-based engagement approaches that is not country-specific (6%).
- **Types of arts-based interventions:** Diverse arts-based approaches are considered, spanning theatre (N=13); video - film and animation (N=11); other types of diverse visual displays (e.g. infographics, digital graphics) (N=9), photography (N=8); drawing, painting or sculpture (N=7); performing arts other than theatre (e.g. dance, audio-drama) (N=3); games, including video games, board games or street-based games (N=3); immersive art installations (N=3); and other approaches used less frequently (e.g. storybooks, comic books and poetry) (N=7). Some publications cover more than one arts-based approach, so the numbers cited will not match the number of publications reviewed.

## 2.2. Reflections on publication quality

We did not set out to do a formal quality assessment of the literature within the scope of this work. However, we did consider a range of features of the articles reviewed to enable us to provide a general reflection on the quality of the evidence base (including the evidence source(s) used, the clarity of the aims set out and descriptions of population and setting, and any conflicts of interest amongst the authors). We also noted any limitations that were explicitly highlighted by the study authors, and reviewers reflected on any unacknowledged limitations. Key observations are described below.

With regard to the evidence sources on which the publications are based, we found that – broadly speaking – the strength of the evidence relating to the impacts and outcomes of arts-based approaches to public

engagement is relatively weak. Thirty of the 40 included journal articles reporting on primary research, along with two of the three case studies identified in the grey literature (32 overall, 74%), describe some form of evaluative activity in relation to the arts-based engagement approach used. However, in the majority of cases, this does not take the form of a systematic evaluation. Evaluation is often limited to simple audience surveys or discussions conducted immediately after the engagement activity to gauge initial responses and short-term outcomes (N=13, 41% of those with some form of evaluation). Others use qualitative methods to explore the process of developing and disseminating artistic outputs (N=8, 25%), with some using a combination of these approaches (N=3, 9%). For one study, the evaluation approach is unclear, reporting only on participant reflections without specifying how they were gathered. Seven publications (22%) describe a more systematic or comprehensive evaluation approach – one guided by an evaluation framework, for example, or using a mixed-methods approach or incorporating a formative element to facilitate continuous improvement of the arts-based engagement approach. However, these studies are limited by the lack of a comparator and a focus on only short-term outcomes. One publication refers to an ongoing RCT, but this was still in progress at the time of the article's publication.

The authors of some of the empirical papers we reviewed also note limitations relating to the general lack or inadequacy of the evaluations undertaken, such as the sample or sampling approach used and associated risk of bias (e.g. use of convenience sampling; small samples; failure to capture the experiences of all stakeholders; low response rates or a lack of availability of information on response rate; and lack of a comparator). Many authors also noted a failure to capture relevant outcomes, particularly those related to long term effectiveness.

The reviews and reports covering multiple arts-based approaches included within our research also vary in the degree to which they take a systematic approach to identify the evidence that informs their findings. For those taking a systematic approach, the inclusion and exclusion criteria used appear to be appropriate, while for a number of included publications a more pragmatic approach to establishing which sources to include is taken, and the inclusion and exclusion criteria are less well defined.

Based on our assessment, the aims of the included articles are generally clear and well described across the publications we reviewed (with a limited number lacking some clarity with respect to intended outcomes). The target audience and setting for the arts-based approaches are also well defined in the main, although some lack detail on the specifics of how an intervention had been implemented. The majority of publications describing arts-based interventions appear to draw on relevant and informative literature in setting out the rationale for their approach and discussing findings.

We found no meaningful issues related to conflicts of interest amongst authors.

# 3 Arts-based engagement in research

## 3.1. Why adopt an arts-based approach to public engagement with research instead of other types of engagement approaches?

Across the literature reviewed, we found two key reasons why researchers select an arts-based approach for engaging the public with research:

- The first is a desire to find more effective ways of engaging stakeholders than can be achieved by using traditional research outputs (e.g. disseminating information through journal articles). This is particularly relevant when a broad and diverse audience needs to be engaged on complex or sensitive topics, or when specific communities who may not find traditional research outputs accessible need to be reached.
- The second relates to external expectations of the funder to use an arts-based approach based on the belief that it will increase the impact of the research.

We expand on each of these drivers below.

In addition, and although not a key driver for resorting to using arts-based approaches for public engagement purposes and not one we came across frequently in our research, the decision to resort to an arts-based approach can sometimes include an element of serendipity, for example as a result of chance encounters. An interviewee consulted as part of our research noted how having an office (where this expert worked in a public engagement role) based next to an arts-centre ended up creating ideas and opportunities for collaboration and for using the arts for public engagement purposes [INT1], which may not have happened otherwise.

### 3.1.1. Arts-based approaches to public engagement with research often stem from efforts to find creative and effective ways to engage with stakeholders.

As discussed in section 1.1, researchers undertake public engagement with the aim of increasing research impact, relevance and accountability, as well as potentially enhancing public trust in science [1]. The reasons for pursuing an *arts-based* approach to public engagement with research vary, depending on what the engagement activities aim to achieve and depending on the wider research topic and research context that the public engagement activity is related to [11]. One key reason is that traditional academic outputs, such as academic articles, do not reach all stakeholders. Even when they do, they may be inaccessible due to subject-specific terminology and complexity [12]. Arts-based approaches are thought to help convey complex [7-9, 13] or sensitive topics [8, 9] in

a way that intended audiences can relate to. For this reason, arts-based approaches may be used to communicate research findings and raise awareness about complex and sensitive research topics, or in efforts to help inform the research process itself when there are opportunities for learning from dissemination efforts to feedback into ongoing or future research (see section 1.2 for further detail). Arts-based methods are argued to be especially effective at communicating complex and sensitive subjects because art can use tools such as metaphors to broach such topics, providing a space where assumptions can be challenged and explored [11, INT5]. One example of this is the work of Hundt et al. (2011), who used theatre to tackle the subject of prenatal genetic screening [13]. Prenatal screening can identify foetal abnormalities such as Down's syndrome, and the results from prenatal screenings may inform women's decisions to terminate their pregnancies. As such, it is a complex and sensitive topic. Clear communication of information from health professionals that avoids coercion is viewed as critical. For this reason, the authors argue that performance is an appropriate approach, enabling questions to be raised about morality and for the audience to identify with characters.

Arts-based approaches to public engagement with research are sometimes used as part of an explicit effort to reach diverse audiences because they are argued to be more accessible approaches (i.e. more understandable and easier to physically access) to an intended audience than those based on the dissemination of traditional research outputs (e.g. journal papers). Researchers sometimes perceive arts-based approaches to be more accessible in terms of (i) content (e.g. they are generally less technical in nature), (ii) form (e.g. they rely less on written materials and may incorporate visual or interactive elements, or be presented in a format that is more familiar to an intended audience), and/or (iii) the location or avenue through which they are distributed (e.g. they may be available in a public setting as opposed to an article published in an academic journal). Researchers seeking to raise awareness about research findings amongst a broad population or engage with a diverse population to inform the research design or process may be particularly inclined to use arts-based approaches [14-18, 19, INT5]. To illustrate, an engagement project designed to raise awareness about acoustic science incorporated a travelling sculptural exhibit because the research team felt that this approach would reach a wider audience than a "*typical science exhibit*" at a science museum [14, p. 2]. The engagement team complemented the sculpture's exhibition with workshops and outreach to schools, including teacher training and online resources. By exhibiting the sculpture in four public parks across the UK along with the additional engagement resources, the project team felt that they would be better able to reach a more diverse audience than if they had limited the exhibit to science museums alone. This is because - as the authors note - only 22 per cent of adults in the UK visit a science museum each year [14].

In another example, researchers pursued an arts-based engagement approach in the form of a website that incorporated videos conveying research findings. They sought to reach three different key stakeholder groups and required an approach that was accessible to each of them [19]. Specifically, the researchers aimed to reach men with depression (and their families), healthcare providers and the general public in order to provide information on depression, support existing services for men with depression and work towards destigmatising depression in men amongst the general public. The website allowed the team to use a variety of elements

to convey information and provide engagement opportunities, including art-based elements such as videos, but also a participatory blog, podcasts with authors of the journal articles, online brochures with study findings as they relate to different target groups (e.g. college-age men, older men, and middle-aged men) and evites to invite people to visit the site.

However, arts-based approaches to engagement are not always as accessible to the targeted stakeholder group as researchers may initially believe them to be, and some facilitation might be required in order to realise the full potential of the arts-based approach. One example of this relates to the engagement approach used within an ethnographic study that examined the professional experiences of healthcare assistants in England who worked with people with dementia. Researchers involved in this study, together with a production company, developed a theatrical production based on the research findings with the explicit aim of performing the play for a group of healthcare assistants [17]. The researchers believed that a play would be more accessible to healthcare assistants than traditional academic outputs and felt strongly that their research findings should be shared with the healthcare assistants, given that they were the focus of the research. The researchers even facilitated healthcare assistants' access to the theatrical production by coordinating with local employers to grant a group of healthcare assistants leave during the day to see the play and participate in an associated workshop. However, the researchers quickly learned from audience feedback that many audience members found the play inaccessible due to its experimental and abstract nature [17]. In response, they opened the play with a short discussion explaining the context to help facilitate understanding upfront.

Arts-based approaches are also sometimes used to engage Indigenous, minority or marginalised communities [9, 18, 20-24]. Some authors argue that arts-based approaches are especially effective in engaging these communities because they can account for the skills and abilities of such populations, and help address, challenge and rebalance power relationships amongst the stakeholders involved in the engagement intervention [24]. For example, an ethnodrama (a drama that is based on transforming ethnographic research into a play) based on research findings on the health-seeking behaviours of African American men used an arts-based approach because the researchers felt that traditional approaches to dissemination often exclude important audiences, particularly the study population(s) and the practitioners who work with these populations [18]. Furthermore, they argued that "*such exclusion runs counter to current participatory research movements and can forestall deeper levels of engagement with and uptake of research findings"* [18, p. 532].

Using the arts for public engagement with research can also help when working with populations with limited literacy or language proficiency [9, 25-27]. As one example, researchers exploring women's experiences of infertility chose a drawing-based workshop method because the researchers believed it would be accessible to their research participants, who had varying levels of English language proficiency [9]. Similarly, in a project that aimed to understand how ethnically Cambodian women living in the US experience health inequalities, the researchers adopted various arts-based methods including theatre, body-mapping (see section 3.3) and interpretive art in the form of play-dough sculptures, in part to overcome barriers related to language and literacy [28]. In another example, researchers studied the needs of people from communities of colour in the US

to understand why they were not enrolling for health insurance through the Affordable Care Act (ACA) [25]. They further aimed to enhance community members' self-efficacy in relation to navigating the healthcare options available through the ACA. The researchers argue that individuals without health insurance in the US are often from communities of colour and are excluded for reasons that include the complexity of the system and literacy challenges. The research team therefore adopted an approach that incorporated animated videos that were distributed via a website to tackle challenges around literacy, believing this approach to be more accessible to the community than traditional academic dissemination approaches.

Arts-based approaches are also sometimes adopted by researchers as a means of addressing past inequalities amongst communities by engaging with historically marginalised groups throughout the research process and using collaborative approaches to dissemination [9, 21]. Researchers may be explicit in their aim of addressing past inequalities through the adoption of collaborative arts-based approaches, as was the case in a project that sought to engage the public with information on astrophysics and traditional Indigenous stories, culture and art about the night sky using art produced by the Wajarri Yamatji community in Western Australia [21]. The engagement effort entailed the sharing of stories between astrophysicists and Wajarri Yamatji artists about their perspectives on the night sky, including stories behind constellations and physics explanations for visual phenomena. From these discussions, the Wajarri Yamatji artists created over 150 pieces of art documenting the various perspectives on the night sky. As described by the author, the art exhibit's collaborative nature helped to address "*the displacement, disadvantage, and discrimination that Indigenous peoples*" have experienced [21, p. 3]. When working with marginalised communities, some researchers adopt arts-based approaches because they have been shown to be effective at promoting social change and involving members of communities in the processes of social change [23, 26]. For example, a project in North Carolina aimed to improve the delivery of mental-health interventions provided by Latina health advisers with limited English proficiency through participatory research that explored issues related to mental health. The researchers adopted a photo-based research approach for public engagement and dissemination of the results (i.e. Photovoice, see section 3.3) in part because evidence suggested it is effective at promoting social change [26]. This is due, in part, to its accessibility for policymakers, who may find it easier to engage with photos taken by members of the public than with other forms of research output.

### 3.1.2. Using arts-based approaches for public engagement with research is also sometimes driven by external expectations, such as those from research funders

External expectations from research funders about public engagement needs can also drive decisions to adopt arts-based approaches for engagement with research [29, 30]. Much research funding comes with a requirement to demonstrate research impact, and one way to do that may be through arts-based approaches [31]. However, public engagement, dissemination and impact are not the same, and researchers may sometimes confuse dissemination and engagement efforts with impact in relation to research assessments that inform funding decisions. Whereas public engagement may facilitate impact, it does not count as an impact in and of itself.

Nevertheless, our analysis of the literature suggests that there may be funder expecta-

tions for researchers to use arts-based approaches for engagement with the public to ensure it is more accessible than traditional forms of academic dissemination [29, 30]. This desire to effectively disseminate research findings to the public is sometimes seen as a requirement tied to the acceptance of public research funds [30], and arts-based approaches are sometimes perceived as an effective way of meeting this requirement in funding applications. There are also more avenues for disseminating creative, arts-based approaches to public engagement – with the rise of science festivals, for example – than there may have been in the past, which may help enable a growing recourse to arts-based approaches to engagement [31].

## 3.2. What does the use of arts-based engagement approaches seek to achieve?

As discussed above, researchers may be driven to use arts-based approaches for public engagement due to a desire to find more effective ways of engaging stakeholders with research or in light of funder expectations. What, however, do researchers aim to achieve by using the arts for engagement? In other words, with what aim and to which end-goals is arts-based engagement being applied?

Based on the literature reviewed and the interviews conducted, the most common overarching aims include:

- To effectively raise awareness about a research topic and about research findings
- To pursue impacts on specific stakeholders – such as to mobilise change in behaviours amongst specific stakeholder groups or changes at the policy level
- To use insights from arts-based public engagement efforts to inform the research process and direction.

The extent to which these aims are realised is discussed in section 3.7. Here we overview these high-level aims, supported by examples from the literature and interviews.

The desire to raise awareness about a research topic and research findings [9, 13-19, 24, 31-35, 36, INT5, INT6] or to mobilise change in behaviours in specific stakeholder groups or at the policy level are particularly frequent aims [9, 20-24, 26]. Raising awareness may include increased awareness about the empirical evidence on a specific topic [13, 14, 16-18, 31-34, 37, 38]. However, it can also include creating spaces for engagement, debate and dialogue around the research topic [9, 13, 24, 32, 35, 36, INT6] or raising the profile of a research study, programme or institution [14]. One example of an engagement intervention that aimed to raise awareness of a research topic and spur debate is the work of Taylor et al. (2017) [18]. Based on research into the health-seeking behaviours of African American men, researchers developed an ethnodrama in collaboration with a writer/performer that explored themes of "*cultural influences on diet and nutrition, inaccessibility or unaffordability of health insurance and healthcare, the emergency room as the primary interface with the medical establishment, hyper-masculine gender roles and expectations, upbringing on home remedies and traditional medicine, experiences of poor service related to race or insurance status, and distrust of the medical establishment*" [18, p. 533]. The researchers aimed to raise awareness of the research study's findings amongst the study population (i.e. African American men) and the broader community, and to do so in a way that "*gave voice to the study community*" [18, p. 533].

Mobilising change in individual behaviour or change in practice/policy at an organisational or government level is challenging (see section 3.7 for a discussion of realised impacts); however, engagement interventions may

adopt these aims. Individual behaviour-change aims are often 'soft' aims, such as raising the target group's intention to change a behaviour, e.g. tobacco use [32]. Practice or policy change is often associated with participatory action-based research approaches, such as Photovoice, which encourages research participants to take ownership of the research and its findings and use them to pursue social change [23, 26].

However, arts-based engagement approaches can also be used to provide insights of relevance for the research itself and how it evolves, for example, to help provide new interpretations of research data that can help in sense-making [17, 39]. To illustrate, a research project examining how to translate women's experiences of responses to their safety concerns in pregnancy into useful health information used insights gained from participants in the development of a health information resource for pregnant women to evolve the scope of the research study [40]. The project's objective was to create a health information resource for pregnant women in the form of an animation that would be shared on social media. During the process of developing the animation through consultations with women, the authors found that they were able to extend findings from their previous research, moving from findings rooted in women's previous pregnancy experiences into opportunities for change that offered insights into "*what could be*" [40, p. 651].

Arts-based methods are sometimes used both as part of the research process itself (as a research tool) and as a public engagement tool whereby using the arts subsequently influences the evolution of an ongoing research study (i.e. informs research direction and/or process) [9, 23, 26, 28, 41, 42]. For example, researchers employing participatory arts-based research methods such as Photovoice (see section 3.3) typically involve members of the public in collecting and analysing data that is used as part of a research study, as well as in decision-making about dissemination and the delivery of dissemination activities – i.e. as part of public engagement aspects of the project [23, 26, 41].

An expert we interviewed for this research suggested that incorporating the arts late in a research process can limit researchers' opportunities to learn from the process and respond to emergent lessons [INT6]. An example of this type of missed opportunity can also be found in the literature. For example, Weston (2019) notes that a playwright she worked with to translate her interview-based research on the impact of HIV/AIDS in a prison in Dublin, Ireland, into an audio drama highlighted gaps in the underlying research study [39]. Through her thorough review of the interview transcripts, the playwright observed a complete absence of former prisoners amongst the interviewees. The researcher noted that she would have preferred to have this insight earlier in the research process so that additional interviews could have been secured, and recommended that on future projects, arts-based engagement be undertaken in parallel with research so that these insights might be fully incorporated rather than left until the end of the research study when it may be too late to use the arts to optimise learning.

When the arts are used throughout the research project (and not only to disseminate findings once a study is completed), and when collaborations with artists are embedded throughout the research process, arts-based engagement has the potential to inform and challenge embedded aspects of the research process. This includes aspects such as the power relations underlying informed consent when researchers work with disadvantaged populations [11]. This was the case when Wellcome supported an artist in residency

as part of a global health clinical research programme [11]. One role of the artist in residency was to be a critical voice. In this example, the artist cast a critical eye on the power dynamics that existed around the informed consent process in the global health clinical research programme. The programme worked with women in Malawi whom the artist felt did not fully understand what they were agreeing to when they consented to participate in clinical research. The artist raised these concerns with Wellcome and was later able to provide a space for researchers and community members to interact with each other where the power dynamics could be diminished. These examples lend weight to the comments from an interviewee who argued that because the involvement of the artists "*will feed into everything, the design through to evaluation… artists should be embedded from the beginning*" [INT6].

## 3.3. What does arts-based engagement with research look like in practice?

Approaches to arts-based engagement span the visual arts, performing arts, games, immersive art installations, and other approaches identified less frequently in the literature. Engagement efforts may adopt a single approach or combine multiple types of arts-based interventions. Within the sample of literature we reviewed, the use of theatre (N=13) and video (film and animation) (N=11) were the most commonly-used approaches, with photography also being common (N=8). This reflects research by Boydell et al. (2012), which finds that photography and theatre are used more frequently in research than other arts-based approaches. However, their study was not limited to engagement and includes approaches used in the research process itself, and notably does not include video as a common approach [24]. Other types of diverse visual displays (e.g. infographics, digital graphics) were also frequently discussed in the literature we reviewed (N=9), as were interventions incorporating drawing, painting or sculpture (N=7). Performing arts other than theatre were less frequent (N=3), as was the use of games, including video games (N=1), board games (N=1) or street-based games (N=1). We also identified some interventions that used immersive art installations for public engagement with research (N=3) and other approaches such as storybooks, comic books and poetry (N=7). Some publications discuss multiple types of arts-based approaches.

Decisions about which types of arts-based engagement interventions to use within an engagement approach are tied to the aims of the research or engagement activity, the specific stakeholder groups that are relevant, and the research topic and wider engagement context. However, the relationship between these factors is not straightforward, and the selection of a specific approach to use is typically driven by a collection of project-specific factors that need to be considered on an individual project-level basis. This is a matter we elaborate on in section 3.4 below.

Below we provide an overview of arts-based approaches discussed in the literature we reviewed, with some illustrative examples, before further discussing considerations related to selecting specific engagement approaches.

### 3.3.1. Key types of approaches to arts-based public engagement with research: an overview

#### Visual arts

The visual arts include approaches using photography, video (film and animation), digital media, drawing, painting, sculpture and a variety of visual-based public displays designed to engage the public in research as their core

interventions. We elaborate on each of these below.

- **Photography:** Photography-based approaches for public engagement with research often evolve from research methods that incorporate photography as part of their research process, such as Photovoice [23, 41]. Photovoice is an action research method that emphasises community engagement and the promotion of social change [26]. It entails having research participants take photos that reflect their perspective on a particular research question or problem, and then using the photos to facilitate discussions amongst the research participants and researchers [26]. Photos generated through the Photovoice process or other photo-based approaches provide a readymade avenue for engaging with policymakers and the public [23, 26, 41]. Evidence also shows that photography can be an effective way to engage marginalised groups in the research process [23]. For example, as part of a project on healthy eating, First Nations high school students in Canada served as co-researchers in a Photovoice project that resulted in the creation of a photobook. The photobook used words and images generated by third and fourth grade First Nations students to depict healthy eating in culturally appropriate ways.
- **Video (film and animation):** Across the literature we reviewed, we came across informational videos created for inclusion on websites and as part of science communication and research dissemination efforts [25], as well as longer films [42]. Some examples of different types of video used in arts-based approaches for public engagement with research include live-action videos using actors to play roles [42], video interviews about a topic [19], and animations [25, 40, 43]. Video has been adopted by authors for its perceived potential to effectively reach a wide audience, given its familiar and accessible format [44]. Video has the potential for widespread distribution via websites, which can support efforts for reaching large and geographically dispersed audiences [19, 25, 40, INT2]. For example, and as previously mentioned, in a project that aimed to reach men with depression (and their families), healthcare providers, and the general public, the researchers used a website because they were seeking to reach three key geographically-dispersed groups and required an approach that was accessible to each of them [19]. The specific distribution method is driven by the aims of the engagement effort, with projects targeted at raising awareness amongst specific communities – such as a localised Indigenous community [42] – having smaller-scale distribution than projects aimed at raising awareness amongst the broader public, for example [19].

- **Drawing, painting, sculpture:** Arts-based approaches to public engagement with research also sometimes use drawing, painting and sculpture as the artistic forms of expression. In these cases, there is often an element of co-production of the art with the targeted stakeholder group [9, 45]. For example, in a research study aimed at exploring women's experiences of infertility, the research team conducted a workshop where participants engaged in drawing exercises around the theme of infertility [9]. The resulting co-produced drawings were then disseminated to the general public in the form of a book. However, not all engagement interventions using drawing, painting or sculpture are co-produced. An example of this is a sculpture to raise awareness about acoustic science, which was created by a professional artist in consultation with the wider project team but which did not involve any co-production with the target audience (i.e. the general public) [14]. Because the resulting art comprises physical objects, it is typically disseminated as part of an exhibition staged at an art gallery or other public place [14, 21], but in the case of drawings in particular, may be disseminated in the form of a publicly available booklet [9].
- **Other visual displays:** This includes graphics such as maps and infographics, or digital simulations and mixed-reality representations of an environment (e.g. a partial artificial-reality overlay that can demonstrate what a place would look like under different environmental conditions or at a different historical time point) [30], which may be displayed in public settings such as parks [30] or disseminated via websites [46]. For example, following on from a literature review that catalogued existing opportunities for participative arts-based engagement activities for people with dementia in the UK, the project team created an interactive map which displayed the location of those activities and allowed users to click on the locations to learn more details about the activities [46].

### Performing arts

The performing arts identified as part of arts-based public engagement with research in the papers we reviewed include theatre, storytelling through audio dramas, and other expressive art forms such as dance, body mapping and music. Some authors suggest that qualitative, interview-based research lends itself especially well to engagement through narrative forms of art such as theatre or storytelling [15, 18, 39].

- **Theatre:** Theatre used for engagement in research may include an element of audience engagement beyond simply being an observer of a performance. More specifically, some theatre forms used for engagement include active audience participation during the performance itself. Examples of this include immersive

street theatre [47], participatory theatre [11, 15, 28], and forum theatre [32]. The use of participatory theatre approaches is sometimes related to the researchers' desire for stakeholders to have "*an active learning experience*" [15, p. 75]. For example, one engagement team sought to have audience members experience some of the discomforts felt by non-native English speakers living in the UK who spoke English as a second language in a play based on research into their experiences [15]. To achieve this, they created a play wherein audience members were encouraged to participate in the public bullying of an 'immigrant', played by a professional actor, by shouting insults or otherwise showing disapproval of the 'immigrant's' actions. Feedback from the audience suggested that the play was successful in provoking discomfort in some audience members. Of course, more traditional theatre forms may also be used for arts-based engagement with research [8, 11, 13, 16, 17]. However, even when traditional theatre is used for public engagement purposes, the teams involved with the development and delivery of the public engagement activity frequently incorporate audience engagement through pre/post-performance discussions or workshops (as discussed in section 3.4.1) in order to facilitate deeper engagement with the art and research topic [8, 13, 16, 17].

- **Other performing arts:** Although they appear to be used less frequently, the literature review identified other examples of performing arts, such as audio-drama [39], dance [11, 24, 44], body mapping – a creative visual process where experiences are expressed through movement in the body to help people identify how the world has impacted their body through experiences such as injury or illness [28], and music [45, INT1, INT5, INT6]. To illustrate with the example of music, an interviewee who has a professional background in both science (psychiatric research) and art and design described a project where he collaborated with a jazz musician for the development and delivery of an intervention to engage the public (particularly health service users) in psychiatric research [INT6]. The musician composed and performed music, based

on artwork produced for an exhibition to engage attendees at the exhibition auditorily as well as visually. Another interviewee we consulted also described a collaboration between a local artist (who had lived-experience of accessing mental health services) and a researcher to develop an arts-based public engagement intervention based on the experience of being sectioned. This took the form of a pop-up interactive exhibition that included poetry and poetry workshops, photographs of the environment within wards, a physical reimagining of a seclusion room, along with musical input [INT1].

### Games

The use of games to engage stakeholders in research potentially includes any type of game. Across the literature sample we reviewed and the experts we interviewed, however, examples included video games, a board game and street-based games.

- **Video games:** Video games can be useful for engaging with a geographically-distributed target audience because they may be distributed through an online platform. This was the case with the games developed as part of a game-design competition to raise awareness about, and encourage reflection on, research on human error and 'blame culture' in healthcare (see Box 3) [33]. The use of video games as part of a game-design competition also demonstrates that video games can form part of a creative approach to engagement by including stakeholders at various points in the engagement process (such as in the creation of the video game), and not just as a recipient of a disseminated finished product.
- **Board games:** In the literature we reviewed, there was one example of a board game that was developed as an engagement activity. The game was developed as part of a participatory public health research project addressing health priority setting practices amongst female family caregivers in Indigenous communities in Canada [20]. In the game, a player moves around a game board (which represents an imagined urban Indigenous community) by drawing scenario cards, thus requiring participants to make decisions related to health practices. Information for the scenarios was based on study data as well as health promotion best practice guidelines.
- **Street-based games:** These vary in scale and are intended to engage the public physically in interactive play-based interventions. They include large-scale immersive games that overlap with interactive theatre performances, creating a world complete with props and actors in which players are immersed while they work towards a goal. In one such example, Downpour!, members of the public attending science fairs are cast as flood risk advisers in a fictional flooding scenario set in Manchester, UK [31]. Players work in teams of up to five people to respond to an immediate crisis before making longer-term decisions about mitigating flood risk. Through playing the game, people learn about environmental science research. Immersive street-based games such as Downpour! have the potential to "[foster] *a direct emotional engagement with a topic, while providing a space for players to experiment with ideas and solutions*" [31, p. 20]. Street-based games can also include simpler games such as those used in the Tupumue research project in Nairobi, which were designed to teach children about lung health and air quality [INT3]. These were based on traditional street games played by children in Nairobi and were simple to teach and learn.

## Immersive art installations

Immersive art installations are characterised by the immersive experience they present to stakeholders and may incorporate multiple arts-based techniques within their approach [34, INT1, INT2]. An example of this approach is 'Timeless', a fictional beauty brand and pop-up shop that The Liminal Space created in collaboration with Wellcome to engage the public in thinking about 'social egg freezing' (when women choose to freeze their eggs for reasons related to their lifestyles instead of medical reasons) [INT2]. The pop-up shop was open for six days in London's Old Street Station and contained a variety of beauty products available for purchase, with names like 'Follicle-Stimulate', 'Trigger Stimulate', 'Man's World', 'No Money, No Baby' and 'Working 9 Till 9'. The products conveyed research-based information about the egg freezing process as well as social and ethical issues around social egg freezing. 'Timeless' is an example of arts-based public engagement with research that encourages the public to engage with a larger body of research evidence instead of findings or evidence from a discrete research project.

Another example can be found in Tischler et al. (2019), who describe an immersive art installation used for public engagement to improve the quality of life and community connectedness of people living with dementia and challenge the negative public perception of dementia [34]. The arts installation was presented at the Green Man festival and took the form of a 'living room' belonging to an imagined couple, Doris and Ivor. These were inspired by research participants living with dementia. The art installation recreated cartoon-couple Doris and Ivor's living room within a pop-up tent. Visitors to the installation could enter to see the home (which was filled with elements linked to the research) brought to life, e.g. cushions on two armchairs printed with artwork made by the participants, 'maze-like' wallpaper reflecting the deterioration of the brain in dementia. The installation also included

interactive games: a 'spot the difference' on two cuckoo clocks printed on the wall, and a memory test involving a tray of objects (akin to brain-training techniques used to try and stave off memory problems).

### Other approaches identified less frequently in the literature

Other approaches to using art to engage stakeholders in research were also captured in our rapid review. These include approaches that incorporate literary-art elements such as the use of storybooks [20], comic books [9, 48, INT1], oral histories disseminated through academic journals [49] or poetry [45, 50], as well as the creation of an outreach and communications programme targeted at the film, video and video-game industry [51]. To illustrate with one example: as part of a participatory public health research project addressing health priority setting practices amongst female family caregivers in Indigenous communities in Canada, creative non-fiction storybooks were developed to provide a mechanism to encourage the repair of parent-daughter relationships [20]. The books provided concrete examples to promote healthy relationships between caregivers and children, and were based on data from interviews, art-based research results and participant observation. The outreach and communications programme provides an avenue whereby those in the film, TV, and video-game industries can call a hotline and be connected to a scientist, engineer or medical professional who then provides the professionals in the film, TV, and video-game industries with ideas. Rather than explicitly telling storytellers what to do, these scientists, engineers or medical professionals share interesting research to inspire story creation [51]. One novel approach is the use of visual minutes for research workshops, which involves bringing an illustrator into a workshop setting. The illustrator creates visual minutes, capturing elements of what happens or is discussed. This then feeds into a showcase event (after a project is completed), which tends to be a completely open session and to include those who have been part of the project and others with an interest in attending [INT1].

## 3.4. Selecting the arts-based approach for use in public engagement activity

The selection of the approach to use for public engagement with research is informed by many factors, including the research topic, target stakeholder group, aim of the engagement effort and context of the delivery [INT2, INT3, INT5, INT6]. Some of the interviewees we spoke to stated that, based on the current evidence base, it is not possible to generalise that some types of approaches are better suited to specific engagement aims and audiences than others, and that there is no set rule about when to use a specific approach [INT1, INT2, INT3, INT5, INT6]. It is important for researchers to understand specifically who they are trying to engage with, the context they'll be engaging with them in and how best to reach them. [INT4, INT6]. One commented that researchers should not describe specific practices as being for different groups or purposes or make assumptions about whether a particular method would work for a particular group. Instead, there is a need to open up conversations with the audience about how to engage with them [INT1].

Interviewees also offered some (albeit more anecdotal) insights on when particular approaches may be especially suitable to a given context, however [INT3, INT5, INT6]. For example, one interviewee suggested that some art forms, such as sculpture or photography-based approaches, may be particularly suitable to engagement efforts that seek to facilitate the personal development of a stakeholder

being engaged with as a potential beneficiary. Other approaches, such as theatre, may be better suited to draw out and explore healthcare professionals' perspectives and feelings about an issue or topic (e.g. delivering compassionate care), encourage debate, and facilitate "*a space where new conversations can be had*". [INT6]. Similarly, another expert we interviewed noted that approaches based on music, performance and film, for example, may be particularly suitable for children or individuals with learning disabilities because they can be more attention-grabbing [INT5]. Engagement through digital channels was also flagged as particularly beneficial if achieving scale in engagement matters [INT2].

As an example of the context affecting the selection of the approach to engagement, one interviewee described how important it was, when developing an interactive game to be used at a specific science festival, to consider the existing culture of the science festival as well as factors such as the space available to host the game, the average amount of time people would have to engage with the game at the festival, and the typical background of festival attendees [INT3].

The specific circumstances of the target audience also affect the selection of the approach to engagement. To illustrate, when seeking to engage with grocery store warehouse night-shift workers in the UK on the subject of sleep health, the project team adopted an approach that accounted for the fact that the workers were overwhelmingly male (98 per cent) and uninclined to seek out an 'artsy' experience [52, INT2]. The result was a travelling 'night club' in a shipping container that travelled to various warehouses across the UK. The 'night club' included interactive light-based experiments, midnight feast meals, and expert clinics. The design elements used in the project were also important, using neon colours to replicate the high-visibility vests worn by night-shift workers and mimicking night-club flyers instead of more 'artsy' outputs [INT2].

Examples from the literature also illustrate how various factors inform the choice of approach. For a project that aimed to engage communities of colour in the US in understanding the Affordable Care Act, Patel et al. (2018) adopted a digital media approach for engagement after conducting focus groups with their target audience and learning that digital technology was a big part of their audiences' lives [25]. Focus group participants stated a preference for short videos with a quick pace, a manageable volume of information, and availability in multiple languages, leading the researchers to develop a website with short, animated videos available in multiple languages. Similarly, Lee et al. (2016) discuss an engagement project with Cambodian American women around issues of community health and wellness, in which non-verbal communication through expressive arts (theatre, body-mapping) was used to help bridge age-and-experience gaps amongst different community members that the researchers interacted with [28].

The selection of the specific approach may also be tied to the aims of the research or dissemination activity. This includes, for example, the desired reach, with some methods being better suited to large-scale distribution/engagement than others, e.g. digital technologies such as websites are well suited to reaching a mass audience [INT2]. The engagement activity aims might also include the desire for the target audience to have an active learning experience[15, INT6], leading to the selection of methods such as participatory theatre. Alternatively, as previously discussed (see section 3.3), researchers aiming to engage disadvantaged populations with research and/or spur policy change may adopt approaches such as Photovoice (in which photography is the medium used not only for

conducting the research but also for engaging in consciousness-raising and advocacy) which have been shown to be effective at achieving these aims [23, 26].

### 3.4.1. How the engagement process happens

#### Stages in the development and delivery of arts-based approaches for public engagement with research

Our discussion of how arts-based engagement happens is sensitised by the stages of an engagement intervention outlined by Cook et al. (2017) [35], which we have adapted and evolved to reflect the insights gained from the analysis of the range of interventions identified in our rapid review. The key stages that seem to apply to most arts-based public engagement projects are overviewed in Table 4 and reflected on in the contents that follow. It is important to note that not every engagement approach includes every stage (e.g. not all engagement approaches have an evaluation element), that there can be variety in how different stages manifest themselves, and that the stages in the engagement effort may not progress linearly but instead involve feedback loops and iteration – a matter we return to later in this section.

**Table 4. Stages in arts-based engagement interventions – informed by Cook et al. (2017) [35]**

| Stage | Description |
|---|---|
| **Conception, planning, establishing collaborations and securing funding** | This phase is when the specific approach to arts-based engagement is selected, the aim of the engagement intervention is determined, and questions around the target stakeholder group, potential funding sources and collaborations are discussed. Although the fundamentals of an approach are often specified at this stage, some engagement approaches also accommodate a degree of emergence, not least as part of an effort to ensure an inclusive and collaborative way of establishing an appropriate arts-based intervention (package of interventions) [11, 15, 42].<br>A central part of this phase includes establishing collaborations with stakeholders who will be involved in the design and delivery of the arts-based engagement approach, e.g. researchers, artists, healthcare professionals, members of the public and local communities [16, 30, 35, 43].<br>Securing funding for engagement activities can include efforts to secure funding for both the initial engagement intervention and for sustaining or replicating the intervention over time [13, 17, 19, 35, 39, 40, INT3]. |
| **Producing the arts-based intervention** | This stage involves the actual creation of the artistic output underlying the arts-based approach (which can consist of the arts-based product(s) as well as complementary interventions such as discussion workshops, facilitation of the engagement event or others). The practicalities involved will vary widely depending on the specific arts-based approach being pursued and the underlying research material. For example, this stage could entail working with a playwright to transform interview transcripts into a script for a play [39], conducting interviews with research participants to create short video-vignettes for a website [19], holding a workshop in the community to explore methods of recycling discarded medical materials into visual art pieces [11], or collaborating with an artist to produce a sculpture [14], amongst other approaches. Investments into strengthening and, in some cases, expanding relationships with stakeholders engaged as part of the conceptualisation and planning stage may happen during the production stage. In some cases, new stakeholders are brought in to support intervention development, such as when members of the public are involved in the production of the art [11, 23, 33], or when an artist with specialised skills (e.g. a playwright) is brought into the project [18]. |

| Stage | Description |
|---|---|
| **Delivering the arts-based engagement approach to an intended audience** | The form of delivery and dissemination of the arts-based engagement approach is linked to the type of art. It could include, for example, a museum exhibit [21], theatrical production [16], film screening [42], staging a design competition to facilitate the creation and dissemination of art [33], playing a game [31], staging an immersive art installation experience [52], or launching a website [53].<br>As part of delivery, many engagement interventions incorporate critical reflective discussions or workshops to provide a space for stakeholders to engage more deeply with the art and the research [14-16, 29, 30, 35, 36, 56]. These sessions also allow project teams or researchers to offer educational support to make the engagement experience more accessible to stakeholders.<br>As per the intervention design and development stage, new actors such as workshop facilitators [17], educators [14] or performers [8, 16, 39] may need to be brought in to support intervention delivery, although the same stakeholders are often involved throughout [23, 33, 35, 38, 53-56]. |
| **Evaluation** | Evaluating arts-based approaches to public engagement is challenging because there are often multiple or even competing goals due to the diversity of stakeholders involved [INT4]. Their final outputs may be intentionally unpredictable due to the incorporation of collaboration, and the impact can occur months or years after the intervention (see section 3.7) [11]. However, when evaluations are undertaken, they often involve some form of stakeholder feedback such as comment cards or surveys. Evaluations may be conducted by the researchers/project team or by external evaluators. |

Across the arts-based interventions we reviewed, most include the overarching stages, as outlined in Table 1. However, the engagement stages will vary across different projects, and the stages of arts-based interventions may be non-linear. For example, in a project that aimed to create an audio drama to be performed live at arts festivals, based on research into the experience of HIV/AIDS in Irish prisons, the project team encountered multiple issues that caused them to backtrack and revise their plans along the way, shifting between the conception and production stages [39]. The first issue arose when they received negative feedback on the first draft of their script, necessitating a complete rewrite and conceptual refocusing. The second issue arose when the project team realised that their revised script would be too complicated to perform live in front of an audience as they had originally intended. Instead, they opted to produce a recorded version of the audio drama that could be played for audiences at the festivals. Interventions may also change in scope or focus as new partners are brought on board, as was the case with Night Club (see Box 5, section 4). The inclusion of a new partner with a focus on long-term health conditions led the project team to broaden the engagement intervention's focus from sleep health and the health impacts from shift work to one that incorporated research evidence on the association between poor sleep and long-term health conditions.

Regarding the evaluation stage (a topic covered in more detail in section 3.7), most of the engagement interventions we reviewed included some form of evaluation, but this was often in the form of audience or participant feedback with little additional analysis or evaluative components [13, 16-18, 29, 31, 32, 57, INT5]. Evaluations relying on audience feedback frequently aimed to measure

the intervention's effectiveness for raising awareness about the given subject matter [13, 16-18, 31, 32, 57]. However, other approaches to evaluation are used, including, but not limited to, hiring an outside evaluator to conduct a formal impact and process evaluation [11, INT2, INT6] and the use of Google Analytics to gauge website traffic [19].

It is also important to flag that collaboration can occur across all stages, but how researchers collaborate with artists or other stakeholders can vary. Arts-based engagement interventions vary in the degree to which they involve collaborations with professional artists, designers or technicians [11]. As Austin (2016) advises, not every project will require collaboration with an artist, especially when the researcher has "*a strong focus*" or a "*clear idea of the output they would like*" [11, p. 43]. In these cases, the researcher can lead the project, as in the case of Photovoice projects (see section 3.3.1). If a project team does decide to work with a professional artist, some sources advise beginning the collaboration early in the development of the research engagement intervention [11, INT2, INT3, INT5, INT6] and ensuring that adequate funding is secured to pay for all of the professional artist's time, including any planning and development work [11, INT3]. The artist's role within projects also varies and must be negotiated to ensure a shared understanding amongst involved parties [11]. For example, the various stakeholders in the project may envision differing levels of artistic autonomy for the artist, prioritising different stakeholder voices (potentially above the artist's) depending on the aims of the engagement activity [11, INT 5]. Furthermore, an artist brought in at the beginning of the project may have greater autonomy than one brought in at a later stage, after the project's direction has solidified [11]. The degree and scale of collaboration with artists or other stakeholders will also be influenced by resource availability (see section 3.6 for further detail).

In addition to the core arts-based intervention, various complementary activities may be included to support the intervention. These could include critical reflective discussions and workshops, or various activities designed to raise the intervention's profile, reach or impact. As an example, in a project that translated findings from ethnographic research on people enrolled in weight-loss classes into a comic book, various additional activities helped extend the reach and impact of the project [INT1]. These included producing a number of podcasts with the artist and researcher, holding an exhibit at the University of Leicester, and having the researcher make public appearances, including giving a talk and being part of the British Science Festival.

Some engagement interventions incorporate critical reflective discussions or workshops to provide a space for stakeholders to engage more deeply with the art and the research, provide education, and facilitate a two-way engagement process between stakeholders and researchers and/or the engagement team. These are used in performing arts-based approaches [15, 16, 35, INT6] as well as those employing visual arts techniques [14, 29, 30, 36, 56]. In the literature we reviewed, they frequently took the form of facilitated discussions with the audience at an engagement event such as a theatrical production [15, 16, 35]. The discussions allow audience members to engage with researchers and/or performers and reflect on their (i.e. the audience, researchers and performers) experience of the engagement. Within the visual arts, critical reflective discussions and workshops can serve a similar purpose. An example is an art exhibit that aimed to bring together developments in psychiatric research and practice with visual art, which had at its core the work of two artists (one

a former biostatistician and one a practicing psychiatrist) [29]. In addition to the art exhibit, the intervention included a number of talks and workshops led by clinicians, scientists, and artists, which aimed to provide a space for the public to engage in a collaborative dialogue.

Reflective sessions and workshops also allow project teams or researchers to offer educational support to make the engagement experience more accessible to stakeholders. The discussion or workshops may take place before, during or after the dissemination event. In relation to a play where audience members enter into an environment where they experience the world of a person with dementia, for example, the engagement team quickly learned that many audience members found the play artistically inaccessible [17]. In response, they opened the play with a short discussion explaining the context in order to facilitate understanding. In visual arts exhibits, the workshop or discussion may be used to help visitors understand the research underlying the visual arts display. An example of this is found in the iSWOOP project (Interpreters and Scientists Working on our Parks), which uses imagery generated by scientists conducting on-site research in national parks to make that research an interactive part of the visitor experience [30]. Park rangers and informal educators facilitate discussion with visitors around the visual arts displays, providing further education to enhance the public's understanding of science.

Other forms of educational support are also provided to members of the public in order to facilitate engagement with research through arts-based approaches. This can include teaching people involved in participatory research projects how to engage in necessary arts-based research activities, such as taking pictures in Photovoice projects [23, 26, 41], or the education may be focused on facilitating research dissemination efforts such as teaching participants in a video game design competition essential skills for designing video games [33].

## 3.5. Contributors to arts-based approaches for public engagement with research

A variety of stakeholders are involved in the design, development and delivery of arts-based approaches for public engagement, or are engaged as part of an audience. Contributing stakeholders span researchers, artists and other professionals (e.g. IT engineers and technical experts in content production), patients, communities and the wider public, and healthcare professionals.

Stakeholder contributions to the development of arts-based engagement approaches usually involve an element of co-production. However, the degree to which co-production is pursued varies and is influenced by the resources available for public engagement activity and the aims and nature of the engagement approach (e.g. [11, 15-17, 22, 28, 33, 35, 36, 42, 53, 55, 58]). In some instances, the overall approach to engagement is designed through collaboration between different stakeholders, such that the type of arts-based intervention (and need for any complementary activities such as discussion panels or training workshops) is jointly decided on [20]. The actual arts-based output that forms the intervention's basis is also sometimes co-developed (e.g. [23, 26, 28, 32, 38, 54]). The inclusion of stakeholders in the development of an arts-based approach and its constituent interventions is important for facilitating the relevance and accessibility of the content [13, 16-18, 24-26, 28, 30, 32, 33, 38, 40, 54, 57, INT2, INT5, INT6]. It can also help demonstrate transparency and respect for the groups the project team sought to engage [11] and facilitate the intervention's adoption and sustainability [37].

However, it is worth noting that many of the articles we reviewed provide only limited detail on stakeholder roles in bringing arts-based engagement approaches to life and do not clarify which aspects of the engagement process specific stakeholders are involved in. In the contents below, we elaborate on stakeholder involvement in the development and delivery of arts-based engagement approaches, to the extent that this is possible. We then reflect on who benefits from these engagement efforts.

### 3.5.1. Who is involved in the development of arts-based engagement processes?

Unsurprisingly, and as introduced above, the development of arts-based engagement projects tends to be led by academic researchers. The design of the actual arts-based output, however, can be led by other stakeholders (e.g. the artists) working closely with academic researchers and other stakeholders, such as representatives of specific professions or local communities [INT1, INT4].

Across the pool of papers we reviewed, researchers working in diverse research fields were involved in leading the design and development of the arts-based engagement process, including the fields of healthcare, social care and nursing (e.g. maternal health, psychiatry, stroke) [9, 15, 16, 23, 34, 35, 40, 53], biochemistry and genetics [13, 29, 57], social sciences [13, 25, 29, 40, 49], and criminology [39]. Researchers who lead the process of designing and/or developing an arts-based public engagement approach learn new skills that can be shared to benefit others in the academic community interested in taking an arts-based approach to public engagement [INT5]. Some examples include developing skills related to understanding the feasibility of specific arts-based engagement approaches [10, 32], such as gathering survey data on audience responses to a theatre production on maternal and reproductive health (e.g. the audience's interest in and emotional response to the material covered) following a performance and panel discussion [16], or the use of Photovoice to communicate the experiences of participants with specific health issues [16, 33, 35, 38]. Multidisciplinary teams are also sometimes formed [13, 16, 25, 28, 29, 42, 53].

Examples of the types of artists involved in developing interventions used for public engagement with research include artists specialising in visual arts (such as sculptors, print-makers, interactive artists and painters, along with curators and art historians), and those with expertise in the performing arts (including theatre producers, theatre companies, scriptwriters and actors [8, 11-13, 15, 17, 18, 29, 34, 36, 39, 40, 55]). Game design experts or 'mixed-media' artists (e.g. graphic designers, animators, film editors and data visualisers) [9, 12, 14, 30, 31, 33, 36, 59] are also involved in developing interventions that are used for public engagement with research. Artists may take a particularly active role in leading the actual production of the arts-based intervention that will form the central part of an engagement approach [18, 29, 31, 43]. For example, in an approach that used ethnodrama to engage the public in relation to health-seeking behaviours among African American men, a playwright was recruited as a creative partner who then took the lead in developing the script (based on interview transcripts from study participants) [18]. In another example, Wendler and Shuttleworth (2019) report on the development and delivery of an interactive street game, which engaged the public around the topic of flood risk management [31]. The game was created by a street game designer in collaboration with filmmakers, environmental scientists and public institutions. Experts from research and an organisation that combines

public engagement and performing arts interviewed for this research describe the close collaboration between researchers and artists throughout the development and design of arts-based approaches to public engagement as crucial for the success of the project as well as in the development of the actual content, i.e. the arts-based intervention [INT5, INT6].

Public engagement professionals [59] and art advisors or art project managers [29, 59, 60] may also be brought into the project to help with the development of the arts-based approach [59, 60, INT6]. Kukkonen and Cooper (2017), emphasise the value of involving artists and other professionals from the field of art, as well as community members, to provide direction and enhance the quality of the artwork and to guide critical discussion of the artwork by the target audience [60].

The academic researchers leading the arts-engagement process may also be artists [29, INT5, INT6]. One article included in our review describes a series of arts-based public engagement projects that used a variety of arts-based methods (e.g. print, painting and interactive art), led by researchers who were at the same time also artists/designers. They were able to use their combined skills in science and art to engage the public through several engagement interventions (e.g. workshops and exhibitions) [29].

Representative groups who are the intended beneficiaries of the project (such as the patients and public, local communities and healthcare professionals) are also sometimes involved in co-producing the design and development of the arts-based approach, helping to decide what needs to be done and how to ensure that the developed content is relevant and resonates with their experiences of the world [11, 13, 16, 23, 25, 26, 28, 35, 37, 38, 40, 42, 53, 55, 56] and co-creating the artistic output (e.g. [23, 26, 28, 32, 38, 54, 55, 56, INT5]. There are various examples of such co-development of the arts-based output in the literature that we reviewed; in relation to approaches involving participatory photography (Photovoice) [23, 26, 38] for example, or forum theatre [32], where members of the target community for engagement were involved in the development of the performance [29]. One of the experts interviewed as part of our research emphasised this importance of co-production when describing the 'Representing the Mind' project, which aimed to engage the public (particularly people with mental health problems) in psychiatric research through printmaking and music composition, delivered through an exhibition and music performance at a showcase event [INT5]. As a researcher and artist, this expert consulted mental health service users via a questionnaire to gain their perspective and lived experience of mental illness (specifically, how they perceive their minds and internal thought processes) and their input on the development of themes to be represented in the art. As another example of community-member involvement in designing and developing an arts-based public engagement approach, Cooper and Driedger (2018) describe how members of an Indigenous community in Canada (both research participants and community partners) were involved in a brainstorming session to determine how best to disseminate the findings of a public health study to the community, agreeing on the development of a game that highlighted traditional Indigenous knowledge and culture [20]. They were also involved in developing a set of considerations to be used to develop dissemination products in general within the community (e.g. [20]). Vaughn and colleagues (2013) also describe how members of an urban youth community in the US participated in selecting animation as a dissemination approach for research findings on the risk of violence, recruiting the artist to lead the creation of the animations and working with the artist and researchers to develop the animations

themselves [43]. Jones et al. (2017) describe the use of co-production in arts-based approaches for public engagement as a reflection of a changing academic climate, where partnerships with communities are seen as important in the production of knowledge [29].

Technical experts from the IT sector and producers with technical expertise are also sometimes involved in the development of an arts-based approach to public engagement with research by enabling arts-based interventions to be delivered online (e.g. video games, video or audio dramas) and providing technical knowledge and skills [18, 33, 53].

Cook and colleagues (2017) share some learning and guidance for project teams undertaking arts-based public engagement approaches on how to work with and engage stakeholders when using art-based approaches such as photography and sculpture, delivered at an exhibition [35]. Amongst other issues, they highlight the importance of securing financial and promotional support from the research team's academic institution to ensure the project can be carried out as planned and that project aims can be realised. (The impacts of involvement in the development and delivery of arts-based engagement approaches with regard to capacity-building are considered in further detail in section 3.7.)

Further detail on the importance of involving different stakeholders in developing an arts-based approach or the content for it is discussed in section 3.6.

### 3.5.2. Who is involved in the delivery of arts-based approaches to public engagement with research?

Often, the same individuals and stakeholder groups involved in the development of the arts-based public engagement approach are also involved in its delivery [11, 23, 26, 35, 38, 53, 55, 56].

For example, in theatre-based public engagement approaches, this can involve acting in a performance (e.g. [16, 17, 32]). However, there are other ways stakeholders can contribute to the delivery of an arts-based engagement intervention. Some examples include contributing to forums or panel discussions following a performance or exhibition [8, 13, 16-18, 31], acting as an adjudicator or judge of the art produced [33], and organising or facilitating exhibitions of artworks [14, 28, 36]. An example is a project by Drumm and colleagues (2015), a collaboration between an acclaimed artist (sculpturist) and acoustics researchers involved the display of the sculpturist's work through a touring exhibition, with engagement with the general public (as well as teachers and students) facilitated through talks, exhibitions and workshops [14]. This was to encourage more people to pursue science and engineering degrees, of which the study of acoustics is a part. The delivery of this intervention was supported by volunteers from the National Trust, Eden Project, and The Lowry, who invigilated the artwork and were trained by an arts company (the Aeolus team) to provide background information about the work, direct visitors to the exhibition and gather survey data on the experience of visitors to the exhibition [14]. Similarly, Jones and colleagues (2017) describe how interdisciplinary dialogue between scientists, clinicians, artists and social scientists through events, talks and workshops facilitated learning about art-based public engagement approaches by allowing practical experience and ideas to be shared [29].

### 3.5.3. Who are the intended beneficiaries of arts-based approaches for public engagement with research?

Arts-based approaches for public engagement with research can target diverse beneficiaries, depending on the purpose and topic of

engagement. Across the publications we reviewed, these spanned very diverse stakeholder groups. Examples included:

- Clinicians and healthcare professionals who are intended to benefit in terms of information and knowledge to support service delivery [9, 11, 13, 15, 17, 24, 32, 35, 37, 39, 44, 46, 53-55, 61]
- Educators and students (e.g. health or social care students) who may use the content of the public engagement approach for educational purposes [11, 14, 17, 29]
- Academic researchers not directly involved in the arts-based engagement project but who may have an interest in a specific research topic [11, 13, 16, 33, 35, 43, 49, 57, 61]
- Service users, in the context of improved health, care and other public services [11, 24, 34, 35, 38, 46, 53].

Intended lay beneficiaries can be from a particular community targeted by the intervention [9, 15, 16, 18, 20, 22, 23, 25, 26, 28, 31, 34, 38, 42, 43, 54, 55, 59, 61, 62], including a cultural or ethnic community [9, 15, 16, 18, 20, 22, 25, 26, 28, 31, 34, 38, 42, 43, 54, 55, 59, 61, 62] such as African American communities [18, 38], Indigenous communities [20, 22, 28, 42, 54], or individuals from a specific geographical area [35, 45]. Members of the general public are also sometimes the intended beneficiaries [1, 6, 7, 9, 26, 29, 33, 35], such as visitors to a website [6], visitors to a public exhibition [1, 9, 14, 29, 36] or audiences at a festival (e.g. a science or cultural festival) [10, 33, 35], who are, through exposure to the arts-based interventions, intended to benefit through greater awareness about a research topic area or through knowledge and information that can influence their behaviours.

Policymakers [7, 13, 23, 45, 54], or those responsible for clinical decision making and healthcare planning [49], can also be the target beneficiaries of an arts-based public engagement effort, as well as representatives from charities or research councils who may have an interest in the topic [7, 22, 29, 45] or industry organisations (for example representatives from the film, TV or video-game industries) who can use research evidence to inform and design the plot and content of their products [51]. Artists can also directly benefit from arts-based public engagement approaches [9, 11, 33, 36, 51, 59, 63], such as interdisciplinary exchange with researchers. Researchers and artists can validate and strengthen each other's work, and public-engagement efforts can increase the visibility and profile of both artists and research partners [59]. Finally, the researchers involved in leading and initiating the development of an arts-based public engagement approach can also benefit through using the insights from the public engagement effort to inform the process, design and direction of a wider body of research [9, 23, 26, 28, 41, 42].

The demographic characteristics of targeted beneficiaries are rarely discussed in the literature. However, a few articles reported the target audience's gender, age, ethnic or religious background [8, 9, 11, 16, 17, 33, 37, 40, 47, 59] or marital status [8]. For example, Lohan and colleagues (2015) provide Google Analytics data on the age, gender and country of residence of users of online interactive men's health tools, developed for the purpose of translating research findings about men's health into improved health outcomes. [37], but this type of data is an exception rather than the norm in the literature we reviewed.

## 3.6. Influences on arts-based public engagement with research

A variety of features of the arts-based public engagement approach and the context in which it unfolds influence the process of engagement and impacts thereof. The literature we reviewed focuses more on influences on the engagement *process* than on influences on the *impacts of* engagement activities. Of course, the two are closely related, as the way the process unfolds will play a role in the impacts that materialise. The key types of influences identified in the literature relate to (i) the features of the engagement approach and of its associated interventions, (ii) resource availability and infrastructure, (iii) relationships and collaboration, (iv) the skills and experience of stakeholders involved in the design, development and delivery of engagement interventions and/or as recipients of the engagement effort (i.e. as audiences), and (v) additional influences specifically related to the ability to achieve impact from a delivered engagement intervention(s). We overview key messages in relation to each influence in Table 5 and expand on them in the sections of 3.6 that follow.

**Table 5. Key influences on arts-based public engagement with research**

| Type of influence | Key messages |
|---|---|
| **Features of the arts-based public engagement approach and of its associated interventions** | • **Relevance and accessibility of content**: The arts-based engagement approach pursued needs to resonate with the interests, experiences, values and beliefs of intended audiences and be sensitive to the context in which it is being deployed. The appropriate approach needs to be decided on a case-by-case basis.<br>• **Complexity of components:** Overly-complex intervention designs can hinder effective engagement. There is a need to balance breadth and depth in the scope and scale of issues covered through the arts-based engagement effort. Some arts-based engagement interventions may need an upfront explanation to a target audience prior to their implementation to manage challenges associated with the complexity of an engagement approach and research topic.<br>• **Style of delivery:** It is important to balance the emphasis on scientific and artistic elements of an engagement approach to facilitate the effective use of the arts for public engagement with research. |

| Type of influence | Key messages |
|---|---|
| **Resource availability and infrastructure** | • **Financial resources:** Maintaining relationships and interactions with diverse stakeholders involved in the design, development and/or delivery of arts-based public engagement interventions can require a significant financial investment. It is important to mitigate against a mismatch between researcher or research-institution ambitions related to an engagement exercise and the degree of stakeholder interaction that can take place in light of available resources. Researchers wishing to pursue intensive engagement and co-production between themselves, artists and/or other stakeholders throughout the engagement process can find securing sufficient funding particularly challenging: resource constraints can mean that intensive engagement and co-production can sometimes be compromised for a more transactional approach that is focused more on responding to a specified brief.<br>• **Time:** Arts-based engagement approaches are rarely quick to develop and implement, especially considering the relationships that need to be built with diverse stakeholders, and underpin the ability to ensure relevant and accessible content and delivery. It is also important to ensure that intervention delivery is timely for an intended audience.<br>• **Facilities:** It is important that the facilities used to deliver an intervention are fit for purpose – accessible, aligned with the budget of a project and suitable for the theme that is being engaged with. Sometimes the most appropriate setting in which an engagement approach is being delivered is one that intended audiences are familiar with and see as a safe and comfortable space. In other cases, it may be appropriate to take stakeholders outside of their comfort zone deliberately – this depends on the aims of engagement, the research topic and the diversity of stakeholders that the engagement effort is relevant to.<br>• **Governance and administrative infrastructure:** Clarity in contractual arrangements between collaborators, agreements on intellectual property issues related to the artworks produced, attention to ethical concerns regarding data security and privacy issues for participants in engagement efforts, and timely payment of contributors are important governance and administrative considerations. The governance of arts-based public engagement projects also needs to ensure appropriate rewards and/or recognition for participants, including providing feedback and acknowledging contributions. There can be challenges to ensuring sufficient support for arts-based public engagement activities at the institutional level, as research institutions tend to prioritise traditional outputs such as publications. |

| Type of influence | Key messages |
|---|---|
| **Relationships and collaboration-related influences** | • **The ability to recruit and retain the right stakeholders:** Many arts-based public engagement projects in the healthcare field require the involvement of diverse stakeholders across researchers, artists, healthcare professionals, patients and the wider public, and at times policy and research funder communities. These stakeholders can contribute to the design and development of an intervention and its delivery. Many projects require the involvement of researchers from different disciplines across the natural and social sciences. Representatives of target audiences are sometimes involved in designing and developing an intervention, not just as recipients, and bring lived experience to an arts-based public engagement approach. Engaging the right stakeholders and nurturing their contributions through time is important for bespoke interventions that are fit for purpose, although resource constraints sometimes challenge the extent to which continual engagement can be supported. Investing time and effort to ensure an appropriate communication approach to mobilise stakeholder engagement is important, including optimal language to recruit stakeholders, and securing the buy-in and support from senior leaders in the target group's setting in some cases.<br>• **The importance of consulting stakeholders on the design of arts-based public engagement interventions, and on implementation and adoption issues:** Two-way, interactive engagement can help support a collective and immersed engagement experience but can be challenging to achieve. It is important to invest in building trusting relationships and mitigating against power-imbalances (e.g. between researchers, artists and community representatives), and to invest in creating shared understandings of a research topic and the engagement tasks at the onset of the engagement effort. Clear communications can be supported by enabling stakeholders to express their contributions in ways that they are familiar with (which sometimes requires non-verbal or non-written communications or translation and interpretation activities to address linguistic barriers) and through the use of facilitators to help avoid or deal with misconceptions or misunderstandings. Whereas the overall requirements for an arts-based engagement effort can be planned, the interactions between involved stakeholders need to allow for a degree of emergence and unpredictability. Researchers sometimes need to relinquish the degree of control they may be accustomed to, and allow sufficient freedom of expression and experimentation to artists involved in developing engagement interventions.<br>• **Context-awareness and context-sensitivity:** The design and delivery of arts-based approaches for public engagement with research need to be done with sensitivity to the cultural, political and socio-demographic context in which a research topic is being explored and stakeholders engaged. |

| Type of influence | Key messages |
|---|---|
| **Skills and experience of stakeholders** | • **Technical and social skills:** Both technical skills (e.g. in the sciences and arts) and social skills (e.g. collaboration skills) are important for successful arts-based public engagement projects.<br>• **Prior and lived experience:** Some of the literature identifies previous public engagement and participatory research experience to be enablers of arts-based public engagement efforts. Important and relevant skills for the design, development or delivery of the intervention can also come from lived experiences of those involved (e.g. communities that are being engaged with).<br>• **Training and skills-building:** Many arts-based engagement projects include elements of training or skills-building, for example, explaining an engagement process, research topic or arts-based intervention to stakeholders before its development or delivery. Talking to people who have designed, developed and delivered arts-based public engagement approaches in the past can help those seeking to develop capabilities in this space. Some approaches also include training or skills-building resources into the dissemination approach (e.g. training resources to accompany an arts-based intervention). |
| **Influences related to realising impact from engagement** | • **Evaluation:** Building in mechanisms to evaluate the success of an arts-based public engagement intervention is important for understanding impact and informing future efforts. However, many arts-based public engagement projects are faced with financial resource and data-related challenges to robust evaluation.<br>• **Timely feedback and financial support for uptake-related activities:** For example, for applying findings from an engagement project within target communities) is also important for efforts to maximise impact.<br>• **Stakeholder support for achieving impact:** Dissemination activities and investment in promoting the results of the engagement effort can support efforts to achieve impact. |

### 3.6.1. The features of the arts-based public engagement approach and its associated interventions

#### Relevance and accessibility of content

The literature we reviewed as well as insights from stakeholder interviews highlight the importance of a relevant and accessible engagement approach (and associated interventions) that resonates with the interests and experiences of the stakeholders that are being engaged, and that they can understand and relate to [13, 16-18, 24-26, 28, 30, 32, 33, 38, 40, 54, 57, INT2, INT5, INT6].

Arts-based engagement approaches are premised on the assumption that using the arts can directly tackle issues related to the accessibility of research-related content to wider stakeholders. By accessibility, we mean both the extent to which stakeholders can understand and relate to the content and the extent to which they can 'physically' access it. The choice of the arts-based interventions to be used for engagement in part depends on considerations of what is likely to resonate with the stakeholders involved, given their interests, backgrounds, experiences, values, beliefs, attitudes to the arts as an engagement vehicle, and demographic profiles [26, 28, 57, INT5, INT6]. The choice of an optimal approach will depend on multiple aspects of the engagement context (such as what the aims of engagement are, who is being engaged with, the research

topic), and should be selected on a case-by-case basis [INT1, INT2, INT5, INT6]. Replicating what has worked in one context to another without understanding how similar or different the audience is should be avoided [INT2]. Considering cultural and context sensitivities in an intervention's physical design also matters for its accessibility, relevance and acceptability to the stakeholders being engaged (see section 3.6.3 below for further detail).

For a more detailed discussion of factors to consider when making decisions about the type of arts-based public engagement approach to use, and to avoid repetition, please see section 3.4.

### Complexity of the components of an arts-based engagement approach

The complexity of the intervention is a related and important consideration. For example, Iacovides et al. (2019) discuss this in the context of game designs being explored for use in public engagement with the topic of human error in healthcare, and flag that overly complex games can be a barrier to effective engagement [33]. Similarly, Patel et al. (2018) highlight the importance of managing breadth and depth in the design of arts-based engagement interventions to ensure that the intervention is manageable in relation to the scope of issues it seeks to cover [25]. In the context of their work, this was animated videos of superheroes using the health insurance system as a means of aiding communities of colour in the US to navigate the system [25]. Mackintosh et al. (2018) comment on the importance of balancing how generic and specific the content of engagement interventions is, noting that this can be challenging to achieve in practice [40]. They report on the Re-Assure project, which examined whether arts-based approaches could help translate research findings on women's experiences of responses to their safety concerns in pregnancy into useful health information that assists women in their journey through the maternity system [40]. As part of this work, women with lived experience, as well as charities and healthcare professionals, contributed to the development of an animation about safety concerns in pregnancy. Challenges arose in relation to depicting sensitive topics without making women feel stigmatised or excluded for having – or not having – certain experiences during pregnancy. The authors realised that there is significant variation in experiences and perceptions of what constitutes a 'red flag' in pregnancy, as well as variation in healthcare professionals' interpretations of their significance. This presented difficulties in creating the animation, and the project team ended up having to refer to relatively generic safety concerns as a result [40]. An interviewee we consulted also flagged the importance of a realistic approach, i.e. feasible to pursue and not excessively ambitious [INT5].

### Style of delivery

The style of delivery can also influence how accessible an arts-based approach and its associated interventions are to the public being engaged, and it is not always straightforward to balance the scientific and artistic components of an engagement project [18, 24, INT2, INT4, INT6], not least as researchers and artists may come with different expectations and priorities. For example, Taylor et al. (2017) present a case study describing the development and implementation of an ethnodrama based on qualitative public health research [18]. The authors flag the importance of achieving the right style for the intended audience, highlighting some of the considerations that influenced their effort. Specifically, they note that too comical a style could distract from the information that was to be presented, and too dramatic a style could alter the points that participants sought to communicate in

consultations that informed the content of the intervention. They also highlight that too much information could give the feel of an oral report and that the choice of the cast (e.g. solo performer or ensemble) needed to achieve a balance between performance-value and knowledge-sharing [18]. On a related point, Schneider et al. (2014) flag that some arts-based engagement interventions may need an upfront explanation for a target audience to understand how the engagement is intended to work [17]. They discuss this in the context of the dissemination of a play based on an ethnographic study of the work of healthcare assistants in England, which aimed to examine the stresses, coping strategies and rewards associated with caring for people with advanced dementia. Many public-based engagement approaches also include follow up activities around the core intervention to ensure accessibility (as discussed in section 3.4.1, hence not repeated here).

Perez et al. (2016) warn that the name of an approach and its method of communication also influence accessibility – they discuss this in the context of using Photovoice approaches in a project that sought to improve the mental health of Latina immigrants in the United States, noting that participants in the public engagement project found the term inaccessible and the method intimidating [26].

### 3.6.2. Resource availability: Financial resources, time, facilities, and governance and administrative infrastructure

The resources available to support the development and implementation of an arts-based public engagement approach receive significant attention in the literature. These include financial resources [11, 18, 24, 35, 39, 40, 43, 53, 59, INT1, INT2, INT3, INT5, INT6], sufficient time for developing an approach and for its implementation [18, 23, 25, 28, 39, 43, 55, 59, 61], facilities [14, 18, 31, INT6], and governance and administrative infrastructure [9, 18, 24, 35, 39, 59].

#### Securing appropriate financial resources

Arts-based public engagement approaches can be intensive in terms of financial-resource requirements. For example, Hung et al. (2019) flag that a considerable budget can be required to maintain long-term collaborations with various types of individuals involved in the design or delivery of an intervention, such as artists, community members and researchers [53]. In addition, some projects require funding to be secured from the institution(s) that a researcher(s) is based at, and this can be challenging – especially when there is a *"mismatch between institutional expectations for researcher-driven public engagement and the resources allocated to it"* [35, p. 101, INT1] or when the engagement activity is local or small-scale and does not meet institutional ambitions for reputational benefits from engagement activities [35]. Similarly, Sian and Nugent (2019) provide a summary of desk research into existing collaborations between artists and researchers for public engagement (with a UK focus but including international examples) and also identify challenges related to the value research institutions assign to public engagement activities as well as challenges related to funding hierarchies for such activity across different disciplines [59]. Differences between available resources for artists, researchers and community-based participants can also hinder engagement efforts [28, 59]. Lee et al. (2016) describe how inabilities to cover childcare costs, for example, impeded the participation of some community members in their public engagement events [28]. There can also be challenges in sustaining specific arts-based public engagement interventions due to difficulties securing continued funding [INT3]. These types of financial barriers can limit the potential for co-producing an

arts-based engagement approach through frequent and intensive interaction and idea exchange between researchers, artists and/or other stakeholders and may lead to more transactional approaches to engagement and the development of arts-based interventions based on a pre-specified brief [INT1, INT3].

One of the interviewees we spoke to provided insights on the types of issues that may be scrutinised by a funding committee and can lead to rejections of funding applications for arts-based public engagement projects. The interviewee commented that applications need to be clear about the need for the arts-based public engagement project, who it is for and how the intended audience will be reached, and that they need to convey that the engagement plans are realistic based on available relationships and infrastructure. The interviewee also commented on the importance of specificity about the intended audience [INT4].

### Ensuring sufficient timescales for engagement and timely intervention outputs

Arts-based public engagement approaches are rarely quick to develop and implement. Establishing appropriate relationships for the development of the approach, resolving potential misunderstandings between stakeholders, and ensuring relevant and accessible intervention design takes time [55, 61, INT1, INT4]. Time demands are accentuated when the interventions are developed in a highly collaborative manner [25], not least in light of competing demands on participant time [28]. Staff turnover can further compromise the ability to deliver an arts-based public engagement project according to originally envisaged timelines [25]. Too tight a timeframe can also increase the risk of participant withdrawal [55]. Similarly, Sian and Nugent (2019) identify partners lacking time or resources to fully explore a partnership as a factor limiting co-creation and leading to engagement between existing 'usual suspects' [59]. The lack of sufficient finance can sometimes lead to project teams needing to invest substantial amounts of their own 'free' time in a project [40].

In addition to having sufficient time for intervention development and delivery, it is important to ensure that the delivery is timely for the intended audiences. For example, Pruitt et al. (2018) present findings from a community-based participatory evaluation of a Housing First program in Hawaii - a programme to support homeless individuals by placing them in the housing of their choice and then providing access to and connections with support services [23]. This project included an arts-based engagement element consisting of an exhibition developed from research findings informed by a photovoice approach. The authors note a challenge related to the strategic timing of the exhibition event. The event was timed to precede a decision on programme funding by the city council, which meant that the development of the exhibition ended up being hurried and the research team was unable to assess its impact in a way that they had hoped for [23].

### Access to the right facilities

The facilities used to deliver an arts-based public engagement intervention also need to be carefully considered and fit for purpose. For example, Drumm et al. (2015) discuss a project using a touring sculpture, an exhibition, and workshops with schools to raise awareness about acoustics science [14]. The authors identified that the nature of the venue and access to it were barriers to the extent to which younger audiences could engage with the exhibition [14]. Taylor et al. (2017), in the context of an ethnodrama on the health-seeking behaviour of African

American men, discuss the importance of a venue of sufficient size and proximity to the stakeholders being engaged that fits with budget and time constraints [18]. Wendler and Shuttleworth (2019) discuss how, in the context of an immersive interactive street game developed for public engagement with environmental science research, it mattered that the physical space in which an intervention was being delivered resonated with the topic and themes of the engagement exercise, that of flood risk communication [31]. The use of an "*accessible urban space*" [p. 23], as part of the Manchester Science Festival and Festival of Social Science 2016, was therefore considered appropriate. Interviewees consulted for this research also flagged the importance of a safe, comfortable and pleasant physical environment for facilitating learning [INT5, INT6]. One interviewee flagged that on some occasions, however, it can help to take stakeholders outside of their comfort zone and enable engagement in a neutral space [INT3] to level the playing field in multi-stakeholder contexts.

### Conducive governance and administration infrastructure

The development and implementation of arts-based public engagement projects are also influenced by factors related to the governance and administrative infrastructure within which these projects evolve. The literature we reviewed flags a series of challenges in this regard. For example, Cook et al. (2017) emphasise that contractual agreements need to support the timely delivery of work and payment of expenses for contributors [35]. Sian and Nugent (2019) identify payment issues and the lack of understanding on the part of researchers of how artists 'survive' financially as challenges to engagement processes [59]. Ensuring clarity in relation to ownership issues for the 'products' developed, for example, in relation to copyright, is also important for effective governance of engagement processes [18, 33, 59, INT1]. Similarly, Lee et al. (2016) note the importance of clear guidelines and agreements to support effective engagement [28]. One of the experts we spoke to flagged the importance of tackling some of the potentially thorny issues early on –including considering issues such as ownership, specific roles, funding and pay arrangements, and legacy and sustainability-related matters [INT1].

There are also various considerations to bear in mind concerning ethics and data governance in arts-based public engagement projects, such as data security and the privacy and confidentiality of stakeholder information [9, 18, 24, 39]. Boydell et al. (2012), based on a scoping review of arts-based interventions used in health research that included arts-based approaches for knowledge translation (i.e. public engagement in the dissemination stage of research), flag important ethical considerations relating to privacy, consent to be photographed and sensitivity to the potential experiences of participants that may be triggered through engagement (such as painful or unexpected feelings) [24]. They note that few guidelines specific to arts-based public engagement currently exist in this regard [24].

More generally, there is a scarcity of best practice guidelines for how to do public engagement with research well. This applies both to guidelines for arts-based engagement approaches and public engagement with research in general and such guidance is needed [INT5]. The National Co-ordinating Centre for Public Engagement in the UK is currently developing some guidance to support effective engagement, based on feedback from an earlier call for evidence [INT1].

Wider governance challenges are also identified in relation to institutional ways of working, researcher job roles, and institutional incentives. More specifically, Cook et al. (2017) discuss how research institutions often

prioritise traditional outputs (such as journal publications), which can limit support for arts-based public engagement activities [35]. They also note that short-term contracts can lead researchers to prioritise other academic commitments, given competing duties and job responsibilities [35]. For example, the authors note how competing demands on researcher time compromised their ability to build closer relationships with students from an arts college involved with delivering a visual arts project (revolving largely around a photographic exhibition). The project targeted the local community of people in south-east London, stroke survivors and their families, and clinicians and researchers involved with the South London Stroke Register (SLSR).

Governance of collaboration on arts-based public engagement projects also needs to contend with reward and recognition issues for contributors. One issue flagged as important is providing feedback to contributors [11, 33] and acknowledging their contributions to help them feel valued [28, 33, 39]. Austin (2016) notes: "*Always follow up with the community because it demonstrates your respect for the participants and your transparency as an organisation. The community should also be provided with the detailed outputs*" [11, p. 29]. Contributors can also benefit by learning and developing skills in research and leadership (e.g. [22, 28]), or art production (e.g. [33, 38]). Monetary rewards are also sometimes used. For example, Iacovides et al. (2019) discuss the design and playing of a game as a public engagement intervention [33]. A team of academic researchers asked members of the public (volunteer university students) to design a game on human error in healthcare practice, allowing the researchers to evaluate the game design method as a public engagement approach. This was part of a wider research project investigating ways of improving safety within healthcare. Designing the game was part of the intervention while playing it contributed to its development; students other than those who had originally designed the game played it and provided feedback as further learning for the students who created it. The games were also made available online as another form of public engagement. Winners were selected, and all competing students received feedback. A final showcase event was held so all attendees could try out other teams' games and present theirs. This was attended by 35 people, including the wider research team and the wider public (further details not provided). To recognise their efforts, the students' names were listed next to their games online, with their personal website details or online profiles. Cash-prize awards were also provided [33].

### 3.6.3. Relationships and collaboration

Securing and nurturing effective stakeholder relationships is a central theme across the literature we reviewed and flagged as a key influence on the success of arts-based engagement efforts by the interviewees we consulted.

#### Recruiting and consulting the right stakeholders

The ability to recruit and retain the right stakeholders in an arts-based stakeholder engagement project is key to success [13, 18, 28, 29, 33, 35, 49, 56, INT2, INT4, INT5, INT6]. This is by no means straightforward, particularly in the absence of sufficient financial resources to support engagement activities [35]. The fact that many arts-based public engagement projects require the involvement of diverse stakeholders across researchers, artists, healthcare professionals, patients and the wider public, and (at times) policy communities adds to this complexity [13, 28, 29, 33, 49]. Recruiting and retaining a variety of desired stakeholders can be costly [33], and the challenge is to balance efforts to

attract the desired type, number, and variety of individuals given the available resources [33]. Thinking carefully about the wording of invitations to engage the public and ensuring that the invitations come from trusted, credible and respected individuals/organisations can be a helpful tool for recruitment [INT6]. Different stakeholder groups may require different means of communication to ensure their engagement [INT2]. In some cases, getting the buy-in from senior leaders in a setting where the target group is based can help mobilise buy-in [INT6].

The development of many arts-based interventions also requires multidisciplinary collaboration for a diversity of voices to be heard [29, 49, INT5]. For example, Jones et al. (2017) reflect on the use of metaphors in visual arts-based public engagement to communicate medical and scientific work to various public groups [29]. They describe a public engagement exhibition 'Translation: From Bench to Brain', which was created through various collaborative arts-based engagement projects and organised by the Cardiff Medical Research Council (MRC) Centre for Neuropsychiatric Genetics and Genomics in conjunction with what was the Centre for the Economic and Social Aspects of Genomics (Cesagen). Clinicians, natural and social scientists and artists were involved in delivering a number of talks and workshops associated with the exhibition. The authors highlight the importance of a multidisciplinary organising team who were able to bring expertise from the visual arts, social sciences, medical research and clinical psychiatry into the development of engagement content [29].

### Enabling interactive experiences and leveraging the skills, experiences and perspectives of diverse contributors to the engagement effort

Alongside evidence from interviews conducted for this research, the literature flags the importance of consulting stakeholders on both the design and development of arts-based public engagement interventions and implementation and adoption issues [14, 37, 40, INT1, INT3, INT5], and of doing so early in the engagement process [INT3]. One of the experts we interviewed stressed the importance of careful preparation and planning that engages stakeholders to ensure an appropriate study design, clarity about the themes that need to be communicated through an arts-based intervention, and a fit-for-purpose dissemination approach [INT5]. Another expert we spoke to commented on the importance of creating opportunities for exchanging ideas and knowledge early on in a public engagement effort (through a workshop, for example) where different stakeholders can share their views on various possibilities for arts-based approaches and then select the most appropriate one [INT6]. However, another noted that there is also a need to become comfortable with not having all the details of an approach ironed out at the onset so as not to have preconceived ideas that prevent stakeholders (who were artists and researchers in the context of the interviewee's example) from genuinely co-shaping the engagement approach [INT1].

Mackintosh et al. (2018) also comment on the importance of consulting stakeholders (in this case, consulting women on their responses to safety concerns in pregnancy) prior to the creation of an animation that aimed to communicate health information to assist women in their journey through the maternity system [40]. The early consultation helped the team developing the animations to identify key issues for these women [40]. As an alternative example, Lohan et al. (2015) discuss the dissemination of research through a video-drama to promote

evidence-based sex education to teenage men on the topic of unintended pregnancy [37]. The authors discuss the importance of consulting stakeholders in the planning phase (in the context of their project, this included policymakers, health experts, education experts, management of schools, teachers, students and parents) to increase the likelihood of successful implementation. They also note that ongoing stakeholder consultation is critical to the adoption and sustainability of the intervention they developed as a sex-education tool, in light of potential topic-related sensitivities [37].

Some authors and individuals we interviewed emphasised the importance of two-way interactive engagement to ensure a collective and immersed engagement experience. Whereas the extent to which two-way interaction is required for intervention development may vary across different engagement approaches and interventions, the need for interaction is a frequent theme in the literature [11-13, 32, 33, 36, 39, 40, 59, INT6]. An interviewee consulted for this research flagged the importance of creating avenues for the fertile exchange of ideas to enable a particular topic to be approached from fresh and innovative perspectives [INT6]. Another interviewee stressed the importance of building interactions based on genuine respect between researchers and artists and ensuring mutual understanding of the nature of the relationship (consultative, commissioning or truly co-creative) from the beginning [INT1]. However, enabling interactive experiences does not equate or necessitate co-producing an entire arts-based public engagement approach [INT2] – some (but not necessarily all) aspects of the approach may be co-produced between different stakeholders, and pragmatic considerations will influence the degree of co-production that is feasible.

In the context of effective interactions, Austin (2016) flags the importance of genuine commitment and sincerity of intent when those delivering arts-based engagement projects engage with communities. Austin notes that "*The more it's a genuine and complete engagement, you are taking greater risks and taking opportunity for greater reward*" [11, p. 13]. The need for effective audience engagement with the arts-based interventions, once developed, is also important for impact [29, 31, 32].

Although important, two-way engagement and effective communication are not straightforward to realise due to relational and operational challenges [7, 9, 11, 20, 28, 35, 53]. Austin (2016) highlights language differences, power differentials and misconceptions about each other's work as potential drivers of misunderstandings between stakeholders and identifies ways to mitigate them in the context of projects involving communities [11]. Some of the examples presented include using the traditional art forms of a community for an engagement project to allow people to express themselves in a familiar way, involving the community from the project's inception, and involving the community in identifying issues to research [11]. Cook et al. (2017) note that email-based communication can contribute to misunderstandings when establishing stakeholder involvement in the development of art (e.g. briefing on overall aims of a project) [35]. An expert on arts-based public engagement that we interviewed also commented that ready access to the stakeholders being engaged with – by working in the same premises where stakeholders normally reside, for example – can help build relationships and facilitate interactions [INT6].

Various authors emphasise the importance of ensuring that stakeholders understand the research topic underlying the arts-based public engagement approach and the importance of

clear communication about a subject area and engagement task at the onset [7, 33]. Creating space for dialogue and open communications throughout the process is also identified as important [22, 62 INT1], not least as the process of designing and developing arts-based engagement interventions is often experimental. Whereas the overall requirements can be planned, the interactions between involved stakeholders need to allow for a degree of emergence and unpredictability [INT2].

Linguistic barriers to effective communications are also identified [9, 20, 28, 53, INT5], and finding ways to address them, including through non-written and non-verbal communications as well as translation and interpretation activities, are considered in the literature [20, 28, INT5]. Linguistic barriers are not just a challenge in relation to engagement with the general public and local communities. Sian and Nugent (2019) point out that language barriers also exist between the disciplines artists and researchers work in. Despite using similar or identical processes (e.g. experimentation), "*the vocabulary may be different in differing contexts and exacerbated by stereotyping e.g. studio vs. lab*" [59, p. 6]. Similarly, an interviewee we consulted during the course of this project noted that using appropriate language that resonates with different stakeholders is key to successful collaboration in the development and delivery of arts-based public engagement approaches [INT6].

There can also be challenges due to tensions between stakeholders that can arise as a project unfolds. For example, Hundt et al. (2011) identify dealing with conflict in the team as a challenge in their highly interactive collaboration to develop a theatre-based engagement intervention, based on the findings of their research on the topic of women's and health professionals experiences of second-trimester prenatal screening [13]. The authors note that conflicts were not always easily solvable given that individuals from different vocational backgrounds had different perspectives at times and that conflicts led to substantial debate [13]. An interviewee we spoke to highlighted the need for creating environments where issues can be openly and transparently discussed [INT6].

Similarly, some of the papers we reviewed discuss the influence of power imbalances and the importance of building shared understandings, ensuring that everyone is 'on the same page' and establishing trusting relationships. This is also identified as important by some of the interviewees we consulted [11, 34, 40, 59, INT1, INT2, INT4]. To illustrate, Mackintosh et al. (2018) identify a project team's commitment and belief as facilitative when dealing with differences in opinion about the development of an animation that aimed to communicate health information to assist women in their journey through the maternity system (based on research findings on women's experiences of responses to their safety concerns in pregnancy) [40]. In this arts-based public engagement project, women with lived experience of birth complications were given roles as facilitators, and approaches were designed to encourage and empower them to use their experiences to develop a storyboard for an animated video. The authors describe how health information on pregnancy and childbirth typically places power with healthcare professionals by assuming a deficit in patients' knowledge rather than reinforcing pregnant women's expertise and ability to self-diagnose complications in pregnancy. Therefore, the animated video aimed to help address perceived power imbalances between pregnant women and healthcare professionals. Other mechanisms to support the bringing together of multiple perspectives were set up early to facilitate open dialogue, shared understandings and trusting relationships (no

further detail provided) [40]. Similarly, Tischler et al. (2019) comment on the importance of researchers relinquishing a degree of control when collaborating with artists and other stakeholders, whilst also noting that this can pose a risk of the translation of research-based findings into an arts-based engagement intervention being "*neglected or overshadowed by creative outputs*" [34, p. 6]. Being prepared to relinquish a degree of control when needed is also identified as important by one of the interviewees we spoke to [INT1]. Regardless of degrees of control, working closely with artists is key to developing appropriate interventions. As pointed out by an interviewee, *"it doesn't happen all the time and you really see the difference when it doesn't"* [INT6].

Others, too, comment on the need to allow stakeholders involved with the development of an engagement intervention sufficient freedom and autonomy, but recognise that this is not always easy to do while balancing researchers' needs [33, 35, 36]. For example, Couture et al. (2017) discuss arts-based engagement of the public with bioethics research. The authors flag challenges that can be encountered when using arts to support knowledge-transfer and create shared meaning across arts, bioethics and wider public communities (whom all create meaning differently), as illustrated by this quote: "*sometimes we saw a gap appearing between our universes and heard bioethicists ask for more rational discourse and explanations, while artists were seeking more freedom and intuitiveness, and both facing a sometimes sceptical public*" [36, p. 629].

### Context-awareness and context-sensitivity

Related to the above is the importance of both cultural and wider context-sensitivity in efforts to develop and deliver effective, accessible and relevant arts-based interventions for public engagement with research [21, 28, 37, 39, 42, 43, 54]. For example, Saini et al. (2020) describe the development and dissemination of a whiteboard video tool to share public health messages (based on research into public health issues affecting the Inuit community) for reducing the risk of self-reported acute gastrointestinal illness [54]. This was developed and delivered by young members of the Rigolet Inuit community in Canada, key regional stakeholders (e.g. local public health practitioners) and the research team [54]. Together, representatives from these stakeholder groups developed ideas for the engagement approach and were involved in putting on a series of community engagement activities during the development of the whiteboard video tool (e.g. a youth workshop). Saini and colleagues (2020) found that the local stakeholders' involvement in the content-development of the whiteboard video tool (a form of animation) helped make the public health messages in the video suitable for the Inuit community members who were the target audience. Narration of the video by a local community Elder was perceived by Inuit viewers as authoritative, familiar, and distinct, which also helped with perceptions of content validity [54].

An alternative example is described by Tingay (2018), who reports on a collaboration between astrophysicists in Western Australia – who were aiming to build the world's largest telescope – and Indigenous artists living in the region they planned to build it in [21]. The collaboration resulted in an art exhibit that conveyed information on astrophysics alongside traditional Indigenous stories, culture and art to the general public across different geographies (Australia, Europe, USA, and South Africa). Tingay describes the art exhibit as a science communication approach and notes the importance of mutual respect, unrushed communications and the exploration of different cultural perspectives as important for the development of a successful artistic exhibit [21].

Also in relation to engagement with local communities, Zemits et al. (2015) describe the screening of two participatory films made with the Indigenous Yolnu community in a remote part of Australia [42]. The films presented research-based evidence on health topics relevant to the Yolnu community. One film was about the prevention of iron deficiency and the other about testing for foetal anomalies during pregnancy. The authors reflect on the importance of cultural considerations in the process of developing the films. They describe how roles between researchers and Indigenous community members needed to be negotiated, with researchers giving up control over the narrative being told and timelines for getting things done. The non-Yolnu researchers and members of the Yolnu community negotiated through communication and discussion of the balance between the 'western' health messages told in the film and representations of the Indigenous perspective on the films' topics. The authors note the importance of casting appropriate actors in the film due to the complex kinship relationships within the Yolnu community. If the wrong actors were cast in some roles, Yolnu audiences would be distracted by the inappropriate relationships being depicted because they would be aware of the underlying relationship(s) between them [42].

In addition to being culturally sensitive, public engagement interventions need to be mindful of the wider historical and political context within which they unfold, and the demographics of the stakeholders being engaged. To illustrate, in discussing the development of an audio-drama based on research on the impact of HIV/AIDS on a prison population in Dublin, Weston (2019) notes that the first draft of their script was a highly fictionalised account that the author and scriptwriters thought was very powerful [39]. However, when the script was shared with collaborators in Dublin, they had a negative reaction to it, believing it to be insensitive and overly critical of the Irish prison system's response to HIV/AIDS. It was also noted that everyone involved in the production of the script was English. In response to the critique from their Dublin colleagues, the project team revised the script to better situate the events in the prison within the broader social context, which was one of fear and confusion around HIV/AIDS. The revised script followed a more documentary-style format, incorporating extracts from the oral histories (voiced by actors), a narrator to provide context, and an epilogue to explain the research process and use of oral histories. The author reflects on the fact that some subjects, such as HIV/AIDS, are contested historical topics, and one role of the historian is to cast a critical eye on 'official' versions of history, but she notes that collaborative public engagement around such contested topics can be challenging [39].

Patel et al. (2018) also consider the importance of political context [25]. They describe how changes in the political climate influenced an engagement project that used an arts-based intervention to help communities of colour in the US gain healthcare insurance based on the findings of a community-based participatory research study exploring navigation, enrolment in, and maintenance of health insurance coverage within communities of colour. The video was created to help communities of colour understand the Affordable Care Act (ACA), which broadens Medicare eligibility. Attempts were made to repeal the ACA in its entirety, repeal specific provisions or defund its implementation. Team members were therefore concerned about the sustainability of the video content they were creating, given that the content would no longer be relevant if the act was significantly altered or de-implemented. The project steering committee meetings were used as an

opportunity to address these concerns, and the authors flag the importance of ongoing dialogue between project team members to keep up with the impact of the political climate [25].

Sensitivity to other demographic factors, such as age, also matters for effective engagement interventions. To illustrate, Vaughn et al. (2013) discuss the use of digital animation to disseminate research findings to the community on the topic of youth violence in Philadelphia [43]. The researchers used interviews and focus groups to develop a digital animation together with community participants, and animated shorts were disseminated to the general public in urban communities (both youth and adult). The authors note the importance and challenges of balancing what is important to youth and adult stakeholders [43].

### 3.6.4. Skills and experience

Unsurprisingly, the skills and experience of both those involved in intervention development and delivery and of its target audience influence how the interventions unfold and their success (e.g. [8, 15, 28, 30, 32, 34, INT4, INT6]). As demonstrated in section 3.6.3, arts-based public engagement with research is a social process, and the researchers' social skills – in terms of their ability to facilitate effective interactions and communications – are critical to how engagement processes evolve (e.g. [29, 31, 32, INT6]).

#### The importance of technical and social skills, and of both prior and lived experience

Technical skills, specific educational and research backgrounds, and lived experiences are also important, as we have shown (see section 3.6.3) in the context of attracting appropriate stakeholders across research disciplines, artists, healthcare professionals and lay patient, public and policy communities [13, 18, 28, 29, 33, 35, 49, 56, INT1, INT6].

Some of the required skills can be facilitated by previous experience in public engagement projects. For example, Lee et al. (2016) flag that the skills of researchers in relation to community-based participatory research methods enabled the development and delivery of their expressive arts-based engagement project with Cambodian American women, with arts-based outputs resulting from participatory research around issues of community health and wellness [28]. Harvey et al. (2019) report on the development of a theatre production based on research into international students living in the UK and their motivations for learning English [15]. They note how the play's development was informed by the authors' previous experience of developing a shorter theatre production [15]. Similarly, some skills come from direct experience of the world in which an intervention will be implemented. For example, Hristov et al. (2018) describe the characteristics of visual material that can be used to captivate public interest, enhance the public's understanding of hard-to-grasp concepts, or spark conversations about the value or relevance of scientific research [30]. They do so by presenting a case study on innovative visual communication methods, through examples from the iSWOOP (Interpreters and Scientists Working on Our Parks) project, a "*science-based informal learning project*" (p. 117) conducted in national parks (a collaboration among wildlife biologists, on-site scientists, park rangers, informal education researchers, and designers). The authors note that the existing skills and motivations of the park rangers delivering the created visual materials made them "*ideal ambassadors for the science messages that often get left out of the public discourse*" [30, p. 117].

In a similar light, an interviewee we consulted for this study spoke about how years of experience working for a programme developed by a theatre company have been helpful with the design and development of new arts-based public engagement projects that seek to engage healthcare staff, because learning from past experience can be brought into the process [INT6]. The same interviewee commented that the quality and reputation of the artists being engaged with matters, including in relation to facilitating engagement of other stakeholders who may be more willing to engage if the contributing artists have an established reputation and prestige [INT6]. Regardless of prestige or years of experience, however, it is important to ensure that the artists have skills that are matched to the audience being engaged with [INT6]. Another interviewee commented in a similar light: *"Artists are often really brilliant at finding fresh and uplifting ways of mobilising – all this can alter a space and the ground rules for interaction. It comes down to talent and the approach that artists can bring"* [INT4].

Important and relevant skills also come from lived-experience [32, 34, INT1, INT6]. To illustrate, Malchy et al. (2011) present a case study on the use of forum theatre for research knowledge translation to address tobacco use in the context of mental health services [32]. Providers of mental health services and service-users affected by tobacco use were actors in the performance. A two-day training session was provided, covering basic theatre techniques and exploring issues relating to tobacco use and mental health. The cast (led by the project co-ordinator) developed and rehearsed scenarios based on research findings and the actors' own experiences, which formed the basis of the forum theatre performance. The fact that the actors were all individuals directly affected by the issues explored gave authenticity to the voices who presented the tobacco behaviour-related messages and enhanced the credibility of the contents presented through the performance [32].

Some arts-based public engagement approaches explicitly include an element of education or training in their design (as discussed in section 3.4.1) by incorporating critical reflective discussions or workshops [14-16, 29, 30, 35, 36, 56, INT6]. These teach people involved in participatory research projects how to engage in necessary arts-based research activities [23, 26, 41], provide skills to facilitate research dissemination efforts [33], or may include other types of support to bring needed skills into the engagement effort, such as designated management support from public engagement experts [INT1].

For example, stakeholders who might contribute to the development of an arts-based intervention may require some training on the research topic or arts-based engagement methods [33, 56, INT4]. An example is the development of a web-based animated sexual health promotion intervention targeted at young men in prisons (developed through a participatory research project involving a number of incarcerated young men), in which prison nurses received a bespoke three-day training course to ensure adequate knowledge of sexual health issues that were being explored. Nurses completed web-based sexual health modules as part of the training. Similarly, Iacovides et al. (2019) discuss how members of the public (volunteer university students) were involved in designing a game based on research findings on the topic of human error in healthcare practice so that researchers could evaluate the game design method as an approach to public engagement [33]. In this case, university students attended a workshop where they received talks from experts and healthcare professionals and learnt about and

practiced game-design techniques [33]. Perez et al. (2016) describe the use of a Photovoice public-engagement intervention in a project that sought to improve the mental health of Latina immigrants in the US. They discuss using an orientation session where facilitators described the purpose of Photovoice and also provided information and described how to use the cameras to participants and explained basic photography principles [26].

### Training and skills-building

An interviewee consulted for our research also flagged the importance of building capabilities to effectively design, develop and deliver arts-based public engagement projects by talking to those who have done it before [INT1], noting that research reports often lack key information about the challenges of a particular approach.

Training or other supplementary forms of upskilling and information and awareness-raising may also be a part of the delivery of an intervention as complementary activities to the delivery of the core engagement activity (e.g. supplementary content to an audio or video-drama). The complementary activities can aim to support target-audience engagement or to support uptake and impact. For example, Weston (2019) notes how the research team sought to facilitate audience knowledge and ability to effectively engage with an audio-drama on the impact of HIV/AIDS on a prison population in Dublin by engaging a narrator to provide context and using an epilogue to explain the research process and use of oral histories [39]. Concerning the role of training and support resources in enabling uptake, Lohan et al. (2015) discuss the development and delivery of an interactive video drama on teenage men and unintended pregnancy called 'If I Were Jack' and designed to be used within sex-education courses for boys and girls of at least 14 years of age [37]. The arts-based intervention delivers evidence-based content and consists of a project website that hosted the research and evidence-informed interactive video drama. The website also hosted classroom lesson plans for teachers and promotional materials, including videos and podcasts with experts and 'practitioners' that were intended to 'increase the credibility of the resource' with teachers [37, p. 6].

One of the experts we consulted argued for the need for an integrated approach to research careers that understands arts-based methods as a fundamental part of research methodology [INT4].

## 3.6.5. Insights on influences on realising desired impacts

As mentioned earlier, much of the literature we reviewed focuses on influences on the process of arts-based public engagement with research, and less specifically on influences on its ability to realise intended impacts. Of course, the two concepts are closely related, as the way in which the process unfolds will play a role in the impacts that materialise.

### The importance of evaluation

Building in mechanisms to evaluate the success of an arts-based public engagement intervention is important for understanding impact and for informing future efforts. Still, it is challenging, and involving external evaluators can sometimes go beyond the resources available to arts-based engagement projects [INT2]. Bratchford et al. (2018) flag the importance of choosing an appropriate evaluation approach that can capture the range of outcomes of interest [55], and this was also flagged as important by some of the interviewees we spoke to [INT6, INT4]. In addition to challenges posed by a lack of financial resources for evaluation, a lack of data and evidence on impact can also be a challenge to learning from evaluation [13, 33].

Sian and Nugent (2019) warn of a tendency for success stories to be published but as yet little documentation evidencing issues and challenges [59]. They flag that the failure of projects is often blamed on the artist not successfully interpreting the research, a point also made by one of the individuals we interviewed [INT1]. As we elaborate on in section 3.7.3 (and hence do not repeat here), the evidence base for arts-based public engagement approaches is nascent, and there is a considerable lack of robust evaluation [INT5, INT3, INT4].

### Support for uptake, dissemination and impact: timely feedback, funding for dissemination and stakeholder engagement with promoting the results of the engagement effort

Nevertheless, across the literature we reviewed, the authors identify some influences on the ability to achieve the desired impact from the interventions used and delivered. One such influence is the availability of funding to support efforts to apply findings from an engagement project to help the communities being engaged with [28]. Another is the ability to provide timely feedback on the engagement effort's results to the communities involved [20, 36]. Finally, the literature discusses the importance of stakeholder support for dissemination and impact-oriented activities [37] and investment in promoting the results of the engagement effort [33]. Saini et al. (2020) discuss the use of social media as a way to maximise the reach of some interventions (in their case, a video-based intervention for disseminating public health messages) [54]. Engaging with the media is also identified as helpful by an interviewee we consulted [INT5], in the context of using TV channels to help disseminate musical and visual art developed from psychiatric research. A live launch event that featured an art exhibition and live jazz performance was televised, which increased the impact by enabling a wider pool of individuals to engage with the intervention.

## 3.7. What are the outcomes and impacts of arts-based engagement approaches and their associated interventions?

In this section, we set out evidence from the literature and interviews with experts in the field of arts-based public engagement relating to the outcomes and impacts of arts-based engagement approaches. We first consider the nature of the evidence base and existing guidance regarding the evaluation of arts-based approaches and their constituent interventions. We then discuss what is known about the types of outcomes and impacts that may materialise in relation to the goals of arts-based approaches for public engagement with research.

### 3.7.1. What is the nature of the evaluative evidence base?

The evidence base on the outcomes and impacts of arts-based engagement approaches and associated interventions is limited, reflecting a number of challenges associated with their evaluation. These challenges are related to a number of issues:

- **The aims of arts-based approaches to public engagement with research can be difficult to establish.** The variety of stakeholders that might be involved in their development and delivery can have a mix of common and unique interests in the engagement effort [11, 24, INT4]. For example, in their review, Boydell et al. (2012) highlight that authors reported difficulties in balancing the artistic and scientific components of engagement projects, with the aesthetic value of such projects often going unexamined [24]. Austin (2016) also notes the potential for

disagreement regarding what constitutes a desired outcome, given differing goals between researchers and their artistic collaborators – a point that is reinforced by interview findings [11, INT4, INT5]. One interviewee noted that the goal of changing the behaviour of the individuals targeted by arts-based engagement approaches is more likely to be espoused by health researchers than artistic partners [INT5]. Cook et al. highlight a need for research to gain *"further understanding of the value of public engagement for institutions, researchers, participants and publics"* [35, p. 102], although some have argued that the collaborative creative process itself is as valuable and meaningful as any tangible or more measurable output [11].

- **Many arts-based engagement interventions are designed to be intentionally emergent. This is partially related to their development, often involving an element of co-production.** This emergence can pose a challenge to evaluation as it is difficult to define the interventions in an arts-based approach that are to be evaluated a priori [11, INT2, INT3, INT6].
- **Impacts from arts-based public engagement approaches and associated interventions can take months or years to unfold after the engagement activity is completed.** This poses a challenge in relation to the timing of evaluation activity [11, 17, 33]. One interviewee noted the tendency for interest from research partners in collaborative arts-based engagement efforts to drop off once the artistic output has been created, with the artist left to complete any follow up for their own portfolio (linked in part to the project-based nature of research funding – with contributors moving on to other projects) [INT1].
- **There is a lack of guidance on how best to evaluate arts-based engagement approaches and their constituent interventions.** There is a recognised need for further work to develop reliable evaluation methods [24, 32, 34, 55, INT4]. In their scoping review, Boydell et al. (2012) identify a need to explore ways of evaluating arts-based dissemination approaches, noting *"authors in our review replicate the expectations of a positivist worldview and argue for rigorous evaluation of dissemination strategies and several suggest that what is required to address issues of quality and impact are randomized controlled trials"* [24, section 4.3]. However, the review authors question whether or not there may be alternative ways to address quality, suggesting that positivist ways of evaluating impact may be at odds with the methods used to conduct arts-based engagement interventions [24]. This point is reinforced by Bratchford et al. (2018), who note challenges related to using a positivist approach to capture outcomes relating to empowerment in a socially engaged photography approach in primary care, and by one of our interviewees, who described how those involved in arts-based projects are constantly striving to find forms of evaluation that can build a holistic picture and capture non-quantifiable impact [55, INT4]. Tischler et al. (2019) highlight a need to *"consider how its value and impact is measured in light of growing interest in public engagement"* (specifically within the context of the UK Research Excellence Framework) [34, p. 102].

Despite the identified challenges and knowledge gaps regarding approaches to evaluating arts-based engagement approaches

and interventions, a few of the articles and information sources included in our review provide learning and guidance to assist with evaluation efforts [11, 20, 64] and interviews with experts provide additional insights. These relate, for example, to:

- **The timing and staging of evaluation:** Guidance set out by Wellcome [64] identifies the importance of evaluating different stages of designing, developing and delivering an arts-based engagement approach and its associated interventions in order to provide feedback on whether it is achieving its aims and enabling improvements to be made. The same source also points to the need to consider whether the evaluation can be incorporated into the engagement activity itself [64]. Although not a formal evaluation, one example of efforts to build evaluation activity into the design and delivery of an arts-based engagement approach can be found in Wendler and Shuttleworth (2019), who pursued this in the context of an interactive street game focused on flood-risk management [31]. They experimented with seeking in-game reflection from players, with a 'journalist' character asking teams about their decisions during the course of the game.
- **Tailoring the evaluation methods and approach to the context and stakeholders involved:** The importance of considering the stakeholders contributing to the evaluation and the context in which it is being undertaken when planning evaluations of arts-based engagement interventions is also emphasised in the literature [11]. Taking into account both the accessibility and acceptability of the evaluation approach is paramount to facilitate and encourage contributions and maximise responses to evaluation data gathering instruments [11, 16]. For example, a lengthy survey might be inappropriate for an activity in which the public is engaged for only a brief period of time [64]. Alternative methods (such as those borrowed from the entertainment industry, such as 'vox-pop' interviews – brief interviews with members of the public – focus groups and the use of social media to gauge audience reactions) may be more appropriate than more traditional methods in the context of arts-based engagement [11]. Cooper and Drieger (2018) also highlight the value of building in simple strategies, including using remote devices for participant feedback in group settings so that participants can provide anonymous reactions to the (arts-based) dissemination products; or short follow-up surveys sent to community organisations [20]. It is also important to consider the intended audience when sharing evaluation findings, considering alternatives to written reports where appropriate (e.g. presentations and multimedia, while bearing in mind the need to ensure the credibility of the findings [11]).
- **Considering a range of impact and outcome types on a variety of stakeholders:**
  - Guidance on the Wellcome website highlights the need to consider outcomes for, and impacts on, different stakeholders involved in the development and delivery of an arts-based engagement approach, and not just on the ultimate audience that is being engaged with when planning evaluation measures and which impacts to capture [64] – a point supported by an expert we interviewed [INT2]. A range of impacts on different stakeholders and at different levels of analysis should be considered, including at the individual-level (e.g.

in the context of awareness-raising, knowledge gained and behaviour change), organisational-level (practice change), and wider societal outcomes and impacts (e.g. changing or raising the profile of the conversation about a research topic or policy impact) [INT2]. One of the sources we reviewed flagged that it is also valuable to gather insights about how engagement efforts made members of target audiences feel and whether art influenced the memorability of an event or research output (as well as what they learned and what they did as a result of engagement), since this can help to inform the design of future engagement efforts [12].

- Two sources included in the review refer to an arts-based knowledge translation framework, developed to guide researchers in planning and evaluating these activities [60; 65]. This framework, developed by Kukkonen and Cooper (2017; 2018) sets out four stages for planning and evaluation, including (i) identifying goals and target audiences, (ii) choosing the appropriate art form or medium, (iii) building partnerships with artists, and (iv) considering which impact indicators are appropriate and what methods should be used to capture them. The authors acknowledge that the stages need not always proceed in a linear fashion. The guidance set out in relation to the first and last of these stages is particularly relevant when considering the outcomes and impacts of arts-based engagement interventions, and further details on these are set out in Box 1. Within this framework, the authors set out the types of goals that researchers may consider and suggestions for the types of impact that could be measured and how. The framework's focus is on arts-based knowledge translation (rather than public engagement more broadly), defining knowledge translation as "*a process that uses diverse art genres (visual arts, performing arts, creative writing, multi-media including video and photography) to communicate research with the goal of catalyzing dialogue, awareness, engagement, and advocacy to provide a foundation for social change on important societal issues"* [60, p.1]. However, the stages and detailed considerations highlighted are likely to apply to reflections on the outcomes and impacts of arts-based public engagement more broadly (beyond its role in communication and dissemination of findings).
- A further framework, the Guiding Arts-Based Research Assessment framework (GABRA), was developed specifically to assess the quality and effectiveness of arts-based works used to represent research findings; Lafreniere and Cox (2012) are referenced by Lafreniere et al. (2014), who used it to guide their evaluation of the effectiveness of their arts-based dissemination approach (involving the use of online cartoons to convey information on nutrigenomics – the scientific study of the interaction of nutrition and genes) [57]. This has a narrower focus than the framework proposed by Kukkonen and Cooper and sets out four criteria against which to consider success: (i) the acquisition of knowledge, (ii) a change in initial understanding, (iii) the generation of questions from the findings, and (iv) intent to change own practice.

In addition, one interviewee [INT2] described the use in practice of an evaluation approach that reflects the guidance set out above (see the case study on Liminal Spaces for a detailed description) and is guided by an evaluation framework that seeks to determine project-specific outcomes at three levels: individual change, organisational level change, and universal/societal change. This suggests that progress is being made with respect to establishing best practice.

- **Support for evaluation activities:** Austin (2016) notes that the use of an outside consultant with the time, specialised skills and resources to devote to evaluation can help ensure appropriate evaluation capacity and skills [11] (although the costs of using an external evaluator can be prohibitive for some projects [INT2]). An expert we interviewed also flagged that evaluators bring their own sets of skills and perspectives (raising new questions and opening further dialogue), but warns against working with evaluators who do not have a background in, or understanding of, arts-based methods, particularly if they are not involved in the project from the beginning [INT6]. This brings a risk of selecting an evaluation method that is pre-determined based on prior experience, rather than being driven by the needs of the project and what was learnt by the project team throughout the process [INT6].

**Box 1. Arts-based Knowledge Translation (ABKT) Framework – adapted and abridged from Kukkonen and Cooper (2017; 2018)**

**Stage 1: What are the goals of the ABKT efforts (considering each target audience)?**

- Awareness raising: *"Increasing awareness of the empirical evidence on a topic or historical developments on a particular topic"* [60, p. 2]
- Creating space for debate and dialogue: *"ABKT can be used to create spaces for democratic debate and discussion of pressing societal issues"* [60, p. 2]
- Increasing accessibility to research through the arts: *"There are many areas (such as HIV education within international development) in which language, literacy, or culture are barriers to reading research materials. An arts-based approach to KT can address accessibility issues in some cases"* [60, p. 2]
- Increasing engagement: *"Increasing engagement with research content through making it appeal to more of our senses and tapping into social-emotional aspects of the human condition"* [60 p. 2]
- Building capacity and implementation support: *"ABKT efforts can be a catalyst to facilitate professional learning and skill development around a particular topic"* [60 p. 2]
- Achieving advocacy and policy influence: *"ABKT can be used for advocacy on a particular issue (domestic violence, homelessness, cancer) using research to stimulate policy priorities or change"* [60 p. 2]
- Partnership and co-production: *"Facilitating connections among diverse stakeholders, supporting collaboration, and co-producing diverse stakeholders views in order to convey plurality of perspectives on a topic"* [60 p. 2]

[Stages 2 and 3 focus on choosing the appropriate art form or medium and building partnerships with artists respectively; see Kukkonen and Cooper 2017 for further detail]

**Stage 4: What methods and impact indicators might inform arts-based knowledge translation efforts in relation to their goals?**

- Reach Indicators: measure *"how many people a particular ABKT project, performance, or product has reached"* [60 p. 4] (These include: # resources distributed, # requested, Google Analytics data – # visitors, # downloads etc. – and tracking data from social media).
- Partnership and Collaboration Indicators: measure *"processes of co-production and dissemination of ABKT with different partners and/or target audiences"* [60 p. 4] (These include: # products/performances developed or disseminated with partners, # and type of capacity-building efforts, network growth, clear communication, engagement of different stakeholders).
- Practice, Programme or Service Change Indicators: measure *"commitment to change, process measures and outcome measures where possible"* [60 p. 4] (These include: # commitment to change, observed change, reported change, documentation, feedback, process measures).
- Policy and Advocacy Indicators: measure *"influence and change in policy debate, formation, and implementation"* [60 p. 4] (These include: documentation, feedback, process measures, citations, involvement in policy process, media/social media coverage).
- Usefulness Indicators: measure *"whether a target audience found the ABKT products, performances useful"* [60 p. 4] (These include: read, satisfied with, usefulness of, gained knowledge, changed view, # intend to use, # adapt information).

Whilst there is some guidance relating to the planning and evaluation of arts-based engagement approaches and of their constituent interventions (as described above), many of the articles included in this review highlight the lack (or inadequacy) of evaluation as a key limitation [13, 16, 20, 23, 29, 34, 43, 55]. This is backed up to some degree by interview findings, which reinforce the challenges for evaluating arts-based projects set out above (for example, in relation to differing aims between stakeholders for the arts-based approach, the tendency for approaches to be emergent, and the need for long term follow-up) [INT1; INT4], as well as more general challenges such as a lack of time and sufficient resource for evaluation [INT5].

Challenges notwithstanding, there is some evidence in the published literature on the impact and outcomes of arts-based engagement approaches and their constituent interventions. However, this evidence is limited and is based mainly on the assessment of audience responses through feedback surveys and from qualitative case studies and process reviews of the design and implementation of these approaches and the interventions that form them. This includes evidence on outcomes and impacts for (i) the research studies that may use an arts-based approach to engage the public with research (and the teams and institutions with which they are associated), (ii) artistic collaborators, and (iii) members of the community targeted by

the engagement efforts. We consider these below, sensitised by and building on the framework set out by Kukkonen and Cooper [60, 65] described above, which is the most comprehensive and clearly specified of the frameworks identified in our review.

### 2.7.2. What are the reported outcomes and impacts of arts-based engagement approaches and their associated interventions in relation to their goals?

The outcomes and impacts of arts-based engagement approaches and their associated interventions that are considered in the literature fall into three broad categories:

- Helping researchers to meet their goals for public engagement (i.e. achieving engagement as a goal in itself)
- Improving the quality or effectiveness of current and future research and public engagement activities
- The achievement of wider research impact through arts-based public engagement activities.

Evidence relating to each of these categories is summarised below and presented in detail in Table 6, Table 7 and Table 8 respectively.

#### Achieving 'public engagement' as a goal in itself

According to the literature consulted in this review, successful public engagement with research is sometimes considered as an end in itself. There are a number of impacts and outcomes reported in the literature on arts-based public engagement approaches that relate to this goal (see Table 6 below and Annex C for further detail). These span:

- Increased audience awareness of the empirical evidence or developments on a particular topic.
- Creation of spaces for debate and dialogue around pressing societal issues.
- Increased accessibility of research (for instance, in cases where language, literacy, or cultural barriers exist).
- Increased audience engagement with research content (e.g. through stimulating the senses and tapping into emotions).
- Raising the profile of the research study, programme or institution.

These impacts and outcomes can be interrelated. For example, the degree to which an intervention results in increased awareness of empirical evidence may depend on the accessibility of disseminated findings or engagement opportunities and the degree of emotional engagement with the research topic. However, we consider each in turn in the paragraphs that follow.

*Increased audience awareness*

The most frequently reported impact in this category is increased audience awareness of the empirical evidence on a particular topic. This has been identified in relation to arts-based approaches involving a range of interventions (including performing arts, games, immersive art installations and visual arts [13, 14, 16-18, 31-34, 37, 38]. For example, Malchy et al. (2011) report that around 90 per cent of audience members attending a forum theatre performance and post-performance dialogue (focusing on research findings relating to tobacco use among mental health service users) felt more knowledgeable about how tobacco use affects the mental health community [32]. Similarly, Wendler and Shuttleworth (2019) report that 73 per cent of players taking part in an interactive street game stated that they learnt something new about flooding from the game (in line with the intended aim of addressing the

mismatch between public views and scientific research regarding flood risk management) [31]. While evidence for this type of impact can come from a range of sources (including quantitative estimates of audience reach and one mixed methods evaluation [14, 37], conclusions tend to be drawn primarily based on audience survey findings [13, 14, 16-18, 31, 32, 57] and qualitative research [33, 38]. Of the articles describing impact in this regard, all but one supported the effectiveness of the approach in raising audience awareness in the given context. The exception was an intervention using cartoons to communicate issues relating to genomics research to ethics committee members and academics. Lafreniere et al. (2014) found no evidence for increased knowledge or understanding of the issues among this group – based on an emailed follow-up questionnaire [57].

*Creation of spaces for debate and dialogue*

There is also evidence to support the role of arts-based public engagement interventions in creating space for debate and dialogue around a particular issue [9, 13, 15, 24, 32, 35, 36, INT6], again based primarily on audience surveys and qualitative research. For example, Cook et al. (2017) report that a photographic exhibition incorporating sculpture, film and written text was successful in stimulating audience discussions on the topic of stroke research, with the authors' experience reflecting the National Co-ordinating Centre for Public Engagement (NCCPE) definition of public engagement *"involving interaction and listening with the aim to generate mutual benefit"* [5, What is public engagement?]. Hundt et al. (2011), in relation to a theatre piece and panel discussion on experiences of prenatal screening, highlight that the post-performance panel discussion was perceived by the audience (consisting of members of the general public, healthcare professionals, academics and policymakers) as a crucial aspect of the performance [13]. Audience members engaged with the topic, made spontaneous personal disclosures and raised ethical issues, and healthcare professionals opened-up about and reflected on their practice.

*Increased accessibility of research*

Several articles report on the success of arts-based interventions in increasing the accessibility of research (both in terms of the research findings disseminated and opportunities to be involved in engagement efforts) [7, 9, 22, 29, 36, 54, 59, 62] by helping to overcome language, literacy, or cultural barriers. For example, Gameiro et al. (2018) describe how an intervention that aimed to create and disseminate knowledge relating to research on the experiences of infertility among women from minority ethnic groups in Cardiff (through a metaphor-centred drawing workshop and development of an illustrated booklet for wider dissemination of findings) enabled the research team to engage a group with varying levels of English language proficiency [9]. Similarly, Jones et al. (2017) report on a visual arts-based engagement intervention involving an exhibition and associated events in relation to mental health research, with audience-survey findings indicating this was an accessible way of engaging with the public about the complex subject matter [29]. Saini et al. (2020) describe how the co-development of a whiteboard video to share messages based on the findings of research on public health issues affecting the local community with members of an Indigenous community in Canada resulted in an output that was culturally relevant and accessible, following Inuit traditions of storytelling and art [54].

*Increased audience engagement with research content*

Engagement with research content at an emotional level is reported as an impact of a number of arts-based engagement efforts described in the literature [13, 15, 16, 18, 40, 45, 49]. For example, Hundt et al. (2011), based on their observation of panel discussions following a theatre performance, noted that audience members shared personal reflections, showing emotional engagement with the topic of women's experiences of prenatal screening, and audience feedback indicated the performance helped students and healthcare professionals to relate to the experiences of women in this situation [13]. Notably, this evidence on emotional engagement includes author reflections on the perceived success of arts-based approaches in conveying emotional content that cannot be adequately conveyed through more traditional formats [18, 40, 49], as well as direct evaluation of audience response [13, 16, 45].

*Raising the profile of the research study, programme or institution*

The reported success of arts-based interventions in achieving aims related to raising the profile of a particular research team, study, programme or institution (as distinct from raising awareness of the findings of research) was mixed, based on the authors' descriptive accounts. While a number of authors reported positive outcomes, such as significant media coverage of an event or exhibition [14, 62, INT5] or success in raising further funding as a result of the enhanced awareness about the research project [28, 34] – others reported less favourable experiences [14, 35]. For example, for one intervention that used a visual-arts-based approach for public engagement in relation to a programme of research into stroke [35], the authors described how a lack of institutional support meant that the potential to raise the profile and awareness of the research was not realised. For another arts-based approach, press coverage failed to focus on the underlying acoustics based research on which an art exhibition was focused [14].

**Table 6: Impacts and outcomes related to achieving 'public engagement' as a goal in itself**

| Intended impacts or outcomes of arts-based engagement interventions | Type of arts-based approach used by interventions with reported impact/ outcome | Evidence source | Does evidence support effectiveness in given context? |
|---|---|---|---|
| **Increased audience awareness of the empirical evidence or developments on a topic** | Performing arts [13, 16-18, 32, 37]<br>Games [31, 33]<br>Immersive art installations [14, 34]<br>Visual arts [38, 57] | Audience survey findings [13, 14, 16-18, 31, 32, 57]<br>Quantitative estimates of reach [14, 37]<br>Mixed methods cross-sectional evaluation [37]<br>Qualitative research findings [33, 38]<br>Author experience and audience response - multiple methods [34] | Yes [13, 14, 16-18, 31-34, 37, 38]<br>No [57] |

| Intended impacts or outcomes of arts-based engagement interventions | Type of arts-based approach used by interventions with reported impact/ outcome | Evidence source | Does evidence support effectiveness in given context? |
|---|---|---|---|
| **Creation of spaces for debate and dialogue around pressing societal issues** | Visual arts [9, 35, 36]<br>Performing arts [13, 32]<br>Multiple approaches [24] | Qualitative research findings [35, 36]<br>Audience follow-up discussion [9]<br>Audience survey findings [13, 32]<br>Observations of audience discussions [13, 32]<br>Literature review [24] | Yes [9, 13, 24, 32, 35, 36] |
| **Increased accessibility of research (for instance, in cases where language, literacy, or cultural barriers exist)** | Visual arts [7, 9, 22, 29, 36, 54]<br>Performing arts [17]<br>Immersive art installation [62]<br>Multiple approaches involving artist – scientist collaborations [59] | Qualitative research/ evaluation findings [22, 36, 54, 62]<br>Audience survey findings [17, 29, 62]<br>Audience follow-up discussion [9]<br>Literature review and interviews [7]<br>Desk research [59] | Yes [7, 9, 22, 29, 36, 54, 59, 62]<br>No [17] |
| **Audience engagement with research content at an emotional level (through stimulating the senses and tapping into emotions)** | Performing arts [13, 15, 16, 18, 45]<br>Visual arts [40]<br>Disseminating oral histories [49] | Author experience – descriptive account [13, 18, 40, 49]<br>Audience survey findings [13, 15, 16]<br>Qualitative research findings [45] | Yes [13, 15, 16, 18, 45]<br>Unclear [40, 49] |
| **Raising the profile of the research study, programme or institution (or of the engagement effort)** | Performing arts [28]<br>Immersive art installations [14, 34, 62]<br>Visual arts [35] | Author experience -descriptive account [14, 28, 34, 35, 62]<br>Audience survey findings [14] | Yes [28, 62]<br>No [35]<br>Unclear [34]<br>Partly [14] |

### Improving the quality or effectiveness of current and future research and/or of future public engagement activities

In addition to helping researchers to meet their aims for public engagement in general, there is also some evidence to support the contribution of arts-based approaches and their constituent interventions to improving the quality or effectiveness of current and future research and informing further public engagement activities. There are a number of types of impacts and outcomes reported in the literature that relate to these goals (see Table 7 below and Annex C for further detail). These include:

- Strengthening research through creating new knowledge or alternative ways of thinking about the research topic

- Building sustainable partnerships to support further research and engagement activities
- Building capacity and implementation support for arts-based engagement efforts
- Informing the design of further engagement efforts or dissemination strategies
- Creating high-quality artistic outputs and enriching experiences as the basis for public engagement.

These are considered in turn below.

*Strengthening research through creating new knowledge or alternative ways of thinking*

Evidence from qualitative research and descriptive accounts of experiences with arts-based engagement interventions is generally supportive of the positive impact of arts-based engagement interventions (using a wide range of approaches) in bringing alternative perspectives to research questions and building new knowledge. This can be done by helping researchers refine or build on existing research findings, for example, by offering new insights or contextualising findings of existing research studies [8, 20, 24, 35, 44]. Alternatively, arts-based approaches can facilitate relationships that enable the co-production of new or additional knowledge (for example, by facilitating the involvement of members of the target audience for engagement as co-researchers or co-creators of arts-based outputs for wider public engagement) [23, 26, 28, 32, 38, 54]. When researchers and artists collaborate to engage the public, evidence from a variety of sources, including qualitative research [36], descriptive accounts [34], informal desk research [59] and an international workshop on arts-based public engagement [11] suggests that this can result in reciprocal learning and mutual benefit. Researchers and artists can serve to validate each other's work [59] and provide a critical voice or an alternative perspective that strengthens the research [11, 62], as well as increasing the visibility of both research and artistic partners outside their respective disciplines [59]. One expert we interviewed reflected on the fact that collaboration between artists and researchers can result in radically new ways of thinking about an issue [INT4], making links across disciplines that may not otherwise have been contemplated. Couture et al. (2017), however, in relation to their project, which sought to create an engagement platform and associated exhibition combining visual artworks, essays and cultural and scientific mediation activities relating to bioethics research, observed that knowledge transfer between the stakeholders involved was not always successful. They noted that there was a *"surplus of meaning"* [36, p. 629] that could not be assimilated by artists, bioethicists and the public.

*Building sustainable partnerships to support further research and engagement activities*

Collaboration between stakeholders in the development and delivery of arts-based approaches to engagement, or in co-creation of the artistic outputs on which they are based, can develop sustainable partnerships to support further research or engagement efforts. For example, a number of articles describing interventions using Photovoice highlight ongoing roles and relationships involving members of the target community, extending beyond the end of the initial project [23, 26]. Pruitt et al. (2018) describe a 'Photovoice group' that continued to meet and engage in advocacy and research efforts linked to an ongoing support programme for homeless people [23]. Collaboration in engagement efforts can also forge relationships between researchers and artists and connect the research to different community settings, influencing future programmes of work (as described by Tischler

et al. (2019) in relation to the development and delivery of a range of arts-based engagement activities links to a dementia research project [34]). Finally, collaboration with policymakers in developing the engagement approach can also support further opportunities, as in the case of the interactive street game relating to flood risk described by Wendler and Shuttleworth (2019), which provided a focus for networking and further collaborations with public institutions and policymakers on local climate policy issues [31].

*Building capacity and implementation support for arts-based engagement efforts*

The conduct of arts-based engagement efforts can also have an impact with respect to building capacity and support for future arts-based engagement efforts. This can happen in a variety of ways: by establishing key learning or practical recommendations regarding how to do arts-based engagement well [18, 33, 35]; establishing the feasibility or acceptability of particular interventions or technologies or ways of evaluating them [16, 25]; gaining understanding about how they work [40]; learning new skills or ways of thinking around how to communicate creatively [31, 39], or creating supportive communities or infrastructure for arts-based engagement [51].

*Informing the design of further engagement efforts or dissemination strategies.*

There is some evidence for the successful contribution of arts-based engagement interventions to the development of plans for wider public engagement [43, 61, INT5]. In one example, the development of a visual map of findings from a study on foetal alcohol syndrome was used to successfully engage community members in identifying further stakeholders for wider public engagement efforts [61]. In another, community members (youths from an urban community in the US) worked with artists/animators to develop a dissemination plan for co-created animated videos related to violence, providing valued input with regard to the preferred technologies accessed by the target community [43].

*Creating high-quality artistic outputs and enriching experiences*

Finally, a frequently reported outcome of the creative element of arts-based engagement interventions is the production of high-quality artistic outputs themselves (i.e. those that are enjoyable and entertaining [8, 18, 33, INT5], reflective of the culture of target communities [54], aesthetically pleasing or rich in terms of visual quality [9, 34] and/or leading to positive, inspiring or enriching experiences for the engaged audience [30, INT6, 34]. High-quality outputs are described in relation to a wide range of arts-based approaches, including the development of video games [33], animated videos [54], illustrated booklets [9], theatrical performances [8, 18], exhibitions or immersive art installations [29, 34, 62], and interactive visitor experiences [30]. One interviewee highlighted the importance of producing high-quality art, to ensure that the audience will have confidence in the work [INT2].

**Table 7: Improving the quality or effectiveness of current and future research and public engagement activities**

| Intended impacts or outcomes of arts-based engagement interventions | Type of arts-based approach used to achieve impact/ outcome | Evidence source | Does evidence support effectiveness in given context? |
|---|---|---|---|
| **Strengthening research by creating new knowledge or alternative ways of thinking about the research topic** | Performing arts [8, 28]<br>Games [33]<br>Visual arts [20, 26, 35, 36, 38, 44]<br>Immersive art installation [34]<br>Arts-based engagement – general observations [11, 24, 59] | Observation of post-performance discussions [8]<br>Author experience – descriptive account [20, 34, 44]<br>Qualitative research findings [26, 28, 33, 35, 36, 38]<br>Scoping review [24]<br>Desk based research and interviews [59]<br>Findings from international workshop [11] | Yes [8, 11, 20, 24, 26, 28, 34, 35, 38, 44, 59]<br>Partly [36]<br>No [33] |
| **Building sustainable relationships to support further research or other opportunities** | Visual arts [23, 26, 54]<br>Immersive art installation [34]<br>Games [31]<br>Other miscellaneous [20] | Qualitative research findings [23, 26, 54]<br>Author experience – descriptive account [20, 31, 34] | Yes [20, 23, 26, 31, 34, 54] |
| **Building capacity and implementation support for arts-based engagement efforts** | Visual arts [25, 35, 40]<br>Games [31, 33]<br>Performing arts [16, 18, 39]<br>Miscellaneous: Science and entertainment exchange [51] | Findings from qualitative research [25, 33, 35]<br>Audience survey findings [16, 40]<br>Author experience – descriptive account [31, 39]<br>Measurement of reach [51]<br>Process review [18] | Yes [16, 18, 25, 31, 33, 35, 39, 40, 51] |
| **Informing the design of further engagement efforts or dissemination strategies** | Visual arts [43, 61] | Qualitative research findings [43, 61] | Yes [43, 61] |
| **Creating high-quality artistic outputs and enriching experiences as the basis for public engagement** | Performing arts [8, 18]<br>Immersive art installations [34, 62]<br>Visual arts [9, 29, 30, 54]<br>Games [33] | Findings from qualitative research [9, 30, 33, 54, 62]<br>Audience survey findings [18, 29]<br>Audience response - other [8, 34] | Yes [8, 9, 18, 29, 30, 33, 34, 54, 62] |

## Achieving wider impact from research through arts-based public engagement approaches and their constituent interventions

Evidence regarding the degree to which arts-based engagement efforts are associated with impact from research (among the stakeholders that research findings are intended to benefit) is more limited. There is some support, based primarily on qualitative research and evaluation findings and the descriptive accounts of those with experience in delivering such interventions, for impact at the level of individuals, communities and the practice/policy landscape. However, the strength of the evidence is limited by the acknowledged lack of systematic evaluation of arts-based engagement approaches and their constituent interventions [13, 16, 20, 23, 29, 34, 43, 55]. The nature of these wider impacts is summarised in Table 8 (with further detail provided in Annex C). Key impact types in this category include:

- Empowerment of individuals to manage their own lives or contribute to their communities
- Change in (or intention to change) individual behaviour within the target community
- Impact on local culture or community resources, practice, programme or service change (or impact on policy debate).

These are considered in turn.

*Empowerment of individuals to manage their own lives or contribute to their communities*

A number of articles included in the review report on the impact of arts-based engagement interventions with regard to empowering individuals within the target community to make decisions, manage their own lives or contribute to their communities. A key feature of approaches that achieve this outcome is the involvement of members of the target community in the creation or co-creation of artistic outputs for wider engagement [22, 23, 26, 38, 55]. For example, Perez et al. (2016) report that lay health workers participating in a Photovoice project involving research and advocacy relating to mental health among the Latina community in the US felt empowered by their experience, describing personal growth and an increased ability to help their communities [26]. In a further example, Malchy et al. (2011) report that mental health service users, involved as cast members in a forum theatre performance (based on the findings of a research study on tobacco use among mental health service users), found that the experience helped to open up a dialogue on the topic, making it easier for them to address the issue both inside and outside the performance space – empowering them to *"face their own lives"* [32, p. 70].

*Change in (or intention to change) individual behaviour*

Importantly, none of the articles included in the review reported evidence of measured changes in individual behaviour among the target audience (e.g. changes in health-seeking behaviours or individual practices), potentially related to the observed lack of long-term follow-up. A small number, however, reported on intention to change behaviour as a consequence of their experiences with the arts-based approach (based on audience survey and qualitative research findings). These include articles reporting on approaches using theatre [13, 18, 32] and an animation-based approach [54]. For example, Taylor et al. (2017) used an approach involving ethnodrama and post-performance discussion to engage the local community and health professionals with research on the health-seeking behaviours of African American men [18]. Based on audience survey findings, 67 per cent of respondents indicated they would change their future health behaviour based on what they experienced

during the event, while 84 per cent of attendees who indicated that they provide some type of health service stated that the performance would affect how they provide those services. Follow-up data on whether these intentions were met are not reported. Some evidence for impact from arts-based engagement efforts at the level of individuals and their behaviours was, however, suggested by some of the interviewees we spoke to [INT2, INT6].

*Impact on local culture or community resources*

We identified just two articles that describe impacts at the level of community or culture (both reporting on qualitative research findings in relation to community-based participatory research studies). One describes how the initiatives and events that stemmed from the initial arts-based participatory study on health disparities affecting the Cambodian American community (including a community garden and cultural exhibit, developed as strategies aimed at addressing social determinants of health) stimulated the community's pride in their culture. These initiatives continued to be hosted by the community and provided opportunities for new leaders to be involved and take ownership [28]. The other article reports on a change in the dominant narrative around homelessness in the local community, following a community forum held as part of a community based participatory evaluation using the Photovoice approach to evaluate a 'Housing First' programme [23] (although the authors note that lack of formal evaluation of the community impacts limits the conclusions that can be drawn). Interview findings also provide some support for community-level impact. In relation to the arts-based courses on compassionate care described above, INT6 described how these had become embedded within the hospital setting and that healthcare workers reported feeling better supported at work.

*Practice, programme or service change (or impact on policy debate)*

Among the small number of studies reporting on impact at the level of practice, programme or service change, or change in policy debate, the evidence is again broadly supportive of the effectiveness of arts-based engagement interventions within their given context. For example, Byrne et al. (2018) employed a creative arts-based approach – including the use of theatre (along with poetry and drawing) for the collection and communication of data from research on health and well-being undertaken within the local community to inform policy relating to public health and well-being in a deprived community in Wales [45]. Feedback from audience members (including policymakers) who were engaged through the arts-based intervention indicated they found that the creative arts are a powerful tool for communicating messages about health and social life, challenging stereotypes and informing more relevant and appropriate local policy [45] (although they note some risk of bias given the inclusion of representatives from a national body with a responsibility for arts among the audience members). Pruitt et al. (2018) describe how following the sharing of photographs and stories (generated through a Photovoice-based programme evaluation of a Housing First programme tackling homelessness in Hawaii) at an exhibition attended by policy-makers and the wider community, a decision was made by the programme funders to extend programme funding another year and a pledge was made by the Governor of Hawaii to end homelessness by 2020 [23]. However, the authors acknowledge that they were unable to assess the impact of the exhibit on policy changes directly. An example of how arts-based public engagement can contribute indirectly to policy debate was described by one of the experts we interviewed [INT1] in relation to engagement around obesity-related stigma through the use of a comic. This is presented in detail in a case vignette (see section 4).

**Table 8: Achieving research impact through arts-based public engagement interventions**

| Intended impacts or outcomes of arts-based engagement interventions | Type of arts-based approach used to achieve impact/ outcome | Evidence source | Does evidence support effectiveness in given context? |
|---|---|---|---|
| **Empowerment of individuals to manage their own lives or contribute to their communities** | Visual arts [9, 20, 22, 23, 26, 35, 38, 55, 56]<br>Performing arts [32] | Author experience – descriptive account [20]<br>Qualitative research/ evaluation findings [9, 22, 23, 26, 32, 35, 38, 55, 56] | Yes [ 20, 22, 23, 26, 32, 38, 56]<br>Some support [9, 35, 55] |
| **Change in (or intention to change) individual behaviour within the target community** | Performing arts [13, 18, 32]<br>Visual arts [54] | Audience survey findings [13, 18, 32]<br>Qualitative research findings [32, 54] | Some evidence for intention to change only [13, 18, 32, 54] |
| **Impact on local culture or community resources** | Performing arts [28]<br>Visual arts [23] | Findings from qualitative research/evaluation [23, 28] | Yes [23, 28] |
| **Practice, programme or service change (or impact on policy debate)** | Visual arts [23, 46]<br>Games [31]<br>Performing arts [45]<br>Arts-based knowledge production and translation – general observations [24] | Findings from qualitative research/evaluation [23, 45]<br>Author experience – descriptive account [31, 46]<br>Scoping review findings [24] | Yes [24, 31, 46]<br>Potential support [23, 45] |

### 3.7.3. Who benefits from arts-based engagement efforts, and how?

Given that the arts-based engagement approaches covered in this review are (almost) exclusively led by researchers and thus conducted in line with the goals for arts-based public engagement set out above, research teams (and the institutions with which they are associated) are themselves key beneficiaries of engagement efforts through fulfilment of these goals. In addition, there is evidence to suggest that there is a range of both intended and unintended outcomes and impacts for a variety of stakeholders in different roles, in line with the definition of 'engagement' as a *"two-way process"* and one which results in *"mutual benefit"* [5, What is public engagement?]. The outcomes and impacts for the target audience for engagement, for members of the target community involved in the development of the approach or creation of artistic outputs, for the artists and creative partners who collaborate with researchers to engage the public, and for the researchers themselves, are overviewed in Table 7 and Table 8 below, with further detail provided in Annex C. Table 9 focuses on the achievement of intended impacts and outcomes, while Table 10 focuses on unintended consequences for these groups. The research team inferred this distinction on the basis of whether an outcome appeared to

be in line with the stated or apparent aims of the approach as set out in the article.

**Table 9. Beneficiaries of arts-based engagement approaches how they benefit in relation to intended outcomes**

| Beneficiary type | Intended outcome | Specific audiences benefitting |
|---|---|---|
| **Target audience for engagement** | Increased awareness of the empirical evidence or developments on a topic | Members of particular minority ethnic, cultural or Indigenous communities [18, 38]; users of health or care services/ individuals with a particular health condition or concern [32]; children and young people in educational settings [37]; healthcare professionals [13, 17, 18, 32]; students [33] or members of the public attending science festivals, exhibitions or performances or visiting websites [14, 31, 34, 37] |
| | Opportunity to contribute to dialogue | Healthcare professionals [13, 24, 32, 35]; the public attending science festivals or exhibitions or performances [13, 36]; users of health or care services/ individuals with a particular health condition or concern [9, 24, 32]; academics and policymakers [13] |
| | Opportunity to engage with research in an accessible way | Members of particular minority ethnic, cultural or Indigenous communities [9, 22, 54]; public attending science festivals, exhibitions or performances [29, 36, 59, 62] and policymakers [7, 45] |
| | Enjoyment, entertainment or enrichment of experience through exposure to high-quality artistic outputs | Members of particular minority ethnic, cultural or Indigenous communities [18, 54]; users of health or care services/ individuals with a particular health condition or concern [8, 9]; public attending science festivals, exhibitions or visitor attractions [29, 30, 34, 62]; students [33]; and healthcare professionals [18, 29] |
| | Changes in intentions with respect to individual behaviour (with potential to impact on health, well-being or professional practice) | Members of particular minority ethnic, cultural or Indigenous communities [18, 54]; service users/ individuals with affected by a particular condition or concern [32]; healthcare professionals [13, 18] |

| Beneficiary type | Intended outcome | Specific audiences benefitting |
|---|---|---|
| **Members of the target audience involved in co-production of the arts-based engagement approach or co-creation of artistic outputs** | Opportunity to contribute as part of a meaningful partnership | Members of particular minority ethnic, cultural or Indigenous communities [26, 28, 38, 54]; service users/ individuals with affected by a particular condition or concern [23] |
| | Development of new skills (in research or arts-based methods) | Members of particular minority ethnic, cultural or Indigenous communities [26, 28]; members of other marginalised communities [55] |
| | Empowerment to control own life/ therapeutic benefit from involvement | Members of particular minority ethnic, cultural or Indigenous communities [20, 26, 38]; service users/ individuals affected by a particular condition or concern [23, 32, 55, 56]; children and young people in educational settings [22] |
| **Artistic partners collaborating in engagement efforts** | Opportunity for interdisciplinary dialogue/validation of work | Artists [11, 59], in particular those specialising in visual arts [29, 36] |
| | Benefits relating to the nature or quality of artistic outputs | Filmmakers/ TV industry [51] |
| **Researchers** | Benefits associated with achieving public-engagement goals | Researchers in working in the following areas: public health and health promotion [16, 18, 22, 28, 37, 38, 45, 54]; health and care delivery and/or specific health conditions [9, 13, 17, 29, 32-35]; other societal issues [7, 31]; natural and social sciences [14, 36, 62] |
| | Stronger research findings as a result of incorporating new insights or ways of thinking –'access to other knowledges' | Researchers working in the following areas: public health [16, 20, 23, 25, 26, 54]; health and care delivery and/or specific health conditions: [34, 35, 44] other societal issues [8] |
| | New skills and learning to facilitate the conduct of further arts-based engagement | Researchers working in the following areas: public health and health promotion [25]; health and care delivery and/or specific clinical conditions [33, 35, 39, 40] |

**Table 10. Unintended outcomes and impacts of arts-based engagement approaches for different stakeholders**

| Stakeholder group | Unintended consequence | Specific examples |
|---|---|---|
| **Target audience for engagement** | **Negative:** | |
| | Negative emotional impacts or distress as a result of engaging with sensitive issues at an emotional level | Stroke survivors [35]; practitioners involved in education of international students [15] |
| | Feeling of helplessness to impact on the topic highlighted | Public attending science festivals [16] |
| **Members of the target audience also involved in co-production of the arts-based engagement approach or co-creation of artistic outputs** | **Positive:** | |
| | Social support and improved well-being or therapeutic benefit through normalisation of experiences/ catharsis | Members of a deprived community involved in socially-engaged photography project [55]; mental health service users involved as cast members in a theatre production [32]; women experiencing infertility involved in developing an illustrated booklet UK [9]; women with experience of difficult birth involved in development of an animated video [40] |
| | **Negative:** | |
| | Negative emotional effects due to reliving experiences | Women with experience of difficult birth involved in development of an animated video [40]; patients recovering from stroke involved in development of a visual arts exhibition [35] |
| | Concern about own experiences being used to create publicly-available outputs | Addiction workers, probation officers and medical professionals working in prisons contributing to development of an audio-drama [39] |
| | Anxiety or negative sentiments regarding role/ methods used in contributing the creation of artistic outputs | Lay health workers involved in a Photovoice project [26]; stroke survivors involved in developing an engagement approach [35] |

| Stakeholder group | Unintended consequence | Specific examples |
|---|---|---|
| **Artistic partners collaborating in engagement efforts** | **Positive:** | |
| | New projects or collaborative opportunities following on from initial activities | Artists collaborating with researchers in a multidisciplinary engagement approach using visual arts (multiple disciplines, focusing on mental health) [29]; artists collaborating with researchers in a variety of engagement projects (focusing on participatory arts in dementia) [34] |
| | Further funding for community arts projects | Community arts organisation [28] |
| | Increased visibility outside discipline | Artists collaborating with scientists to engage the public (review findings) [59] |
| **Researchers** | **Positive:** | |
| | New community connections (e.g. with charities, local service providers) | Researchers using an arts-based engagement approach with women affected by infertility [9]; researchers involved in arts-based public engagement related to use of participatory arts with people with dementia [34] |
| | Identification of new related topics for research or engagement, based on audience suggestions/ appetite | Researchers using a theatre-based engagement approach to engage older women and their families on experiences of widowhood [8] |
| | New projects or collaborative opportunities following on from initial activities | Researchers collaborating with artists in public engagement approaches: including using visual arts in a project focusing on mental health [29]; using a variety of engagement approaches in a project focusing on participatory arts in dementia [34] |
| | Raised profile or visibility of individual researcher | General observation on arts-based engagement [59]; researcher collaborating with a comic artist to engage the public around obesity related stigma [INT1] |

### 3.7.4. Reflections on the evidence for the effectiveness of arts-based approaches to engagement

While the evidence we found in the literature for the effectiveness of arts-based approaches and their constituent interventions in engaging a range of stakeholder groups is promising, it is generally weak due to the lack of systematic evaluation. We found limited reports of approaches that had failed to meet their goals and few articles explicitly highlighted a lack of supporting evidence for the effectiveness of the specific approach being evaluated. However, based on desk research conducted

to inform a report on research engagement and the arts for the NCCPE, Sian and Nugent (2019) highlight the fact that challenges and unsuccessful endeavours are less likely to be reported on [59] – a point which needs to be borne in mind when interpreting the evidence. Furthermore, we did not identify evaluative evidence that considered the effectiveness of the individual interventions comprising an overall arts-based approach, i.e. there was a lack of evidence as to how the different elements of the approach contributed to the achievement of its aims. While one paper suggested the audience for a theatre production on health-seeking behaviours among African American men identified a post-performance discussion as a crucial element of the approach, this was not explored in detail [18].

It is also of note that none of the articles included in our review made direct comparisons between arts-based and other approaches to engagement with research, but instead tended to base conclusions on assumptions about the unique benefits they offer over more traditional methods. The question of whether some arts-based engagement approaches are more effective with particular stakeholder groups or in particular contexts than others also receives little attention in the literature. We did not identify any articles in our review that reported on direct comparisons between different arts-based approaches or between stakeholder groups using the same approach, and the lack of evidence in this respect was directly acknowledged by some authors. For instance, based on a scoping review of arts-based approaches to knowledge production and translation in relation to health research, Boydell et al. (2012) identify the need to explore the suitability of different methods for different contexts [24]. They note the potential for the arts to lend themselves particularly well to some health issues e.g. stigmatising conditions where innovation might be considered a good way to encourage engagement or might enable a deeper delve into the illness experience in ways that could address sensitive issues. The authors suggest it would be of value to *"compare different genres and explore their particular benefits and challenges in various contexts"*. Similarly, Tischler et al. (2019) suggest that further work could explore public engagement in diverse settings to assess which approaches are effective in maximising research value and wider community benefit [34, section 4.1].

Despite the absence of comparative evidence, it is possible to identify some patterns in the evidence reviewed, with regard to the types of outcomes that tend to be reported in association with particular types of arts-based engagement intervention, in line with their intended aims. For example: performing arts-based approaches or personal narratives tended to be associated with reports of successfully engaging the public at an emotional level [16, 18, 45, 49], the successful use of arts-based engagement interventions to empower individuals to control their own lives or contribute to their communities tends to be associated with the use of the Photovoice approach and other community based participatory approaches that involve members of the target community in arts-based knowledge production or the creation of artistic outputs for wider dissemination (e.g. [23, 26, 32], although these observations do not permit conclusions to be drawn regarding relative effectiveness.) The experts we spoke to also reflect on the particular applications for which certain art forms are well suited. For example, one interviewee notes that applied theatre is particularly valuable when the aims are *"really explicitly about dialogue and about debate and solving problems"* as a group, and to facilitate reflection and interaction between

participants, while if the aim is to facilitate personal development in a participant, then sculpture or photography may be more suitable [INT6].

All those we interviewed [INT1, INT2, INT3, INT4, INT5 and INT6] stress the importance of not making assumptions regarding the most appropriate or effective approach or art-form to use with a particular stakeholder group, suggesting that the most effective arts-based interventions are those that grow organically in consultation with members of the target community (albeit from an informed position and with an awareness of evidence for what has been successful in the past) [INT1].

# 4 Case vignettes

Throughout this report, we have referred to practical examples of the use of arts-based approaches for public engagement with research. Here, in Boxes 2-6, we elaborate on a sample of these practical examples to help bring to life some of the more conceptual issues we have discussed throughout the report and flesh out some of the key examples we have referred to. Our selection seeks to illustrate a diversity of arts-based engagement approaches.

**Box 2. Exposing the challenges of establishing a visual arts project as a research engagement activity in the area of stroke research**

**What was the arts-based engagement approach, and why was it being pursued?**
This project came about as a result of an academic symposium (SLSR20) organised by the South London Stroke Register (SLSR) research team. The symposium was organised to mark 20 years of epidemiological research by the group on the prevalence and risk of strokes, quality of care and long-term consequences of strokes. The researchers established a visual arts project to explore how arts-based methods can be used to tell stories and to engage the public in stories of stroke survivors. The research team wanted to acknowledge the contribution of stroke survivors to the research register, to *"celebrate the people behind the anonymized register data, and to provide a 'human' element to an academic event"* (p. 88). For this purpose, arts students from a local community college were enlisted to work with individuals from a service user group – the Stroke Research Patients and Family Group (SRPFG) – to create art that captures the reality of the stroke experience. The artwork was shown at an art exhibition, which included photographs, handwritten texts describing participants' experiences of strokes, three short films and an art installation.

**How did the arts-based engagement process unfold?**

- **Conception and planning:** Meetings were organised between student artists, stroke survivors and the research team to agree a plan and strategy for the visual arts project. They discussed how to present the 'reality of the stroke experience' through photographs, including emotions and challenges associated with hidden disabilities. This included seeking funding and support from the researchers' academic institution.
- **Production of work and first exhibition:** The contents and theme of the arts were developed through a dialogue between stroke survivors and art students. Students produced 24 photographs and other associated outputs (e.g. handwritten text, images, three short films and an art installation).
- **Exhibition and community events:** The research team used institutional social media channels to promote the exhibition at several events, including the exhibition launch at the SLSR20 event with 200 attendees, a viewing at a 'Research In the Community' event with 50 attendees, a presentation of the art followed by a discussion at two community stroke groups, and a display at a commercial art gallery.

**What influenced the engagement process, and how?**
The authors describe various influences on the arts-based engagement approach, information on which was gathered by the research team through reflective group discussions on stroke survivors' and students' experiences creating the art and viewing it at the exhibition, researchers' notes and diaries through the project, transcripts from individual conversations with stakeholders, and feedback from exhibition audiences and managers of the exhibition spaces. Influences included:

- **Challenges to obtaining sufficient institutional funding and other types of institutional support:** challenges to ensuring institutional support for conducting arts-based engagement projects are noted as a barrier in many academic contexts and were also a barrier for the specific arts-based engagement project. The researchers note a *"mismatch between institutional expectations for researcher-driven public engagement and the resources allocated to it"* (p. 101). Their institution perceived the project to be modest and relatively low profile (due to the involvement of student artists rather than reputable or well-known artists), and the impact was that future financial or promotional support was not offered.

- **Demands on researcher time:** The researchers argue that there are limitations to the extent to which institutional structures and practices can support public engagement activities in academic contexts; in relation to providing appropriate financial resources and enabling appropriate timeframes for engagement, for example. They reflect on their experiences of this in the project, where they struggled to find sufficient time to conduct the arts-based engagement project while balancing this with their other academic and teaching tasks. Short-term contracts and universities prioritising traditional evidence of impact, such as publications, were also seen as barriers to securing sufficient time for delivery and resources for larger-scale engagement efforts. As a result of the time pressures experienced, the researchers were unable to oversee the art students' involvement to the degree they desired and had to outsource the task of project management to a lecturer at the community college from which the students were recruited to take part. This impacted the extent to which they could invest in optimising relationships with stakeholders, and the researchers expressed some frustration at being distant from the process.
- **Communications and relationship-related influences:** Artists and stroke survivors were given freedom in developing the themes and content for art at the exhibition. The authors suggest that this enhanced the engagement process, helped mobilise enthusiasm and supported positive outcomes. However, it also posed some challenges, in that the meaning of some of the outputs was not always clear to the public, researchers or artists. Communication between stakeholders (researchers, artists and stroke survivors) was largely via email, which sometimes led to misunderstandings. For example, some of the stroke survivors did not fully understand the aim of the arts-based project and their part in it. Complex administrative processes fed into problems in establishing appropriate contractual agreements between the researchers, stroke survivors and art students (e.g. ensuring timely delivery of the artwork and timely payment of the participants' expenses). The authors state that this was an issue but do not elaborate on the impact.

**What impact did the arts-based engagement approach have?**
Based on the feedback from stroke survivors and artists, there were several impacts on both the ability to deliver the arts-based engagement project and the stakeholders involved:

- Feedback from stroke survivors, student artists and audiences at the exhibition suggested that the researchers' aims were met in terms of giving stroke survivors a voice (e.g. an opportunity to express themselves creatively, tell their story, and inspire other stroke survivors) and student artists an opportunity to learn new skills and work on a meaningful community project that can be used as part of the college's course syllabus.
- Two generations were brought together to create the art, giving both an opportunity to engage with individuals they may otherwise not; older and younger community members were given the opportunity to spend time together and learn from each other. The authors report that there was some anxiety amongst some stroke survivors as a result of their participation in the project due to the sensitive and personal theme of the art and unfamiliarity with participating in public engagement projects involving art. However, art students felt that they had managed to ease this anxiety and relieve some of the loneliness felt by some older members of the community.
- The experience the research team gained by conducting the project gave them a track record in arts-based public engagement, which enabled them to apply for further funding from a foundation that focuses on research that gives back to communities and promotes well-being using art.

**Sources:** Cook, J., Fudge, N., Stevens, E. and McKevitt, C. (2017) 'Stroke through a lens: Exposing the challenges of establishing a visual arts project as a research engagement activity'. Research for All, 1 1), 84–105. DOI 10.18546/RFA.01.1.07.

**Box 3. Supporting engagement in research through a game design competition**

**What was the engagement approach, and why was it being pursued?**
As part of a larger study called the CHI+MED (Computer-Human Interaction for Medical Devices) project, which investigated human error in healthcare practices, the research team implemented a computer game design competition within the context of a public-engagement intervention. The purpose of the game competition was to raise awareness and encourage reflection on human error and 'blame culture' in healthcare. This means getting people to think about the wider system failures that cause errors in cases where individuals are blamed. The researchers asked volunteer higher-education students to design a game on human error in healthcare practice that inspires curiosity and reflection in its players. The games were targeted at young people and posted online.

**How did the arts-engagement process unfold?**
- **Presentation and talks from experts and a question and answer (Q&A) session:** Competing volunteer students received talks from game design and production experts on technical skills for game design and from healthcare professionals on the topic of human error in healthcare. The talks were followed by a Q&A session to encourage communication between the students and experts.
- **Game design workshop:** The workshop included an overview of game design and examples from a game designer's previous work, with opportunities for students to brainstorm ideas together with each other, with the game design expert leading workshop delivery and with mentors. A networking session helped attendees form teams and share ideas.
- **Facebook and group forum:** A Facebook group and online group forum on a project-specific website was set up to encourage two-way engagement between students and experts. The decision to use this communication channel was based on participant feedback on how they would prefer to communicate with experts.
- **Team formation and competition entries:** Students formed into four teams (2–6 students per team), with each submitting their final game along with additional information about how it was designed and how it was intended to make people think about blame culture and human error. Teams also provided information on how each of the team members had contributed to the game design process.
- **Evaluating the entries:** Expert judging and playtesting were carried out on the games to assess whether they met the brief and identify the competition winners. The six judges were experts in human error, healthcare, and game design and usability. Twelve playtesters from one of the participating universities played each game for up to ten minutes, and an evaluation was conducted to assess the playtester's perception of the game's relevance and impact (i.e. extent to which the game resonated with the player). This was done with a questionnaire and an interview immediately after playing, and a follow-up questionnaire emailed to the playtester two days later.
- **Prize-giving and showcase:** Winners were selected, and all competing teams received feedback. A final showcase event was held so all attendees could try out other teams' games and present theirs. This was attended by 35 people, including the wider research team and the wider public (further details not provided). The students' names were listed (alongside their personal website or online profiles) with the online games, to ensure their efforts were recognised. The winner received £1,000, the runner-up £500 and £500 was also gifted to a team based on voting at the showcase event.
- **Online dissemination:** The games were put on the project website to engage the wider public on the topic of human error in healthcare using the platform Errordiary.org, and made freely available.

**What influenced the engagement process, and how?**
- **Flexibility in expectations of participating students and forms of engagement:** Students did not have to commit to attending and contributing to every stage of the process, and channels were created for catching up on the content they missed (e.g. online). Allowing flexibility meant a wider variety of individuals participated in the process, resulting in a greater variety of perspectives.

- **Barriers to two-way engagement:** Communication between researchers, experts and participating students was not always as interactive as the researchers had hoped it would be.
- **Complexity of the games:** In one of the games produced, the game's complexity was a barrier to the players being able to engage with the content.
- **Students' misinterpretations of academic content:** There were a few cases where students had misinterpreted the academic content on human error in healthcare, which was reflected in their game design. The authors comment on a need to balance specificity (constraints to ensure what is produced is relevant and useful) with ambiguity (to enable autonomy and creativity) in game-design-based public engagement projects.
- **Differences of opinions between expert judges and playtesters:** At times, judges and playtesters differed in their opinions about the games (but do not discuss the impact thereof).
- **Poor promotion and dissemination of the games:** The game was put on the project website with no explicit mention of whether they were advertising it or whom it was targeted at. The researchers were unable to evaluate whether they had reached their target audience of young people and commented on the need for more refined analytics to understand dissemination success.

The researchers reflect on other influences and considerations on the process of using game design competitions for public engagement, although they do not provide detail on the experiences and impacts of these on their project. These include:

- **Recruitment and retention:** To increase recruitment and reduce attrition, the researchers recommend that extensive effort is put into early advertising and recruitment. They note that this should be balanced with cost – the higher the number of participants, the more resources are needed to support the process (i.e. by requiring more mentors and experts, or more time, from those already enlisted to provide support).
- **Copyright:** The researchers recommend that copyright claims are transparent from the start and that the games need to be made free and easy for public access.
- **Mediums for developing games:** The authors comment that more intuitive game design tools that do not require programming expertise could be used to increase the scope of those who could participate. For example, board games may also be used.
- **Paying participants:** The researchers offered large cash prizes as they did not want potential participants thinking they were attempting to get free labour.

**What impact did the arts-based engagement intervention have?**

- The researchers, experts and playtesters involved with this public engagement intervention deemed all of the submitted entries to be high quality (despite the few errors noted), relevant, and appropriate in conveying messages about human error in healthcare. Feedback from students involved in this public engagement intervention suggested that they had learnt a lot about the topic of blame culture in healthcare and game design and that they were inspired by the experts they engaged with. The researchers, therefore, concluded that the project aim of enabling student learning had been met.
- The games were viewed 2,038 times (although the time period is not specified). However, the researchers were unable to collect data on the site visitors' demographics and so could not establish whether they had reached their target audience of young people.
- A nurse trainer contacted the CHI+MED project team requesting to use the winning video in a training session in Hong Kong. This highlights the potential uses of these videos by health-care professionals and suggests they may be used in educational settings.

**Sources**: Iacovides, I., Cox, A., Furniss, D., Stawarz, K., Jennett, C. and Adams, A. (2019) 'Supporting engagement in research through a game design competition'. Research for All, 3 (1): 25–41. DOI https://doi.org/10.18546/RFA.03.1.04 Accessed 13 November 2020

**Box 4. The use of forum theatre to address tobacco use in community psychiatry**

**What was the engagement approach, and why was it being pursued?**
Evidence suggests that forum theatre – a type of interactive drama where the cast and/or audience can intervene in the flow of events and influence the direction of the performance – can empower decision-making and has the potential to lead to changes in health behaviours through the process of participants learning through experience, engaging and reflecting on an emotional level. Theatre and drama production can create an accessible avenue for individuals with mental health issues to *"dispel myths which surround their lived experiences"* and to actively participate in creating representations of themselves (p. 62). Malchy et al. (2011) describe a public engagement project that applied forum theatre as part of an effort to address the challenge of changing tobacco use practices in mental health settings in Canada. Their public-engagement project brought together mental health providers and the mental health service users in Canada, and enabled dialogue on tobacco use.

**How did the arts-engagement process unfold?**

- **Recruitment and training of actors:** Mental health service users affected by tobacco use and providers of mental health services attended a two-day training session, led by the project coordinator, on basic theatre techniques and exploration of issues relating to tobacco use and mental health.
- **Developing and rehearsing scenarios for the forum-theatre performance:** Participants took part in three two-hour rehearsals led by the project coordinator, which resulted in the development of scenarios addressing core issues. In these rehearsals, scenarios were developed and refined based on the findings of a prior study on tobacco use and participants' own experiences, and scripts were fleshed out.
- **Assigning roles:** Following the rehearsals, the service user and provider participants were allocated roles as actors. Two participants took on the role of facilitators – introducing the performance, setting the timings and facilitating the active participation of audience members in the performance.
- **The performance:** Performances were held at venues in community mental health service settings. The facilitator first introduced the performance and engaged the cast and audience members in theatre warm-up exercises. These involved exploring issues relating to tobacco addiction and mental health and allowed participants to 'warm-up' in respect to being on stage. Three prepared scenarios were then showcased, exploring themes such as the power of addiction, rejection from others based on smoking habits, and policies on smoking in mental health facilities. After an initial performance of a scene, the facilitator explained how the audience would participate. The scene was performed again – with a new 'actor' (cast member or audience member) involved in stopping the scene at a particular moment in order to intervene (taking the place of the actor on stage and restarting the scene). The actors then responded in an organic way to new possibilities in the scene's direction, with further interventions by cast and audience members if they perceived an opening. When the facilitator perceived a natural end, they closed the scene. Three scenes were performed in this way.
- **Question and answer session and close:** Following the performance of all three scenes, the facilitator led a question and answer session.

**What influenced the engagement process, and how?**
The authors highlight influences on the engagement process, as overviewed below:

- **Variety of messages conveyed:** The variety of messages conveyed increases the likelihood of their uptake. Audience engagement with the topic of tobacco use was facilitated by the variety of actors who presented their experiences through the different scenarios.
- **Use of fictional scenarios:** The use of fictional scenarios based on real-life experiences helped create a level playing field by nature of the fiction of theatre, whereby audience members and actors from diverse backgrounds were able to act out their realities without fearing mockery or negative consequence.

**What impact did the arts-based engagement intervention have?**
Based on analysis of responses to a questionnaire developed by the research team, a focus group with the cast and field notes, the authors identify a series of outcomes and impacts from the forum theatre-based engagement:

- The use of forum theatre enabled the sharing of knowledge on the effects of tobacco use with mental health service users and providers, which in turn allowed both groups to re-examine the practices and values that mental health service users associate with tobacco.
- Participatory dialogue was enabled between individuals living with mental illness and those who provide mental health services, increasing the capacity to develop creative strategies for behaviour change and to address tobacco use within community psychiatry.
- Cast members (both mental health service users and service providers) emphasised the positive impact of working with each other. The authors suggest that the forum theatre created a space for open dialogue and the opportunity for service users to actively demonstrate to practitioners (both those in the audience and among the cast) how they would shape their interactions with providers when freed from the traditional power dynamics associated with psychiatry.
- Cast members (based on focus group findings) perceived forum theatre as a stepping stone to changes in tobacco-related behaviours. For example, they talked about the role that tobacco plays to decrease or neutralise the lack of social support and reported that being a part of this experience helped them smoke less, quit smoking or believe that cessation was a realistic possibility.
- The majority of audience members (based on 78 completed surveys) said they would attend another forum theatre presentation about tobacco use and recommended using forum theatre to discuss tobacco use. They also agreed that using forum theatre to engage people in an open dialogue around issues of tobacco use and mental illness was powerful. Survey responses suggested audience learning on the issues of tobacco use and mental illness, and 73 per cent agreed that they felt better able to support the tobacco reduction efforts of individuals living with mental illness.
- The audience also found forum theatre compelling as a public engagement method and teaching tool. The researchers felt that post-performance discussions amongst the audience suggest that they were keen to discuss the issues and indicated that theatre helped foster this engaging educational environment.

**Sources:** Malchy, L. A., et al. (2011). "This is the embodiment of empowerment: use of forum theatre to address tobacco use in community psychiatry." Arts & Health 3(1): 61-72.

**Box 5. The use of an immersive art installation to engage the public in research evidence: Night Club**

**What was the arts-based engagement approach, and why was it being pursued?**
Night Club is an immersive art installation – an approach characterised by the immersive experience it presents to stakeholders. Immersive art installations may incorporate multiple arts-based approaches such as visual arts displays (e.g. videos, made objects and informational posters), music, games, opportunities to interact with experts, or other approaches in order to create an engaging and informative experience for the target stakeholder group. The specific approaches and design of the installation are determined by the aims of the engagement effort, the context of the research topic, and the needs of the target audience. The case example below describes how The Liminal Space, a creative consultancy, used an immersive installation to bring research evidence on sleep and shift work to night shift workers through engaging educational activities.

**How did the arts-based engagement process unfold?**
- **Building collaborations:** Night Club began with an investment by Wellcome, a research charity, who aimed to *"improve sleep health and reduce the negative impacts of night work"* [66, p. 1] by bringing together sleep researchers, employers and night shift workers. The first collaboration involved The Liminal Space working with Wellcome, sleep researchers from the University of Oxford and Co-op (a consumer co-operative) to develop an immersive art installation entitled 'Night Club'.
- **Preliminary research:** The Liminal Space conducted preliminary research to better understand their target audience (i.e. night shift workers at grocery warehouses). This allowed them to tailor the intervention to better fit the needs and interests of their audience.
- **Producing the intervention:** Night Club is built in a shipping container so that it can be brought to various warehouses around the UK, meeting night shift workers at their places of employment. The shipping container is filled with informative visual arts displays in the form of posters and pamphlets, and also provides interactive experiences such as discussions with experts in sleep health, experiments with light, and a midnight feast demonstrating aspects of nutrition as it relates to night work.
- **Follow-on activities:** In addition to the main installation, The Liminal Space offers to recruit and train 'Sleep Champions' at the workplaces they visit. The Sleep Champions are intended to extend the reach of the engagement intervention by providing ongoing support and engagement with the topic of sleep health and night shift work via ongoing peer to peer interactions.
- **The intervention is continuing to evolve:** Night Club has expanded beyond its initial partnership with Co-op to include partnerships with Thames Water, the John Lewis Partnership (a department store), ISS (a facilities services company), Network Rail, Morrisons (a grocery chain), and Guy's and St Thomas' Charity (GSTC) (an urban health foundation). The partnership with GSTC has brought a new focus to the work, emphasising the impact of sleep on long-term health conditions.

**What influenced the engagement process, and how?**
Influences on the engagement process include understanding their target audience, addressing their audience's needs and developing a successful approach to collaborating with commercial partners.

- **Understanding your target audience:** When developing Night Club, The Liminal Space understood from preliminary research that their target audience was a largely male workforce (98 per cent) of long-term nightshift workers on the lower-end of the pay scale with multiple health conditions. Their research suggested that overly 'artsy' approaches would be rejected by their target audience and that they instead needed to develop an approach that was *"short, snappy, direct and quite*

*macho*" (Douglas). Elements within Night Club were intentionally designed to be familiar to workers (e.g. using 'day-glo' fluorescent colours throughout to match the high-visibility jackets worn by night-shift workers) because The Liminal Space determined that an aesthetic that was strange or unfamiliar would not work for their target audience.

- **Meeting your audience where they are at:** Night Club is designed to travel to workers' places of employment because, according to the Director of The Liminal Space, it is better to bring arts-based interventions to your target audience in the places they already frequent or find familiar rather than expecting the audience to 'come to you'.
- **Getting buy-in from commercial partners:** The Liminal Space asks their commercial partners (e.g. ISS, Morrisons, etc.) to provide support for the engagement intervention in various ways. This includes providing employees with time off work and/or incentives to visit the installation; nominating a senior person and a front-line manager to champion the project internally; being prepared to use their internal communication channels to promote the intervention; and being prepared as a company to evaluate and change their internal practices in order to facilitate better employee health. Getting buy-in from commercial partners has helped Night Club achieve some of the impacts described in the next section.

**What impact did the arts-based engagement approach have?**

The Liminal Space has developed a framework for evaluating the impact of their public engagement efforts, including immersive art installations. The approach considers impact for all stakeholders (e.g. target audience, collaborators, wider society, etc.) and specifically aims to measure individual-level change, organisational change, and universal/social change.

1. Individual-level change includes any changes that the project aims to bring about in individuals, including aims such as awareness-raising, increased knowledge, or behaviour change. In the case of Night Club, the intervention reached over 4,000 employees across 20 sites in the UK in 2019. In surveys of visitors to the installation, 78 per cent said that they had learnt something new and 51 per cent that they would change their behaviour as a result of the visit. Reductions in absenteeism and presenteeism have also been noted in the workforces who have engaged with the programme.
2. Organisational change refers to changes in organisational practices and outcomes. Organisational impacts from Night Club include commercial partners making changes to their systems and infrastructure (e.g. food provision, mental health support, warehouse lighting, shift rotas) in order to improve working conditions for night shift workers; and improved awareness of issues of sleep health amongst managers – leading to better leadership and management scores in staff engagement surveys. Qualitative feedback from commercial partners indicates that they view Night Club as contributing to better mental health outcomes for their workforce by reducing the stigma around discussing mental health.
3. Universal/societal change is about social impact, policy change, or affecting the national conversation. For Night Club, The Liminal Space worked with Co-op and government officials at Westminster to write a White paper around the topic of sleep health and night shift workers, which was presented to the UK Parliament. The Liminal Space states that the project has raised the profile of each of their commercial partners through the *"significant local and national media"* attention that the project has received (Douglas).

**Sources**: Sarah Douglas, Director, The Liminal Space [Interview]

The Liminal Space. n.d. https://www.the-liminal-space.com/. Accessed 13 November 2020.

The Liminal Space. n.d. "Join the Night Club".

**Box 6. The use of a comic book to raise awareness about obesity-related stigma**

**What was the arts-based engagement approach, and why was it being pursued?**
This case-example involved the use of a comic format for disseminating the findings of a study that explored the stigma associated with obesity. As part of a Ph.D, a researcher at the University of Leicester conducted an ethnographic study of people enrolled in weight loss classes and wanted to translate research findings into a more accessible form (for members of the public affected by or interested in obesity or weight loss related issues) such as for use as an educational package for adults (and potentially children in an educational setting).

**How did the arts-based engagement process unfold?**

- **Conception and planning:** The researcher approached a public engagement manager (working within their institution) for support in translating findings into a more accessible form. Comic art emerged from these discussions as a potentially suitable approach. The researcher then identified and approached a comic artist. Following initial conversations, the artist read some of the thesis.
- **Producing the comic and exhibition prints:** Together, the researcher and comic artist developed a storyline and worked together to co-create a comic (entitled "the weight of expectation"), along with a series of prints for an exhibition launch. While the researcher had an idea in mind at the outset regarding what he hoped to achieve, the comic was developed co-creatively through conversations between the researcher and the artist.
- **Publicising the comic (podcasts, exhibition and comic launch):** Considerable promotional work was then undertaken to publicise the comic and to get people talking about it. This involved the researcher producing podcasts featuring the artist and organising an exhibition hosted by the University of Leicester to launch the comic.
- **Follow-up activities and further engagement:** The successful launch of the comic and dissemination to the target audience led to further publicity and a range of further engagement opportunities. These included the delivery of a public talk on the topic at the British Science Festival and the development of a modified version of the comic for use with children in educational settings.

**What influenced the engagement process, and how?**
There was a range of influences on the success of the arts-based engagement approach, both positive influences and challenges that were overcome during its development and delivery:

- **The researcher's attitude and approach to the project was a key enabler:** At the onset of the project, the researcher had a sense of what he thought might work with respect to disseminating his research findings in an accessible way, but he approached the project with a view to enhancing what could be said about the issue by working collaboratively with the artist. The proactiveness of the researcher, commitment to getting people talking about the 'comic', and a commitment to follow up on conversations that were opened up by the approach were also noted to be important to the project's success and ongoing impact. The 'comic' was seen as simply the beginning of a longer engagement journey.
- **The quality of the relationship between the researcher and the artist was also important:** Openness and mutual respect were key features of this relationship, along with genuine respect for each other's expertise, which enabled the co-creative process.

- **Having the support of a public engagement specialist was helpful:** This provided encouragement and reassurance without influencing the direction taken in developing the approach.
- **Managing demands on researcher time was a challenge that was mediated in part by access to dedicated funding for public engagement:** For the researcher, finding the time to legitimately carry out public engagement related work during the working day was noted as a significant challenge (common to engagement efforts in general). Being able to apply for funding from the University's Wellcome Institutional Strategic Support Fund (ISFF), and having considerable freedom with regard to how to spend the funding, enabled the researcher to be able to pursue novel ideas and helped to secure the value and legitimacy of spending time on the engagement effort within the normal working day.

**What impact did the arts-based engagement approach have?**
A range of impacts was reported in association with the comic-book based approach and the further engagement activities that followed on from it:

- **The comic was successful in raising awareness and stimulating conversations:** Feedback received by the researcher indicated that the comic was well received and resulted in the sharing of stories and the creation of conversations on the topic of obesity-related stigma with the target audience for engagement.
- **The success of the approach led to its application with a different audience:** A modified, child-friendly version of the comic developed off the back of the initial approach has been used to engage a wide international audience in educational settings, with distribution across the world in response to requests from schools for copies of the pack that aims to raise awareness of stigma in relation to obesity.
- **The approach contributed to the increased profile of the researcher leading the project as well as the research findings:** For example, the researcher was invited to give a public talk on the project as part of the British Science Festival. In addition, due to his visibility as a result of the engagement work undertaken, he was asked to comment publicly on a campaign put out by Cancer Research UK (CRUK) about links between obesity and cancer (suggesting obesity was as bad as smoking with respect to cancer risk), with regard to its contribution to stigma relating to obesity.
- **The approach was indirectly associated with a change at the level of policy and practice:** The researcher became a prominent voice in the debate surrounding the campaign and part of a group that wrote to CRUK to highlight the potential impact of their campaign with respect to its contribution to obesity-related stigma. CRUK took this on board and made changes to the campaign.

**Source**: Dr Marie Nugent, Public Engagement Manager, University of Leicester [Interview]

# 5 Conclusion

This review has synthesised knowledge to explore what is known about arts-based approaches to public engagement with research. It considered a range of questions: why researchers might opt to use the arts for engagement purposes; the aims of arts-based public engagement efforts in terms of the goals the concrete endpoints they seek to achieve; the diversity of approaches, how they work in practice, and what influences the process of arts-based engagement; and the various intended and unintended outcomes and impacts that may materialise. The insights gained should be helpful for those seeking to pursue arts-based engagement approaches with research, in the context of considering the various issues that can affect how these approaches unfold and their success.

In analysing the results of our research, we were struck by the lack of robust evaluation in this space, which can hinder efforts to learn about how to design and effectively deliver arts-based engagement and to learn about whether an arts-based or other way of engaging is a better fit for a given aim. Arts-based projects may also be harder to define than those pursuing traditional outputs. At the same time, we found that the use of arts-based approaches is highly context-dependent. There is no one-size-fits-all formula for deciding which type of arts-based approach to use for a particular stakeholder group, research topic or aim of engagement, although anecdotal evidence suggests that some features of an arts-based intervention may make it more or less suitable for particular target audiences. For example, approaches based on music or film were noted by an interviewee to potentially resonate better with children or individuals with learning disabilities because they can be more attention grabbing, and some approaches were mentioned to potentially support the personal development of individuals well (e.g. sculpture, photography) while others were noted as potentially being particularly suited to efforts to understand what is needed by organisations, groups and communities (e.g. theatre). However, all of these examples are hypothetical, and the overarching message from the literature and experts we spoke to is one of needing to decide which approach to use on a case-by-case basis.

Given how context-specific the selection and evolution of an arts-based engagement approach is, we wonder whether efforts to (through evaluation) seek to generalise about which approaches work best for a specific purpose might be futile. Rather, we suggest that evaluators ask not necessarily which approach works best (unless they can tightly control for the implementation context), but to focus on how appropriate and informed

the process of selecting any given approach is, to examine issues of implementation fidelity, and to learn about how the selected approach might be executed and delivered with maximum chances of success – including how bottlenecks are overcome along the way and emergence dealt with. This could help inform guidance that is of practical value. We also note that what constitutes success is socially constructed. While researchers may have clear aims of what they seek to achieve through engagement, new aims and end goals may emerge in the process of co-producing and developing an arts-based approach, from the diverse stakeholders involved and the interests they bring to the table.

Unsurprisingly, many of the influences on arts-based engagement processes are likely to apply to public engagement with research more generally, and we have seen similar influences covered in other literature on public engagement, including work we have conducted in the past [67, 68]. For example, the fact that resources, skills, relationships and the features of an intervention (e.g. its complexity) all matter is not surprising. However, within these broad categories, we identified some influences whose role may be accentuated in the context of using arts-based approaches. Some examples include influences related to building relationships of trust and navigating power dynamics between researchers and artists who are involved with developing an engagement approach (two very different professional groups), as well as in the context of engagement with marginalised or Indigenous communities who can contribute to developing arts-based approaches and not only be recipients of the engagement effort. Similarly, considerations of autonomy versus control in the design of an engagement approach may be particularly prominent when using the arts for engagement purposes. Insights gained from our research highlight the importance of balancing the scientific and artistic elements of an intervention, and providing a degree of flexibility and freedom to artists to express themselves. We were also struck by the extent to which financial barriers to achieving co-production seemed to weigh in the literature and amongst the experts we interviewed, including in the context of a mismatch between the ambitions of different stakeholders. Because developing arts-based engagement intervention requires collaboration between diverse stakeholders, including of course the artists themselves, and because different stakeholders bring different perspectives and ideas to the table, these approaches can be costly and time-consuming to implement in practice, if there is a commitment to intensive and sustained co-production and two-way interactions throughout the engagement effort.

Finally, it is worth reflecting on the fact that the use of arts-based engagement approaches can have both positive and undesirable outcomes. Just as arts is often selected with a desire to facilitate a more accessible and close connection between a target audience and a research topic, the use of the arts may also bring out experiences in stakeholders which may be challenging to process at an emotional level and cause distress or concerns about how their personal experiences may be used in a public domain. Similarly, it is important to manage expectations about the scale of the desired impact that can be achieved by an engagement effort, especially in the absence of resources for further uptake and dissemination efforts. These types of considerations must all be borne in mind when designing arts-based engagement approaches, and mitigation and management mechanisms to deal with potential unintended consequences included in the approach to engaging different stakeholders.

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