EXPLORING ATTITUDES TOWARDS DIGITAL CONSENT

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Introduction
For children and young people, the school represents a key location for vaccination delivery. The current vaccination consent process involves children and young people being provided with a consent pack (containing letter, information leaflet and consent form) to be delivered to parents. Parents/carers/guardian (hereafter referred to as ‘parents’) and children are asked to sign a consent form with children then returning the consent form in a sealed envelope to the school. This is then picked up by NHS workers and processed. Whilst this is a widely accepted method of obtaining consent, it is criticised for being resource intensive (both in terms of printing costs and staff time), with considerable environmental and financial costs associated.

There is increasing interest in digital or electronic consent (also known as e-consent) for vaccinations which replaces paper forms with a digital version. Several pilots in England, e.g. Wirral Community Health and Care Trust and Midlands Partnership University Partnership Trust, used a web-based portal for e-consent. This often required a link to be sent to parents, with requirements for parents to submit a personal code that was sent to them individually. Another option is using an app based approach, as seen in locations in South West England. Examples of app providers include Cinnamon and RIVIAM. These pilots often focus on one specific vaccination (HPV, seasonal flu, MMR) rather than encompassing the entire school-aged vaccination schedule. To date, no digital consent for school-aged vaccinations has been trialled in Scotland.

This report represents findings from a scoping study exploring attitudes towards digital consent as it related to school-age vaccinations in Scotland. It presents the results from educational practitioner interviews, parental surveys and interviews from four local authorities. All surveys and interviews were conducted between January and February 2024.

Consent in School-Age Vaccinations
Consent for school-based childhood and adolescent vaccination programmes in the UK is usually obtained from parents or carers. Children are provided with a consent pack from their school. These packs contain a letter, information pack about the vaccine, and a consent form for parents to complete and return. While this method of school-based vaccination consent is widely accepted, it is not without its challenges.

An example of this is the ‘logistic challenge’ of consent delivery. As forms must pass through multiple hands (NHS-school-teacher-pupil-parent and then returned through the same route), it is viewed as time-consuming, and there are associated challenges of pursuing consent from those parents who did not complete the form (Ferrer et al, 2014; Paterson et al, 2019). A qualitative systematic review and evidence synthesis of barriers and facilitators to HPV vaccination in young women (Ferrer et al, 2014) found challenges of engaging parents with the consent process was present across several high-income countries, leading to additional work required from healthcare professionals and teaching staff. This led to increased costs, both in terms of financial costs and time for staff.

However, several studies suggested a greater understanding of the barriers facing parents and a need to better address inequalities in uptake. For example, a UK quantitative analysis of HPV vaccination consent found that where young people attended alternative education provisions (including home educated, and specialist provisions), belonging to non-white British ethnic groups, lived in more deprived quintiles, or care experienced, parents were significantly less likely to complete and return the written consent forms (Audrey et al, 2021, Fisher et al, 2021).
Potential of digital consent

Recently there has been a drive in UK health policy to shift from paper-based consent forms to digital consent (also known as electronic or ‘e-consent’). Digital consent is seen to provide new opportunities and benefits, including a reduction in financial and time costs associated with paper-based consent form delivery and processing. A key argument for using digital consent is because digital methods of communication (text, email, social media) are commonplace, and the majority of people have access to at least one internet ready device such as a smart phone, tablet, or laptop, transitioning to a paper-free consent process should be simple.

While this has not been rolled out nationally for school-based vaccinations, several NHS trusts in England have piloted this format, particularly in relation to HPV vaccinations. Where digital consent is used, it is often delivered via a weblink to an online portal. This landing page often contains information regarding the vaccination, a letter to parents and the consent form (NHS England, 2021). However, there are individual school differences in how this weblink is delivered to parents (parent mail, email, school website, newsletters, printed letters, QR code) (Footer and Foster, 2022, Chantler et al, 2020). The removal of paper-based forms could lead to improved safeguarding of confidential patient information and could simplify the process of sharing information between parents-school-health services (Footer and Foster, 2022). For example, a digital consent platform may enable automatic updating of central vaccination databases and provide nurses with the ability to facilitate screening directly without the involvement of school practitioners (Chantler et al, 2020).

These pilot studies also highlighted the facilitators and barriers to successful adoption of this new form of consent gathering, both at a school level and for parents. Chantler et al (2021) suggested school staff found that digital consent removed some of their control of the consent process, which was particularly challenging as they were restricted in accessing who had and had not returned consent leading to a delay in following up with parents. Foster and Footer (2022) described initial difficulties with the implementation period if staff involved were hesitant in embracing new technology or adapting to new practices. In terms of parent uptake, pilot studies found a mixed picture with some parents finding accessing the information online difficult, although others found it easier to use. For those who found it challenging, this could be due to language comprehension difficulties, parents not having an up to date email address on the school system, or problems with webpages loading correctly (Chantler et al, 2020).

How does this study contribute to wider understanding and design of digital consent in school-age vaccinations?

Within the context of the wider policy shift towards digital or electronic consent in the UK, understanding the potential impact of introducing this method in Scottish schools was identified as one of the key areas of interest.

Understanding the facilitators and barriers to parental consent uptake and processing when done online would enable an improved design and roll-out of the technology, learning not just from the practitioners and parents interviewed, but also from the wider literature based on the topic.
Methods
This section will first identify the key research questions set by Public Health Scotland (funder of this report) before detailing the workstreams created to collect data, and methods used. The section then summarises recruitment strategies and analysis method utilised.

Research questions:
Six research questions were provided by Public Health Scotland:

1. What are the main factors which would influence parent/carer decisions to use or not use digital consent platforms for vaccination?
2. What are the views of school staff regarding potential implementation of digital consent systems for vaccination?
3. How would the introduction of digital consent systems be likely to impact the workflow and responsibilities of school staff?
4. What would key barriers and facilitators to successful adoption and implementation of digital vaccination consent systems?
5. How would potential barriers be addressed to promote wider use of digital consent platforms?
6. Are there any potential disparities in access to digital consent systems and how can these be addresses?

Workstreams and methods
Two workstreams were created for this project. Workstream one focused on school practitioner reflections and attitudes. This included Head Teachers, Classroom Teachers, and Clerical/administrative staff. Workstream two focused on parental reflections and attitudes.

Workstream one adopted a qualitative approach, with individual semi structured interviews conducted either over the phone, online (using Microsoft Teams/Zoom) or in person.

Workstream two adopted a mixed method approach, with an online survey and follow-up qualitative interviews conducted either over the phone, online (using Microsoft Teams/Zoom) or in person.

Data collection methods used in the two workstreams are discussed in more detail below.

Qualitative interview
Semi-structured qualitative interviews were delivered both in workstream one and two. This was to allow for a more conversational tone, and to enable the participants to naturally link the question asked to their own experiences, or for the spontaneous linking of one question to any relevant experience that may not have been covered by the interview schedule.

The qualitative questions for the interview were informed by the research questions and reflected previous academic research on digital consent, vaccine hesitancy, health information seeking, and digital exclusion. Questions were agreed and amended with an expert steering group (including representatives of NHS Scotland, Scottish Government, Public Health Scotland, and a Head Teacher).

The questions in workstream one (practitioner interviews) were designed to capture the wide range of experiences of the school staff. Questions tackled the administrative workload of vaccination consent distribution, the methods used in school communication, and the social environment of the school (in terms of families, practitioners, and wider community). These questions were designed so
all practitioners could answer the questions, but some could be answered in more detail, reflecting their job role.

The questions in workstream two (parent interviews) were designed to complement the online survey. While the survey used Likert scales or text boxes, the qualitative interview questions were designed to be open-ended and allow for the parents’ experience of the childhood vaccination schedule, and any communications therein, to be explored.

Both workstream one and two interviews asked questions regarding inequalities, disparity of access and how best to support individuals who may have difficulty in accessing information. Both workstreams also asked participants about their views on how digital consent could be delivered and what the platform should look like. This allowed comparison of both groups’ perceptions and attitudes.

**Survey**
The survey was created using the online surveying platform, Qualtrics. Questions within the survey focused on parent and carers’ experiences of school communication in general (both online and via letter), their health information seeking behaviour towards vaccinations, before asking more specific questions regarding how they would respond to a shift to online consent for vaccination in schools. The latter also solicited parents’ preferences and ideas for how this online consent process could be implemented.

Prior to the survey being sent to school, school staff were asked to confirm whether there were any parents within their school community who required translation or a paper-based copy. This ensured any known barriers to participation could be managed. No school requested these adaptations.

**Recruitment**
Four local authorities were selected for recruitment: Argyll and Bute, Dundee, North Lanarkshire, and West Dunbartonshire. This cluster enabled the research team to explore both urban and rural settings, with representation across SIMD deciles.

**Workstream one: School practitioners**
Recruitment methods varied across local authorities. The research team utilised existing connections with schools across the target local authorities, engaged with education officers who facilitated recruitment, and canvassed head teachers via email. While contact methods differed, the recruitment procedure was similar across all authorities. Head teachers received an invitation letter which contained information regarding the purpose of research and data protection information. Those interested in the study were invited to select up to five staff members spanning administration, class teaching, senior management, and pastoral care.
Figure 1 illustrates the process.

*Figure 1: flowchart of recruitment methods used for practitioner recruitment.*

It is important to acknowledge that while a headteacher (HT) may agree to participate, and identify staff members who could share their experiences, these staff had the opportunity to opt-out of the process. This was done either by not responding to follow-up recruitment emails, or directly replying that they had no capacity to do so.

This was more likely to occur where staff had to agree an individual time and date for online or telephone interview. When interviews were conducted in person, the HT was likely to arrange cover for staff members to take part in the interview on the same day, so there was less chance for an opt-out for staff, although this was always offered before the interview began.

In line with other research projects, schools that did not respond to an initial invitation email were sent two follow up emails, spaced approximately five days apart. After the third email, non-response was viewed as a decline to take part. For those schools who did respond to say ‘no’, reasons included staff absence, already participating in other research projects, or preparing for school inspection.

**Workstream two: Parents and carers**

Parent recruitment was conducted using the school as a facilitator. A survey link and QR code to be distributed to parents, carers and guardians within the school was provided to each school that participated in workstream one. The rationale for this recruitment strategy was that the school had an existing relationship with parents and carers so an email inviting them to take part in a research project would be less likely to be viewed as spam.

At the end of the survey, respondents were invited to sign up for a qualitative interview.

This was the only opportunity to provide a contact email or telephone number. If they did not provide it, contact information was not collected, so a follow-up invitation could not be issued.

**Analysis**

Qualitative data from workstream one (practitioners) and workstream two (parents) were analysed using thematic content analysis. This method allowed the research team to explore themes within
the qualitative dataset, identifying the most frequently mentioned comments as well as illuminating the wider drivers underlying these responses.

Quantitative data from workstream two (parents) were analysed using Qualtrics software. Given the number of responses, the statistical analysis was limited to frequencies of responses.
Results

Workstream one: practitioners

Eighteen practitioners from four local authorities (Argyll and Bute, Dundee, North Lanarkshire and West Dunbartonshire) were interviewed. Three high schools, and six primary schools participated. Two of the high schools and three of the primary schools had between 31-56% of pupils living in SIMD 1-2. One of the high schools was situated in a rural location, with difficulties facing some island and rural families that may not be reflected accurately in SIMD ratings. Two of the primary schools described their pupil population as ‘mixed’, containing both areas of deprivation and affluence.

These interviews covered a range of job types, detailed below:

Table 1: practitioner participants by job role

<table>
<thead>
<tr>
<th>Job Role</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Head Teacher</td>
<td>2</td>
</tr>
<tr>
<td>Principal Teacher</td>
<td>4</td>
</tr>
<tr>
<td>Classroom Teacher</td>
<td>5</td>
</tr>
<tr>
<td>Clerical/Administrative</td>
<td>6</td>
</tr>
</tbody>
</table>

Practitioners were asked about current communication practices in school, their role in vaccination consent and their ideas about the delivery of online consent. These are discussed below.

Communication practice in school

A common thread across all practitioner interviews was the shift to digital communication:

*The way our authority is going, all our schools are looking to go digital, they’re looking to have everything online, update their records, get their reports, as long as you can get parents to sign up* (High School Two, Clerical)

This was echoed across other local authorities with comments such as “online is the way forward” and “this is just the way the world is going” (with reference to online banking, shopping, purchasing travel tickets). For some schools, this had led to a ‘paperless and cashless’ culture within the school, with all communication to and from the school being conducted online, and payments (e.g. child lunches, school trips, and transportation) moving to online platforms such as parent portal.

Practitioners also reflected a range of online resources that are currently used in daily school communication with parents. While each school spoke about a range of communication methods, there was a clear rationale or purpose for each. Some were uni-directional, where the school sends out information that requires no feedback from parents/carers, while others were bi-directional where parents/carers could choose to respond. Several practitioners commented that the schools need to use a range of methods to ensure “we capture all parents”.

This array of methods reflected the preferences and online behaviours of parents. Participants working at primary and secondary school levels commented on the differences in communication styles, with parents more likely to receive daily updates or communications via apps such as class dojo or seesaw at primary school, but more likely to receive more formal communication via email or Teams at secondary school. One high school teacher reflected parents
“don’t get much back” compared to what they received at primary level, although there was a sense that by the time parents had children at secondary school, online communication should be normalised for them.

While there has been a shift to digital methods of communication, some schools described a low uptake in parental sign-up to platforms such as parent portal. This should enable parents to report pupil absences, pay for school meals, and access reports. In some cases, uptake was as low as between 30-50%. These schools were more likely to say that they were transitioning to a paperless culture, but “were not there yet”.

Parental barriers and support
For most schools, there was an agreement that most parents now preferred online and digital methods of communication to letters. The culture of paper and cash free was now becoming engrained within the schools, with only a few families requiring additional support to either access or register:

I would say a good 75% of our parents will respond and read everything and do what you ask them to do, 15% need a prompt and that last 5-10% need a wee bit of support (Primary School Four, Clerical)

Across all schools, there was a discussion of the importance of “knowing our families”, particularly those who may require additional support:

We tend to get to know families quite well in primary (Primary School Two, Head Teacher)

The ability to ‘know’ families may strengthen over time, if the family has multiple children going through the school or if they are the second or third generation to attend the school so there is an existing connection. ‘Knowing’ families also relied on school staff working in the school for a considerable amount of time to build relationships and an awareness of their needs. However, relationship building was also two-way, with schools relying on parents to disclose difficulties or flag up issues that may require support.

Participants discussed several issues that parents may require support with, relating to language and communication, literacy, poverty and access to devices, and digital literacy. These issues could be standalone, but they often interacted with families living in areas of high deprivation more likely to experience low levels of literacy.

Language and literacy issues
In several of the schools, there was a minority of parents who found it difficult to understand all information sent via school, either because of language comprehension (where English was an Additional Language) or issues of literacy (where parents had difficulties reading).

A couple of parents are unable to read or write so even sending things home on paper like consent forms can be difficult (Primary School Three, Principal Teacher)

One high school teacher expressed concern about whether materials sent home to families who were not confident in speaking English were received or understood due to a lack of return or communication.

In terms of supporting families with language or literacy comprehension issues, there were several options. Where English was an additional language (EAL), one school described using Group Call, a school communication software programme, which enabled schools to send out emails and texts to parents and carers. This software also provided a translation service. However, they were often
concerned that messages could be mistranslated or contain inaccuracies. Two schools within North Lanarkshire described the potential for local community members to support individuals without English language comprehension to translate documents on their behalf and act as a translator.

Primary school staff often commented that they ‘knew their families’ and could anticipate potential communication issues and would put in place more support. Where there was known literacy problems, staff described various methods to support parents in completing forms:

*I would phone and talk through the form and fill it out for them, and then they could just sign it* (Primary School Three, Principal Teacher)

Several staff commented that the increased use of online communication has meant that those who struggled with literacy could use apps on their phone to read text to them, therefore providing support to complete forms. This meant that schools may not detect issues with literacy and therefore could miss opportunities to help families that may need it.

**Poverty**

While many practitioners described the positive impact COVID-19 had on addressing issues of digital poverty, the mitigations that were in place were beginning to reduce – either with families asked to return tablets or laptops when schools re-opened, or that the technology is now outdated. One high school classroom teacher also suggested that for some families living in areas of high deprivation, the need to buy data bundles was a barrier, giving the example of children who couldn’t submit homework online due to lack of data:

*There’s not much I can say other than ‘buy more data’ or ‘get a new dongle’, I’m at a bit of a loss about how else to support them* (High School Two, Classroom Teacher)

As well as issues facing children completing homework, the reliance on top-up phones and needing to buy data and phone credit for parents living in areas of high deprivation meant they may not be able to communicate or access information sent from the school. Therefore, while all parents may have a mobile phone, they may not be able to text or call back if the school calls them. One Principal Teacher described their families using free Wi-Fi spots in cafes to answer emails or open links that have been sent out.

Connected to this was the experience of rural schools- where parents and children may have access to digital technology, but their town or village may have limited access to the internet:

*There are rural places in Scotland that can have days where their Wi-Fi has gone down due to the weather* (High School One, Principal Teacher)

This was more challenging for schools to support, particularly where there were issues of being able to afford to pay for the internet or access internet enabled devices. Three schools highlighted they had a partnership agreement with private companies to provide tablets or smartbooks to pupils, for the purpose of being used at home (as the devices were not linked to school networks).

**Digital literacy**

Where parents had not signed up for online platforms or did not respond to consent forms delivered online by schools, one of the key issues described was digital literacy. A common definition of digital literacy is an individual’s ability to find, evaluate and communicate using digital media platforms.

For some, the need to have a secure log-in was seen as a barrier:
*When you tell them they have to use more than one password, that’s a downfall straight away* (High School Two, Clerical)

For others, it was the complexity of online websites and not knowing where specific information was located or stored. One practitioner voiced a frustration that despite walking them through how to log in, and locate information, this was still seen as difficult to some parents. All schools described having at least one family that would contact the school asking for their password or for help in accessing the online system.

While most parents had an email address, there were a few examples of parents who did not have email addresses or did not check their emails regularly.

To support these families, schools often provided paper versions of letters if there were known difficulties accessing the internet or navigating online portals. Other examples include clerical staff phoning parents, or sending text messages to ensure they are kept up to date. One primary school head teacher described the importance of the school gates for those parents. News could be shared and, if there was time, forms could be completed in person. In primary schools, some also described hosting drop ins for families to attend to get help accessing the system.

**Current role in vaccination consent**

Schools were asked about their current role in vaccination consent delivery and collection. Current practice was that schools would receive paper consent packs from NHS to be distributed to pupils within school. The pupils would ask parents to complete forms and return in a sealed envelope. The clerical staff within the school would collect all sealed envelopes and return to NHS.

Schools highlighted that while they were not privy to whether parents opted in or out of vaccination, due to the sealed nature of the returned envelope. Some clerical staff maintained their own record of who had returned the envelope. This was not requested by the NHS, and it was not checked over by school nurses on vaccination days. For those who did maintain a record, they described it as useful for keeping tabs on who they would need to send a reminder out to.

School staff, particularly clerical staff, also described the additional steps taken to ensure consent was returned to the school both through email, text, and phone calls because there was an understanding that:

*A lot of those kids, if they’re left and you don’t chase them up, or their parents, then you won’t get them* (High School Two, Clerical)

For clerical staff, this was where ‘knowing’ the families was important. As this knowledge could be applied to ensuring they could offer the right level of support to ensure consent was returned. For some, this may require a telephone call and the clerical staff would complete the form on their behalf if there were parental literacy problems. For others, this may be a ‘quick reminder’ text.

While the majority of parents provided written consent, for those who experience additional barriers, had a child absent on the day of the letter/reminder letters being sent, or had forgotten to return it, there was sometimes an option to provide verbal consent on the day. Where consent was offered verbally, it had to be given directly to a school nurse (rather than school staff). However, for the busier vaccination times, there was sometimes no time for the school nurse to confirm consent with those families who had not returned a form.

Verbal consent was also a useful tool to use if the school was aware of literacy problems from the parent, where a non-return was potentially linked to an inaccessible format rather than a refusal to
consent to vaccinations. In this case, a school nurse could read the form over the phone to the parent and receive consent in lieu of a signature.

Ideas for digital consent
Schools were also asked for their suggestions for how digital consent could be introduced to parents. Practitioners answered this in terms of ideas for the platform itself, accessibility, and a reflection on their ongoing role in the process.

Platform
At the time of interview, there was no outline of how digital consent would look. Practitioners were therefore asked what they thought would be the most successful approach for consent returns from their parent population.

Practitioners were asked about the format of the digital consent package, should it have a hybrid approach of paper letter and online consent, or whether it should all be online. There was an agreement from participants that if a hybrid model was used, it would likely cause ‘confusion’ among parents, and instead it should be delivered solely online. However, they acknowledged that for some parents, they would still prefer paper so this should remain an option for those who wish to complete consent in this format.

Whether the new consent process should look like an app, a web portal or connected to existing apps used by schools (e.g. parent portal) received a mixed response. While some practitioners suggested an app would be useful, this would require parents to have access to the internet to download the app, have enough memory on their phone, and for it to be well designed. A weblink to an online portal was also discussed as an option, with the schools sending out emails to parents with an optional QR code and instructions on how to access. The use of the school as a communicator was described by some as important as the parent would receive regular communication from the school so it would be seen as a trusted address and less likely to be a spam address. While the ability to link to parent portal would be beneficial, schools that experienced a low level of uptake described this as risking fewer parents providing their consent. Also, not all schools used parent portal, and this varied across local authorities and schools.

When asked generally how parents may feel about consent going online, there was an agreement that most parents would be happy with this shift. They suggested that as much of school communication is already online, vaccination consent is one of the last communications that exists on paper. The ability for parents to complete forms without the need to “fish letters out of school bags” may lead many parents to return forms quicker.

In terms of the potential positives to moving online, some suggested that moving online would help reduce errors in form completion or would allow the parent to update or edit the information given on the form without requiring to go through school staff or the school nurse and may improve how quickly some parents return consent forms. Some of the schools who were currently struggling with adopting an online culture within the school described the likelihood of parents being resistant to change. This was not specifically linked to vaccination, but rather the adoption of new technologies:

I think bringing something completely new in would be met with a lot of resistance (Primary School One, Principal Teacher)

This was particularly the case where there was the likelihood that the new technology required downloading a new app, learning a new password, or a new way of working. Others suggested this reluctance may be linked to a wider resistance to vaccinations than the consent platform itself:
Anyone that would be against it would probably be against it on paper as well, they might just be against the vaccine (Primary School Two, Head Teacher).

For some, the most likely success would come if vaccination consent came in a format that the parents are already using or aware of. The need to ensure the accessibility of the digital consent platform was paramount.

**Accessibility**

The need for ‘simple, clear, accessible’ technology was particularly important for those schools where there were known literacy and language difficulties among parents and carers. Some acknowledged that moving online could offer the possibility of additional accessibility tools being built into the process: translation, text readers, ability to change size and colour of words, etc. These have been utilised by parents in other school communication platforms, so this would be welcomed.

For parents who struggle with digital literacy, there was a suggestion that a step-by-step guide could be provided, or a frequently asked questions section included so they can quickly find answers or solutions to current issues. However, these parents may still require a paper copy if they find the online system difficult to navigate.

Linked to ideas of accessibility were discussions of timing, and the potential for a pilot to be done with one school stage before it gets rolled out to all pupils and all vaccinations. Secondary school practitioners reflected that introducing things at S1 are more likely to get a higher buy-in than when things are introduced at S4 onwards. Their rationale was that parents at this stage are more likely to be disengaged so wouldn’t bother. One described piloting things at S1 as allowing new behaviours to become ‘embedded’, while another suggested that a lot of work regarding digital communication should have happened at primary school already.

**Accessibility for children**

Linked to ideas of accessibility were discussions of the role of the child in vaccination consent. Some practitioners discussed the opportunity for online consent to also improve the informed consent process. One high school teacher described the importance of ensuring pupils know what is happening:

> All the kids know is that they’re getting a jag and they’re terrified or they need to get it...I just don’t feel S1-S6 know what they’re getting jagged for (High School Two, Class Teacher)

While they acknowledged that the school nurse has an important role in ensuring informed consent is collected on the day, they also suggested that something more could be done to ensure the pupils are not anxious about the vaccine or have questions beforehand. This is particularly important for those pupils who can give their own consent, or override the consent provided by parents/carers.

Linked to this was the discussion of the UN Convention of Rights for the Child (UNCRC), a legally binding international agreement setting out civil, political, economic, social, and cultural rights of every child, which became law in Scotland in January 2024. Within the UNCRC, Article 12 (“every child has the right to express their views, feeling and wishes in all matters affecting them and to have their views considered and taken seriously”) and Article 17 (“every child has the right to reliable information from a variety of sources and government should encourage the media to provide information that children can understand”) highlight the importance of ensuring informed consent from the child from a very young age. Some ways to ensure this happens includes creating online resources that are child friendly. This may include videos or animations on what vaccinations are and why they are important to get or a video that displays a child physically receiving their flu nasal spray...
or vaccination. Some practitioners suggested that “child friendly” resources may also be helpful for parents who have limited literacy or difficulties with English language comprehension.

One practitioner flagged that there could be challenges in delivering a digital consent platform in high schools where children also have the right to provide or remove consent for vaccinations:

*So how are you going to collect two lots of digital signature [from parent and child]. On this [paper] form they’re right beside each other. I think that it might be more clunky if its online* (High School One, Principal Teacher)

The practitioner reflected that there may be a need to provide an additional digital consent platform for young people and have this matched with their parent/carer’s form and have the two forms communicate or link with each other so dual consent can be recorded accurately. As mentioned above, they reflected that on paper. This is a case of having each individual sign the same form, but online, this may require additional logins or ID checks.

**School role**

Practitioners were asked what they saw the role of the school was if vaccination consent went online. The majority described a need for continued school involvement, even when they were not responsible for distributing vaccination packs to pupils. For some, this reflected the above discussion of the school knowing their parents and therefore being able to offer continued support to the NHS to ensure equity in vaccination coverage. For others, it reflected a cynicism of how transformational moving online would really be for their workload:

*I don’t see any difference with the time that is spent already* (High School Three, Clerical)

For clerical staff, the distribution of the consent packs was the least time intensive element of the vaccination consent process. As discussed above, the most time intensive elements were in activities such as booking classrooms, reminding parents to complete forms, and bringing children out of class to attend their vaccination time slot.

When asked whether the NHS could manage the consent process without the input of schools, some suggested that this would risk some parents missing out. The knowledge of the schools regarding parents that require additional support or an alternative method to ensure their child doesn’t miss out, appeared to be vital to ensure a known minority of pupils did not miss out:

*I would hate to see numbers drop because they missed an email* (Primary School Two, Principal Teacher)

A common suggestion was that schools may need to create drop-in clinics to show those parents who did not have adequate levels of digital literacy how to register and access online consent, which again would be a time cost to schools and administrative time. This reflected where there was known issues having parents sign up to parent portal, but also acknowledging that NHS guidance information could be difficult to comprehend for some. But, as reflected by one classroom teacher, this would require the parents to attend.

One classroom teacher also suggested that they would also like to receive training on how the digital consent process would work:

*I would hate for a parent to come in and ask for help and I wouldn’t know how to do it* (Primary School Four, Class Teacher)
For them, the important issue was to ensure the schools were given training on the new format and to ensure that this training is kept up to date. This may help “sell” the new system to parents, but also would help with some face-to-face troubleshooting which could involve teachers showing them in real time how to register or access information rather than finding an online ‘how to’ guide. This may be particularly important for those with limited data or phone credit.

If the role of the school did change, and consent became the sole responsibility of the NHS, some suggested the school could continue to have a communication role. This would require the NHS to share details of vaccination consent deadlines, and vaccination times so schools could prepare their own communications and prepare to contact those families that may require additional support. On the other hand, one practitioner reflected that if it was entirely centralised, it may be inappropriate for the school to remain the vaccination site as they would have no oversight on the process. However, this would lead to parents having sole responsibility for booking appointments and transporting children to vaccination centres and some may not have the capacity to do this, which could lead to inequity in vaccination coverage.
Workstream two: parents
This section looks at parental attitudes both to general school online communication, and their attitudes towards the potential shift to online digital consent for school-aged vaccinations.

Ninety-nine individuals participated in all or part of the online survey (hereafter ‘respondents’). Table one below details information:

Table 2: demographics of survey participants.

<table>
<thead>
<tr>
<th>Age</th>
<th>25-34</th>
<th>35-44</th>
<th>45-54</th>
<th>55-64</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5 (6%)</td>
<td>40 (47%)</td>
<td>32 (37%)</td>
<td>7 (8%)</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>White Scottish/British/Irish</td>
<td>76 (89%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>White Other</td>
<td>4 (5%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Black or Black British</td>
<td>3 (4%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Registered disability</td>
<td>Yes (physical)</td>
<td>6 (7%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Yes (mental)</td>
<td>3 (3%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Yes (both)</td>
<td>2 (2%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>75 (87%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employment status</td>
<td>Full time</td>
<td>39 (45%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Part time</td>
<td>32 (39%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Unemployed</td>
<td>12 (14%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Temporary contract</td>
<td>3 (3%)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Respondents were also asked for details regarding individuals living in the family home (adults and children).
Table 3: individuals living in family home.

<table>
<thead>
<tr>
<th>Adults living at home</th>
<th>Multiple adults</th>
<th>68 (81%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Single adult</td>
<td>16 (19%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Children living at home*</th>
<th>Nursery/early years</th>
<th>15 (18%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Primary school</td>
<td>52 (61%)</td>
</tr>
<tr>
<td></td>
<td>Secondary school</td>
<td>57 (67%)</td>
</tr>
<tr>
<td></td>
<td>College/University</td>
<td>9 (11%)</td>
</tr>
<tr>
<td></td>
<td>Additional support needs setting</td>
<td>3 (4%)</td>
</tr>
</tbody>
</table>

Forty-five of the respondents selected more than one educational establishment, indicating children in multiple age groups.

Table 4: families with children in multiple educational establishments.

<table>
<thead>
<tr>
<th>Nursery/Early years and...</th>
<th>Primary School</th>
<th>7 (8%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High School</td>
<td>2 (2%)</td>
</tr>
<tr>
<td></td>
<td>Primary and High School</td>
<td>2 (2%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Primary school and...</th>
<th>High School</th>
<th>24 (28%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>College/University</td>
<td>2 (2%)</td>
</tr>
<tr>
<td></td>
<td>Additional Support Needs Unit</td>
<td>1 (1%)</td>
</tr>
<tr>
<td></td>
<td>High School and College/University</td>
<td>1 (1%)</td>
</tr>
</tbody>
</table>

| High School and...        | College/University | 5 (6%) |

Respondents were also asked to include their postcode. This enabled the research team to map responses in terms of SIMD (Scottish Index of Multiple Deprivation). Of the 99 respondents, 75 provided a postcode, with six providing a partial postcode (i.e. first three or four characters).
Further qualitative insight was gathered via telephone interviews. Despite multiple attempts and methods of recruitment, four parents agreed to be interviewed. Their insights are included in the wider survey discussion, offering additional insight or alternative points of view where possible.

**General attitudes towards online communication at school**

Respondents were asked to select the methods schools frequently used to communicate news with parents. They were able to select multiple methods of communication as this was likely to reflect the real-life experience of school communication.

<table>
<thead>
<tr>
<th>Methods of Communication Used by Schools</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Email</td>
<td>62 (75%)</td>
</tr>
<tr>
<td>Letter</td>
<td>18 (22%)</td>
</tr>
<tr>
<td>Parent portal/school app</td>
<td>27 (45%)</td>
</tr>
<tr>
<td>Telephone</td>
<td>8 (10%)</td>
</tr>
<tr>
<td>Face to face</td>
<td>2 (2%)</td>
</tr>
</tbody>
</table>

These responses reflected the practitioner responses in workstream one regarding the multiple ways schools currently communicated with parents. These trends were mostly reflected in the parents’ communication preferences, with email (86%) and school app (37%) being the most preferred by parents:
Respondents were asked to rate on a 5-point scale (really liked, to really disliked) how they felt about the school providing information online. Most respondents suggested they either really (51%) or sometimes (29%) liked it:

Table 7: How parents felt about online communication from school.

<table>
<thead>
<tr>
<th>Feeling about Online Communication</th>
<th>Count (Percentage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Really like online communication</td>
<td>42 (51%)</td>
</tr>
<tr>
<td>from school</td>
<td></td>
</tr>
<tr>
<td>Like online communication from</td>
<td>24 (29%)</td>
</tr>
<tr>
<td>school sometimes</td>
<td></td>
</tr>
<tr>
<td>Neither like nor dislike online</td>
<td>9 (11%)</td>
</tr>
<tr>
<td>communication from school</td>
<td></td>
</tr>
<tr>
<td>Dislike online communication</td>
<td>4 (5%)</td>
</tr>
<tr>
<td>sometimes</td>
<td></td>
</tr>
<tr>
<td>Really dislike online communication from school</td>
<td>4 (5%)</td>
</tr>
</tbody>
</table>

A text box was provided to allow parents to provide additional information regarding their responses.

For this group, respondents stated they felt providing information online was useful for family organisation, as a useful tool that can be checked whenever and wherever they wanted, and that their phone can alert them whenever they have an update (rather than relying on children delivering letters from school bags). This group were also more likely to describe online consent as “the way forward” and “it makes sense in this digital age”, reflecting that this shift is part of a wider cultural shift online and away from paper-based communications.
One of the qualitative interview participants reflected that online communication also enabled her family to keep on top of important dates and events:

*I’m so glad it’s on email, I can just search for it if whenever I need the information* (Parent A, high school child)

They discussed that they were also likely to trust an email from the school as it always came “from a dedicated address... so I assume it comes from the same place”. As school emails include the local authority domain, this was described as one way to ensure it was not spam, or someone pretending to be from the school.

In the same interview, they reflected the challenges of receiving paper letters, and that it was often “more hassle, extra work, extra admin” when letters were lost by child and required another copy to be sent home. Aside from school vaccination consent, the main paper letters their family managed were related to consent forms for school trips. The parent voiced a preference for this to also be moved online so “I would know they’ve done it [handed in the form to the school]”. It would be just one click for me and I could tell them I’ve done it” rather than relying on the child to remember to take the form and hand it in. Another parent agreed describing that the “child postal route is not always great” using as an example a time where they completed a paper form on the day it was sent home but was still emailed a reminder a week later because the form was still in their child’s bag.

Another qualitative participant suggested while they did like some online communication there were occasions where another method was preferred:

*If it’s about them individually, I would prefer a phone call so I can sense the tone a bit better, as to where I’m going with it. You don’t really get that with an email – it’s a bit like detective work! However, I do like an email because it can be more detailed, its written down so I can reflect back on it* (Parent D, primary and high school children)

For those survey respondents who held a negative view, either disliking sometimes (5%) or really disliked it (5%), their textbox responses mentioned issues like feeling it was more impersonal than being able to talk to a teacher, and a risk that emails could be misfiled or ignored as ‘junk mail’ which risks families not receiving important information. They also referred to the cost of online communication, in that it relies on families having access to internet and devices.

One of the qualitative interviews reflected on their preference for paper copies of letters:

*At least I’ve got the bit of paper there, I stick it to the fridge, and it reminds me. If it’s on your phone, you forget* (Parent C, primary school child)

They suggested that when emails are sent from the school, they are sent to the partner’s email account rather than theirs, due to difficulties accessing their emails (“it isn’t working with the school, it keeps coming up ‘failed’”).

When looking at the impact of SIMD on survey respondent attitudes towards online communication, respondents in SIMD 9-10 were most likely to indicate they “really like” online communication (86%) compared with other respondent groups. However, given the relatively low numbers in each category, it is not possible to state whether this is a statistically significant difference and caution is advised in drawing conclusions.
Table 8: attitudes of online school communication by SIMD

<table>
<thead>
<tr>
<th></th>
<th>SIMD 1-2</th>
<th>SIMD 3-4</th>
<th>SIMD 5-6</th>
<th>SIMD 7-8</th>
<th>SIMD 9-10</th>
</tr>
</thead>
<tbody>
<tr>
<td>I really like it</td>
<td>8 (50%)</td>
<td>5 (50%)</td>
<td>9 (56%)</td>
<td>9 (37%)</td>
<td>6 (86%)</td>
</tr>
<tr>
<td>I like it sometimes</td>
<td>4 (25%)</td>
<td>4 (40%)</td>
<td>3 (19%)</td>
<td>10 (41%)</td>
<td>1 (14%)</td>
</tr>
<tr>
<td>I neither like nor dislike</td>
<td>3 (19%)</td>
<td>1 (10%)</td>
<td>1 (6%)</td>
<td>2 (8%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>I dislike it sometimes</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td>2 (12%)</td>
<td>2 (8%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>I really dislike it</td>
<td>1 (6%)</td>
<td>0 (0%)</td>
<td>1 (6%)</td>
<td>1 (4%)</td>
<td>0 (0%)</td>
</tr>
</tbody>
</table>

Accessing internet
Survey respondents were also asked about their own ability to access the internet. 95% of respondents could access the internet at home, with 5% suggesting they could access it but occasionally had issues relating to Wi-Fi connection, out of date devices or sharing devices with other family members. Parents were asked what they used to access the internet. 72 respondents suggested their main mode of internet access was via mobile phone:

Figure 3: types of devices used to access internet, and frequency of use.
Laptop or desktop machines were most likely to be used ‘sometimes’ (as indicated by 42 respondents) and tablets were most likely to used ‘sometimes’ (34 respondents) or ‘never’ (25 respondents). One participant also described using their partner’s mobile phone as their internet hotspot for the house, as it was the cheaper solution.

**Information seeking**

Survey respondents were also asked to indicate other sources of information they use either to get information about vaccinations, or to answer questions they may have. The main sources of information can be found below:

*Table 9: sources of health information.*

<table>
<thead>
<tr>
<th>Source of health information</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>NHS Online</td>
<td>16 (40%)</td>
</tr>
<tr>
<td>Health Visitor</td>
<td>14 (35%)</td>
</tr>
<tr>
<td>GP</td>
<td>14 (35%)</td>
</tr>
<tr>
<td>Friends and family</td>
<td>9 (23%)</td>
</tr>
<tr>
<td>Social media/ online forums</td>
<td>8 (20%)</td>
</tr>
</tbody>
</table>

Other sources of information that were only selected by one respondent included social worker and church or other community location. They were then asked to rate these sources in terms of trustworthiness:

*Figure 4: comparison of source of information by usage and percentage of perceived reliability.*

Again, we see similar trends in terms of how information is accessed and what respondents view as reliable with two significant outliers. While GPs are not accessed a considerable amount more than
other sources of information, they are seen as the most reliable source for information. Also, while social media may be used to access information, more respondents suggested that this is not a reliable source of information regarding vaccinations, which may relate to digital literacy and ability to analyse sources.

One qualitative participant described needing to do their own vaccination research due to their child’s chronic condition, and the scant information or guidance on NHS sites about whether they could receive vaccinations.

Survey respondents were also asked how easily they could understand the information that was currently provided about vaccinations:

Table 10: understanding vaccination information.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>No, I have never experienced difficulties understanding the information</td>
<td>76 (95%)</td>
</tr>
<tr>
<td>Yes, I have experienced difficulties understanding the information</td>
<td>4 (5%)</td>
</tr>
</tbody>
</table>

In a free text box, they were asked to identify their issues. These issues included being unclear as to what vaccination their child was going to get, and further clarification about HPV vaccination. One described a mistrust of vaccinations as “I know they are harmful” and another suggested that it would be useful if other vaccinations could be as easy to find as those in schools – for example, travel vaccinations.

Survey respondents were also asked if there could be other information provided about vaccinations:

Table 11: requirements for additional information.

<table>
<thead>
<tr>
<th>No</th>
<th>68 (88%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>9 (12%)</td>
</tr>
</tbody>
</table>

For those nine respondents who indicated yes, suggested inclusions included more information about risks and side effects (“what harm do they do”) as well as more practical information about what age vaccinations take place, the ‘result’ of the vaccination and a general report of all vaccinations children had received.

This was also raised by one qualitative participant who suggested that NHS Scotland could follow NHS England in creating a portal for information for all vaccination records to be accessible to the general public. They pointed out that as one of their children has a chronic illness, being able to access health records would be useful for their ongoing treatment. Another parent reflected on their own experience in a health occupation, and the struggle experienced with vaccination records not being kept up to date, particularly since GP surgeries are no longer involved in vaccination programmes:
I don’t know where HPV is recorded, maybe that gets sent back to the GP but I know for others there is an increased mismatch in the information recorded and the medical record. So for me if it was going to be online consent, where is that going, where is that being stored, and how as a parent can I access that? If it’s going to be school held information, how would you continue to access that when they’ve left school or if they move school and therefore change health board (Parent B, primary and secondary children).

Information sharing with children
Qualitative participants also reflected on how the information provided in the vaccination consent pack was shared with their children. One parent reflected an experience their older child had where their experience of a chronic health condition started soon after receiving a school vaccination. While medical investigations had not clearly linked the two events, they were now cautious about one particular vaccination. Therefore, they were very clear in ensuring their younger child understood the benefits and risks of vaccinations, and that they had the ability to give or refuse consent.

They always ask “do I need it, do I have to have it, why do I have to have it” but they don’t usually ask questions about the safety of it, that’s not usually what crosses their mind yet (Parent A, high school child)

This was reiterated by another qualitative participant who suggested that their children often did not understand the information provided in the pack, and relied on their parents to explain the purpose of getting vaccinated:

They never want it – once you explain that its there to boost your immune system and I wouldn’t put you forward for anything that I thought was dangerous or anything like that. You need to put your trust in… that people know what they’re doing (Parent D, primary and high school children)

They went on to suggest if vaccination consent did go online, they would like more information to be provided for children so they could watch videos and be more informed about the reasons behind vaccinations and why it was important their parents consented to them. They suggested that videos might be more effective than saying ‘let’s go read this information booklet with hundreds of paragraphs and no pictures’. They also reflected that reading or watching a child-friendly video may also help the parents gain a better understanding of vaccinations too.

Another qualitative participant suggested that when their high school child was offered the HPV vaccination, there was a need to discuss the reasons behind this vaccination being part of the wider vaccination programme:

With the HPV vaccine, [he] had lots of questions about it, about what it was and how it protects him because I think for HPV you hear a lot about it for the girls and cervical cancer but less about it for boys and what it actually means when it says it protects you against certain things…which I think sometimes is not very clear. (Parent B, primary and high school children)

They suggested there could be a role in high school health and wellbeing classes for a wider discussion about vaccinations to ensure that pupils have the best possible chance to make informed decisions regarding their own health.

Attitudes regarding online consent
Parents were asked about their general attitude towards vaccination consent moving online:
### Table 12: how happy parents would be for vaccination consent to move online

<table>
<thead>
<tr>
<th>Response</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very happy for vaccination consent to be moved online</td>
<td>34</td>
<td>(45%)</td>
</tr>
<tr>
<td>Happy for vaccination consent to be moved online</td>
<td>20</td>
<td>(26%)</td>
</tr>
<tr>
<td>Neither happy nor unhappy for vaccination consent to be moved online</td>
<td>13</td>
<td>(17%)</td>
</tr>
<tr>
<td>Unhappy for vaccination consent to be moved online</td>
<td>4</td>
<td>(5%)</td>
</tr>
<tr>
<td>Very unhappy for vaccination consent to be moved online</td>
<td>5</td>
<td>(7%)</td>
</tr>
</tbody>
</table>

Most respondents were either very happy (45%) or happy (26%) with this potential move. One qualitative participant suggested that moving consent online would be safer in terms of data protection:

*If it just happens from primary one right the way through to high school and it stays the same, and its not different platforms for different things. You would just get used to it and it would become natural to have it that way. It would probably be safer that way rather than transporting things in the wee brown envelopes, it would probably go online safer* (Parent D, primary and secondary school children)

Another qualitative participant who was against the consent process moving online suggested the following reflections:

*I think it looks more efficient and looks better when its down on a bit of paper and you’re signing it rather than going online. You have the bit of paper in front of you and you can check it, you know what I mean? If you do things online, you forget about it quick smart. Paper does me great.* (Parent C, primary school child)

Another qualitative participant agreed with the need for a paper element, but described their feelings about online consent being more about the organisation rather than the digital literacy involved:

*I think online consent would be okay, but I would still want information… for me I just like to file it so I would rather have it file-able* (Parent B, primary and high school children)

This question was further analysed by exploring the SIMD of survey respondents. While we acknowledge the spread across the SIMD declines is small, there are suggestions of differences of opinion that can be discussed below.

While most respondents suggested they would be either happy or very happy for digital consent, we see respondents in SIMD 1-2, and SIMD 7-8 were more likely to suggest they would be very unhappy (12% and 14% respectively). Respondents from SIMD 1-2 were also more likely to suggest they were unhappy (12%). However, given the relatively low numbers in each category, it is not possible to
state whether this is a statistically significant difference and caution is advised in drawing conclusions.

Table 13: attitudes regarding digital consent by SIMD

<table>
<thead>
<tr>
<th>SIMD 1-2</th>
<th>SIMD 3-4</th>
<th>SIMD 5-6</th>
<th>SIMD 7-8</th>
<th>SIMD 9-10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very happy</td>
<td>7 (44%)</td>
<td>5 (50%)</td>
<td>7 (44%)</td>
<td>7 (32%)</td>
</tr>
<tr>
<td>Happy</td>
<td>3 (19%)</td>
<td>0 (0%)</td>
<td>5 (31%)</td>
<td>10 (45%)</td>
</tr>
<tr>
<td>Neither happy nor unhappy</td>
<td>2 (12%)</td>
<td>5 (50%)</td>
<td>3 (19%)</td>
<td>2 (9%)</td>
</tr>
<tr>
<td>Unhappy</td>
<td>2 (12%)</td>
<td>0 (0%)</td>
<td>1 (6%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>Very unhappy</td>
<td>2 (12%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td>3 (14%)</td>
</tr>
</tbody>
</table>

In terms of the delivery model for the vaccination consent pack (containing letter, information booklet and consent form), there was a mixed response:

Table 14: preferences for vaccination consent materials should online consent be launched.

<table>
<thead>
<tr>
<th>Preference</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Letter, information pack and consent forms to be online</td>
<td>42 (55%)</td>
</tr>
<tr>
<td>Letter and information pack to be on paper, consent form to be online</td>
<td>16 (21%)</td>
</tr>
<tr>
<td>Letter to be on paper, and information pack and consent form to be online</td>
<td>7 (9%)</td>
</tr>
<tr>
<td>I want it all to remain on paper</td>
<td>11 (14%)</td>
</tr>
</tbody>
</table>

While a move for all consent pack items to go online was agreed by the majority of survey respondents (55%), the remaining 45% requested at least one of the items to remain on paper.

The same question was asked during the qualitative interviews. One participant described their preference for everything to be online:

*It would be a waste of paper otherwise. Right now, I read the letter with my child, we discuss it, and then it goes in the bin. But we could the same online, we could read the information side by side, me on my phone and they’re on theirs, just chatting about it and we don’t need the paper copy* (Parent A, high school child)

Exploring respondents’ preference of delivery options through SIMD, we see that respondents from SIMD 1-2 were more likely to request an “all paper” option (31%), and SIMD 9-10 were most likely to request all online (83%):
Table 15: preference for mode of digital consent delivery by SIMD

<table>
<thead>
<tr>
<th>Mode of Delivery</th>
<th>SIMD 1-2</th>
<th>SIMD 3-4</th>
<th>SIMD 5-6</th>
<th>SIMD 7-8</th>
<th>SIMD 9-10</th>
</tr>
</thead>
<tbody>
<tr>
<td>All online</td>
<td>9 (56%)</td>
<td>6 (60%)</td>
<td>8 (50%)</td>
<td>11 (50%)</td>
<td>5 (83%)</td>
</tr>
<tr>
<td>Consent and information pack online, letter on paper</td>
<td>0 (0%)</td>
<td>1 (10%)</td>
<td>3 (19%)</td>
<td>2 (9%)</td>
<td>1 (17%)</td>
</tr>
<tr>
<td>Consent online, letter and information pack on paper</td>
<td>2 (12%)</td>
<td>3 (30%)</td>
<td>4 (25%)</td>
<td>6 (27%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>All on paper</td>
<td>5 (31%)</td>
<td>0 (0%)</td>
<td>1 (6%)</td>
<td>3 (14%)</td>
<td>0 (0%)</td>
</tr>
</tbody>
</table>

Again, given the relatively low numbers in each category, it is not possible to state whether this is a statistically significant difference and caution is advised in drawing conclusions.

Survey respondents were asked what would influence their decision to access a digital form for vaccinations:

Table 16: factors that influence decision to access digital consent platform

<table>
<thead>
<tr>
<th>Factor</th>
<th>Count (%, % of total)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access to the internet</td>
<td>24 (32%)</td>
</tr>
<tr>
<td>Ability to understand the form</td>
<td>14 (19%)</td>
</tr>
<tr>
<td>Ability to click available links</td>
<td>25 (33%)</td>
</tr>
<tr>
<td>Assurances about the security of my data</td>
<td>43 (57%)</td>
</tr>
<tr>
<td>Other</td>
<td>12 (16%)</td>
</tr>
</tbody>
</table>

In response to the question of what would influence their decision to access a digital form for vaccinations, one of the clear drivers was assurances of data security (57%) followed by ability to click available links (33%) and access to the internet (32%). A text box was made available to encourage survey respondents to suggest other facilitators to accessing an online consent form.

These suggestions included individual level factors (a preference for paper copies, feeling overwhelmed by how much information is on the school app, health conditions such as migraines) as well as elements that could be designed into the online system (e.g. having a simple, easy to navigate form and ability to check that personal information is correct and up to date, having reminders if forms are not completed in a timely manner). Two respondents also referred to vaccination hesitancy/refusal attitudes concerning stopping all vaccinations.
The qualitative interviews provided further insight into the attitudes to access online consent platforms. One parent, when asked what type of format they would prefer the online consent platform to take, suggested that using existing school apps or an NHS app would be preferred. If an email format was taken, this would be okay so long as it came from a trusted source and directed users straight to an NHS page (rather than an independent site). Another parent suggested they would prefer if the information came straight from the school because “my child is going to get it at the school, it’s on school property. Makes sense [if it came from them].”

**Accessibility of online materials**

A question about accessibility and whether there were modifications that could be designed into the form to make it easier to access was included in the survey.

*Figure 5: preferences of accessibility options in digital consent.*

<table>
<thead>
<tr>
<th>Accessibility options</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Translate form to other languages</td>
<td>5</td>
</tr>
<tr>
<td>Change text size</td>
<td>10</td>
</tr>
<tr>
<td>Complete form online</td>
<td>45</td>
</tr>
<tr>
<td>Audible version</td>
<td>5</td>
</tr>
<tr>
<td>More information about vaccinations</td>
<td>20</td>
</tr>
</tbody>
</table>

Ability to complete the form online related to reliable and accessible internet connection, and the ability to ensure forms could be completed and sent to the school/NHS without concern about the form timing out or crashing. However, findings likely reflected the low requirements for accessibility adaptions from the parents who chose to respond to the survey. The majority of respondents did not report a physical or mental health condition or disability (87%), and most reported identifying as White Scottish/British (89%).

An open text box was offered at the end of the survey to capture parental views of digital consent in general, and if they had any issues that were not addressed during the wider survey. Thirteen parents completed this question. Generally, these comments reflected questions pertaining to safeguarding (both in terms of information protection but also the safeguarding of vulnerable parents who may need additional support), informed consent (requesting the form has additional age appropriate information for children to access, and for more information to be displayed regarding side effects), hesitancy/vaccine refusal, and accessibility (referring to the need to support those who may have language or literacy support needs, and paper copies where needed should remain).
Summary

This report sought to identify and explore attitudes of practitioners and parents/carers to digital consent for school-aged children’s vaccinations. At time of writing, there was no agreed platform or method for delivering digital consent, therefore attitudes and perceptions focused on how this may look and be delivered in the future.

Both workstream one and two highlighted that most parents/carers would welcome this transformation, with several acknowledging that there has been a cultural shift to digital methods of payment and communication that mean that vaccination consent is one of the last things to be delivered on paper in schools. However, workstream one also identified that schools were currently still in a transitionary stage in terms of digital communication and moving to a “paper-free” environment, and the barriers and facilitators experienced in wider digital communication could also be applied to how we consider delivery of digital consent in the future.

For those parents/carers who were more likely to be disengaged from digital communication, there were interconnecting issues of poverty, education, and geography, as seen in examples of parental literacy, digital engagement, and digital literacy, affording internet and devices, and migration and English language comprehension. Workstream two acknowledged the impact of deprivation on parents’ perceptions of digital consent, and how much this would be welcomed. However, while there was a trend towards SIMD 1-2 being less positive about digital consent, this finding is based on small numbers and did not reach statistical significance, so should be read with caution. What was clear from discussions of the barriers in workstream one was the key advocacy role schools played in supporting these parents/carers. This could be seen through identification, communication, support, and organisation of alternative arrangements (e.g. verbal consent, paper-based forms, signing on behalf of parents, arranging time to access school computers). Finally, workstream one also highlighted the often-unseen role of school administrator and clerical staff, and their role as the conduit between NHS vaccination teams and pupils. This required a knowledge of pupils and parents, but also establishing an identity within the school community as someone who was non-threatening and supportive to any parent/carer who may require additional help.

Workstream one and two also acknowledged the potential for the digital platform to empower pupils, which is increasingly important given that the UNCRC became law in Scotland in January 2024. The need for children to have a say in issues affecting them, and for information to be presented in a fashion that is understandable should become a cornerstone of all information related to child health and wellbeing. In terms of digital consent, this could include creating digital resources for children that could be delivered both at home and at school, with a shared responsibility for parents and practitioners to ensure children understand what vaccinations are, and their importance for health and wellbeing. In doing so, there are discussions about informed consent, and the need for children to be able to confidently give their opinion regarding decisions impacting their health based on information provided. If this is done correctly, we should be able to see several impacts: accessible digital resources circulated and shared, the creation of a generation of children who are digitally and health literate, and for pupils to be less concerned about the ‘unknown’ elements of vaccinations. However, this issue requires child and adolescent input. If this is not included, we risk adults designing information for young people with limited understanding of what a young person wants to know about or what method of delivery they would be most likely to engage with.
Research questions

1. **What are the main factors which would influence parent/carer/guardian’s decisions to use or not use digital consent platforms for vaccination consent?**

A key facilitator for engaging with digital consent platforms was cultural. That the general cultural shift to online or digital methods of paying for travel, food, bills but also a cultural shift within schools to a “paper-free” environment, would likely influence parents to also agree to consent moving online. Workstreams one and two offered consideration of the general parental population (via parental survey in workstream two) and parents who require additional support both to access information in general, but also digital platforms (via practitioner interviews in workstream one). Where parents were positive about adopting an online or digital consent platform, they suggested key elements to consider including assurances about data security, ability to click links (and have these links be live and go to the correct location), clear language, and reliable access to the internet.

In discussions with practitioners what would need to be in place for those parents who require additional support from school staff, a number of concerns were raised. These included:

- language comprehension, where English is an additional language for families who had recently moved to the UK;
- literacy issues, where parents have a low level of reading and writing capability meaning that school communication is often not understood; and
- digital literacy, where they have a good level of literacy, but cannot navigate complex online spaces or have difficulties with remembering passwords, key information or web addresses.

Alongside these issues are concerns relating to deprivation (leading to a reduced ability to access the internet on pre-pay devices or relying on out-of-date technology) and geography (issues of rural poverty and unreliable Wi-Fi).

For these families, a platform would require several design features including being linked to existing platforms used by the school (to reduce number of ‘new’ passwords or behaviours that are required to be learned), for the platform to have the ability to be translated or for the information to have a text-to-speech option (to support those who have poor literacy skills). There should also be an option for the platform to be accessed offline, to support those with limited access to the internet. Another issue flagged by staff was the trustworthiness of the source. For some families, having the school remain as one of the key communicators may lead to an improved uptake as they are viewed as a trusted name in their inbox whereas there was a concern that an NHS form may appear to some as spam.

2. **What are the views of school staff regarding the potential implementation of digital consent systems for vaccinations in schools?**

When asked whether a move to digital consent for vaccinations would be welcomed by parents, most school staff suggested that, given the ongoing shift to a paperless culture, this would likely be adopted by many of the parents. Regarding the implementation in the school, some staff queried whether the implementation would be piloted, for example with one year group or one vaccination being rolled out prior to the wholesale shift to online.

When asked to expand on this topic, some staff suggested that when new technologies or behaviours are to be implemented, the best return was in the respective youngest year groups (P1-2 in primary school, S1-2 in secondary school). The staff also reflected that by targeting the youngest
pupils, the parents would then be able to build on their experiences over the duration of their child’s attendance in school. They suggested that by senior phases, parents were more likely to be disengaged and therefore less likely to adopt new activities or behaviours.

Questions around implementation of digital consent systems frequently referred to workflow and responsibilities of school staff, detailed below.

3. **How could the introduction of digital consent systems be likely to impact the workflow and responsibilities of school staff?**

The majority of the school staff interviewed suggested that the actual workload and workflow for school staff would not be impacted by the introduction of digital consent. While the concept of digital consent was welcomed by staff, they described a perception that the main tasks of the school would remain the same: chasing up parents who had not yet returned forms, sending communication via social media and school apps reminding parents to check for school vaccination forms, and liaising with school nurses on the day regarding order of classes required for vaccination.

While a move to digital consent may mean physical packs did not need to be handed out in classrooms, and completed packs did not need to be collated and handed to school nurses, clerical staff described this as minor in terms of the actual workload relating to school vaccinations. Linked with Research Question 1, the challenges facing clerical staff concerned those parents who were either disengaged, had low literacy levels, language difficulties, or may not have received the letter from pupil school bags. Clerical staff described multiple methods for contacting parents to remind them to complete forms, including occasionally asking school nurses to acquire verbal consent over the telephone if consent had still not been received on the day of vaccination.

In terms of responsibilities, schools continued to see their role as key communicators and assisting the NHS in achieving a positive return on consent. Clerical staff reflected that in current practice, they were not able to open consent packs to see whether parents had, or had not, consented to vaccination. But instead, they could only note whether a pack was returned to the school office. Some clerical staff kept their own spreadsheet of returns to enable the generation of a list of pupils that required following up. Some staff suggested that if digital consent moved online, being able to access a similar list would enable the school to continue this role.

The schools also reflected on additional roles that could adopt should digital consent be introduced in schools. These included having to introduce or ‘train’ parents in how to access the consent platform and provide troubleshooting advice should there be issues, and providing additional information to pupils regarding vaccinations. This was particularly linked to the UNCRC, and the importance of gaining informed consent from children. At the time of writing, teachers did not have a role in providing information regarding vaccinations to pupils, a role which was left to the school nurse who delivered the information on the day (or to parents if they chose to use the information booklet to share information with their child prior to completing the consent form).

4. **What would be the key barriers and facilitators to the successful adoption and implementation of digital vaccination consent systems in schools?**

A key barrier to successful adoption lies in the format of the digital vaccination consent system. If the new system is designed as an add-on to an existing app or web portal, it is worth bearing in mind that not all schools use the same resources. While parent portal was a popular choice, not all schools used it. Staff acknowledged that whatever format the digital vaccination consent system took, it was important that all schools would be able to access it without any additional cost or requirement for some parents to do ‘extra work’ if the approved system was not one currently used by the school.
While all the schools interviewed appeared positive about the move to an online platform, there was also an acknowledgement that some were currently experiencing problems getting parents to buy-in to wider online communication platforms. The introduction of another request for online engagement may exacerbate the delayed adoption of online communication tools. A multi-phase communication strategy by NHS Scotland/Scottish Government about the importance of signing up for online consent platform prior to the school vaccination dates could remedy this. Such a strategy could include social media, radio/TV, as well as school-based communication (text, email, school apps).

Connected to this is the issue of family readiness, as referenced in research question one. Where parents experienced low literacy rates (either digital, physical or both), there was also an associated disengagement from school communication in general. These were the families who required to be ‘chased up’ and may need multiple reminders in different formats (text, phone call, email, face to face) before paperwork is completed. This disengagement may create a barrier to successful adoption of online consent platforms. Two practitioners reflected that it may not be the digital platform that stops these parents from completing consent forms but consenting to vaccination overall. This was reflected by a minority of survey respondents, where vaccine hesitancy or refusal was the barrier, rather than issues around consent forms and return.

5. **How would the identified potential barriers be addressed to promote the wider use of digital consent platforms?**

School staff were invited to reflect on their ideal format of digital vaccination consent. They were asked to do so acknowledging the barriers and issues facing their schools both in terms of general engagement with digital media, but also in terms of vaccination consent.

As one of the key barriers facing some parents related to digital literacy, there was a request that the new platform design is simple, clean, and require limited use of passwords. Some practitioners suggested that the platform be linked with existing apps such as parent portal, but others suggested that their parents could not easily access this due to high levels of data security (alphanumeric passwords and multiple questions). Others suggested that the platform be designed to be ‘as simple as Google forms’ and be sent as a link over email. This simplicity refers both to the limited number of questions asked, but also the format the questions take: drop down menus, basic language, neutral background.

There was also a discussion of the potential for an online platform to include digital media – such as videos or audio guides. The inclusion of short videos detailing key messages (why receive vaccinations, what is the purpose of this vaccination, what are the likely side effects) would both support those with low literacy, but also could be distributed to children should they have any questions regarding the vaccination process.

6. **Are there any potential disparities in access to digital consent systems, and if so, how can they be addressed?**

Where literacy and language were a barrier to engagement, there was a suggestion that digital consent platform should also have option to translate forms into different languages, change the size of text, or have a text-to-speech option.

For issues relating to digital connectivity, either due to poverty or unreliable internet in the Highlands, there was also a call to ensure the digital consent form could be completed offline, and then sent whenever the parent could access the internet again.
Recommendations
The research findings raise a number of issues for consideration and areas for further research and piloting. At this stage, several recommendations emerge from the findings, these are:

1. For a paper version of consent packages to continue to be used and available for those who either experience poor digital literacy or other barriers to engagement.

2. For the digital consent platform to be designed with accessibility at its core – for translation into other languages, text-to-speech capabilities, changing size or colour of text to be designed into the platform.

3. An exploration of how a digital consent platform could be developed that ensures the safety of health data but also enables parents to access it without complex log-in requirements, and for this platform to work with existing platforms currently used by local authorities in Scotland.

4. For the digital consent platform to also have a page designed for children. This could be accessed by teachers, parents, or by children themselves. The page should have videos and text in child friendly language that details the purpose and experience of receiving vaccinations in a way that respects the rights of the child and ensures their awareness of informed consent.

4. For schools to continue to play a role in vaccination consent, even when digital consent is rolled out. We have seen during this report that the school plays multiple roles with regards to vaccination consent: communicator, supporter, and organiser. By removing these roles, it may risk a decrease in vaccination uptake in those families who are either disengaged or experience difficulties.

5. For the opinions of children to be sought prior to any change in vaccination consent.