



A guide for patients and relatives

How can clinical staff improve patient care, privacy, dignity, independence and wellbeing?

We believe that every patient deserves outstanding, compassionate, safe, and dignified care. We believe in promoting independence, privacy and dignity and, where recovery is possible, the fastest possible recovery for patients.

Oxehealth is a spin-off venture from the Institute of Biomedical Engineering at Oxford University. The institute was founded in 2008 to apply engineering and computer science to the field of medicine. The driving force behind the Institute — and its founding Director — was Prof. Lionel Tarassenko. Much of Prof Tarassenko's academic research has focussed on patient monitoring and his work has had a major, positive impact on the management of long-term health conditions.

From the beginning, the team at Oxehealth have partnered with clinical staff and their patients, the experts on improving patient experience, to co-design Oxevision. Promoting and protecting privacy and dignity is a fundamental design principle for us and has informed every system design decision we have made; from how the technology works to how the staff interact with it as part of their daily routines. We know that it is imperative to provide patients with the right environment and clinical support which helps to keep them safe from serious harm and injury and feel safe throughout their recovery.

We also know that the privacy and dignity of any person encountering Oxevision is also critically important to them, their relatives and their healthcare providers and that, therefore, the way in which We know how important patient privacy is to patients themselves, their relatives, and their healthcare providers. We therefore appreciate that the way in which Oxevision is introduced into a care setting is critically important.

While every healthcare provider will undertake their own approach to implementing Oxevision, we support our partners by sharing insights from other healthcare organisations who are using Oxevision successfully. We advise healthcare providers to carefully consider how they incorporate the use of Oxevision into their daily clinical practice, to ensure it is lawful, ethical, compliant with data protection regulations and supports quality of care in the least restrictive manner. We advise that patients are informed about Oxevision including its presence, what it is, how it is used, when it is used and the way in which data is captured and processed.

Summary:

- › Oxevision and the implementation approach have been co-designed with clinical staff and service users to help staff deliver safer and higher quality care that promotes independence, privacy, dignity and recovery wherever possible.
- › Oxehealth supports our healthcare partners, and their service user and relatives' groups, to think through how they protect the rights of all individuals whose care is supported by Oxevision

How does Oxevision work?



Oxevision uses an infrared-sensitive camera housed in a secure unit installed in the patient's room. The outputs from Oxevision are analysed digitally using specially developed algorithms to provide clinical staff with alerts, readings and reports. These help clinical staff to ensure patients remain safe and secure. The infrared sensitive camera only streams video images to staff when a clinician is making a deliberate patient observation and for a maximum of 15 seconds. The system is a support aid and does not replace personal interaction and care or expert clinical judgement.



Clinical staff can use Oxevision to visually confirm a patient is safe through a short, 15 second, visual check that also measures their pulse and breathing rate. This can all be achieved without the need to disturb the patient by entering their room.



Oxevision can notify staff of activity that may indicate a patient needs help or assistance, for example, if they have been in the bathroom for a long time, or if another person might have entered their room. These notifications are tailored to the individual needs of the patients. Please note that Oxevision does not monitor a patient's bathroom; it only knows if a patient has entered their bathroom.



Finally, the system provides reports that help inform discussions between the patient and clinician about how the patient's care plan might need to be adapted. For example, using objective data to review overnight activity and sleep opportunity to support a discussion about how an individual slept and their night-time routines, and inform how their care needs might need to be adapted throughout the following day.

What do patients say?

Oxehealth has undertaken several clinical research studies and evaluations which have all included patients' feedback and, where possible, their relatives' feedback. These insights have been used to improve Oxevision and the way it is implemented. In addition to this, we also work closely with our healthcare partners to learn about the day-to-day experiences of patients who are being cared for by clinical staff using Oxevision.

Working with five mental health trusts in NHS England, we have listened to and learned from the perspectives of more than 75 patients from across 13 wards who were being cared for in mental health hospitals around England. This took place through NHS-led patient surveys, focus groups and in-depth interviews. Patients were drawn from across service pathways including female working age acute, male working age acute, mixed working age acute, psychiatric intensive care and older adult services.

Most patients were extremely positive about their experiences of having Oxevision incorporated into their care while in hospital. Patients typically expressed an improved sense of privacy, dignity, sleep, wellbeing and safety.

The following quotes are representative of their experience:

"Having Oxevision makes me have a better sense of wellbeing because I feel more, not watched, but secure".

Patient

"I've been in the mental health system for a total of 7 years, since I was 18. Before, the staff would come in all the time during the night, turn on the lights, and would wake you up. It was very stressful, especially when on medication. Now, they don't disturb sleep as much and I think Oxevision is great for that".

Patient

"I like Oxevision because the staff don't disturb my sleep at night anymore. They used to come in every 10-15 minutes even at 6am in the morning to check that I am breathing. I think the system has been a good thing and it doesn't bother me".

Patient

"I think Oxevision makes us very safe on the ward. It's good to know that Oxevision can call for help when you need it".

Patient

"I feel dignified with staff using the system at night. It does not disturb my sleep. My sleep quality is still good".

Patient

Patients reported that being cared for by clinicians using Oxevision helps them to experience:¹

A better sense of **safety**

81%

Less **disturbance at night**

78%

Better **sleep**

71%

A greater sense of **wellbeing**

70%

A greater sense of **privacy**

63%

¹ Data collected between 2019 and 2021 via customer-led surveys conducted by five NHS England mental health trusts. Percentages refer to the proportion of respondents who agreed or strongly agreed with the statements. Sample sizes from top to bottom of list: N = 78; N = 77; N = 76; N = 60; N = 78.

We are continuously working with and supporting all healthcare providers that use Oxevision to listen to and learn from patient and relative feedback.

To find out more about patient perspectives on Oxevision [read a detailed report here](#).

Summary:

- › Patient and relatives' feedback is critical to the ongoing development of Oxevision and how it is implemented
- › The majority of patient feedback indicates that Oxevision increases their privacy and dignity, sense of wellbeing and safety, and that the potential risks that might be perceived in the system are appropriately managed.

Is it CCTV?

At Oxehealth we understand that, at a quick glance, it could be easy to confuse Oxevision's camera with conventional Closed-Circuit Television (CCTV) and draw parallels between the two. We are mindful of the need to provide precise assurances to patients, relatives and healthcare staff that their privacy and dignity is maintained at all times.



The system cannot be used as CCTV; the system does not constantly stream video of the rooms in which it is supporting staff to care. There are clinically designed safeguards built into the software to provide this protection, further supported by the policies, protocols, governance and auditing adopted by our healthcare partners which set out and monitor appropriate usage of the system.

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Clinical staff on the ward only gain access to a video image that could identify a patient when taking a spot-check pulse rate and breathing rate observation. This "clear" video is limited to a few seconds (up to a maximum of 15 seconds). No clear video is being recorded. This is long enough for staff to complete a short safety check, the same safety check that staff undertake during traditional observation rounds. However, traditional rounds involve a member of staff switching on a light or torch and looking through a hatch or opening the bedroom door for at least 10-15 seconds, sometimes more. The difference with Oxevision is that staff do not disturb a patient's rest and, if the patient is still, they can obtain a clinically accurate pulse and breathing rate measurement (Oxevision Vital Signs is cleared as a Class IIa Medical Device in Europe and a Class II Medical Device in the USA).

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Oxford Health's report — [A Good Night's Sleep](#) — details a Service Evaluation that established the improvements in patient experience of completing night-time observations using Oxevision as a supportive tool.

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In specific scenarios and under clinically governed protocols, clinical staff can access anonymised (blurred) vision into the room during or directly after an alert to high-risk activity to support on-the-spot clinical decisions so that they can quickly get the right help to an individual as quickly as possible. The anonymised (blurred) footage cannot identify a patient (the image is irreversibly blurred) but gives just enough insight into what is happening in a room to enable a staff member to determine the least restrictive and most supportive clinical course of action.



The location and activity based alerts can enable more proactive clinical care and the resulting benefits have been studied and reported across acute mental health settings (for example, supporting clinical staff to reduce self-harm in bedrooms on acute wards, and helping them to reduce assaults and rapid tranquilisations on PICU wards — [read report here](#)) and older adult mental health settings (for example, helping clinical staff reduce falls and patient harm in bedrooms — [read report here](#)).

Summary:

- › Oxevision is not a CCTV system
- › Oxevision does not stream a continuous video feed to staff. Instead, it provides contact-free information, including location and activity based alerts to potential patient risks and medical grade pulse rate and breathing rate measurements
- › Clinical staff can only access “clear” vision into the room as part of a required safety check, and can only access anonymised (blurred) vision to support urgent, on-the-spot clinical decision making. No clear video is being recorded
- › A potentially significant patient benefit of using Oxevision is that it can enable staff to conduct accurate safety checks at night without entering their room or waking them up. As a result, it has been found by our healthcare partners that the patient's sense of privacy, sleep quality, and safety has improved
- › Oxevision alerts clinical staff to potentially high-risk situations, allowing them to intervene and prevent significant patient injuries.

How do healthcare providers determine how Oxevision is used in practice?



Ultimately, each healthcare provider determines how Oxevision is used in everyday practice within their healthcare settings. Oxehealth supports this process by sharing the insights from our research in collaboration with healthcare organisations and putting them in touch with other providers who have implemented the system successfully.



Oxevision is a supportive tool for staff in caring for their patients and does not replace therapeutic interaction or personal care.



In the way that it is designed and in the way that it is used by clinical staff, Oxevision offers a least restrictive intervention and promotes well being, independence, privacy and dignity for patients during their stay in hospital.

Feedback from clinical staff is that Oxevision helps them to create more time for direct, therapeutic care and supports them to make more informed and individualised care decisions to promote therapeutic engagement and recovery. Staff feel they can have more meaningful interactions which improve their relationship with patients.

The following quotes are representative of this experience:

"In my experience, Oxevision gives us more time to spend with patients while also knowing patients are safe. For example, at night-time, we'll know that one patient is fine, so we'll have time to attend to another patient who needs something. Our patients tend to go to bed late, so once we are able to check their vitals and make sure they're okay, we've got extra time to attend to other patients who need assistance".

Ward Manager

"In general, we've never had much time to interact with patients. Now with Oxevision it's nice because before we used to check their rooms all the time, sometimes every second, now you can check on the system for patients who are in their rooms and then use that free time to engage with other patients in the lounge or communal areas. In these cases, the interaction level is more".

Healthcare Assistant

"Now you can take time to have that meaningful interaction and say "how are you", not just being reactive to an incident".

Ward Manager

"Staff interact with us a bit more, we only see them less at night. I think they've always been very busy, but you can see that they have more time for us with Oxevision. We still get a good amount of interaction with them".

Patient

"During my observations, I have noticed more interaction in the lounge from staff to patients than previously. The staffing levels have not changed, so this seems to be due to Oxevision".

Healthcare Support Worker

"We wanted to involve the patients throughout because ultimately, it's for them. They liked that we were open and honest with them, which improved the staff and patient relationship".

Service Manager

To find out more about clinical staff' perspectives on Oxevision [read a detailed report here.](#)

To learn about the impact Oxevision had on the experiences of patients and staff in particular trusts, [read insights from Essex Partnership University NHS Foundation Trust](#) and [Central and North West London NHS Foundation Trust.](#)

How do healthcare providers consider appropriate and ethical use?

Working in partnership with service users, relatives and staff representatives, every healthcare provider must assess the legal basis for its use within their facilities prior to any usage.

We advise each healthcare provider to carefully consider the legal basis and consent regime for the use of Oxevision within their settings, including the impact on their patients and staff. Whilst each healthcare provider may undertake their own approach to these decisions, we strongly advise that all patients are informed about the system (its presence, what it is, how it is used, when it is used) throughout the duration of their stay. This may include information upon admission, signage in public areas, frequent discussions within community meetings and other on-the-ward forums, individual conversations with nurses or doctors, and participation in surveys, interviews and focus groups with both service users and their relatives.

Each healthcare provider clearly defines how the system is to be ethically used by clinical staff as part of routine care day-to-day. This includes defining what the system can and cannot be used for. For example, Oxevision can be tailored to support individualised care planning depending on the needs of a particular patient and time of day.

This approach helps to ensure that the system is used to support least restrictive care. It includes a systematic review of existing policies, standard operating procedures and clinical and operational governance arrangements. Clinical staff are trained on both: how to use the system (what it does and does not do) and how and when to use it ethically and appropriately as part of their routine clinical care. Staff are also trained to ensure the system is used to promote improved therapeutic engagement and recovery as well as protect from harm.

Healthcare providers monitor and review their protocols and policies regularly to ensure they are supportive of these principles; that they continue to be good practice and promote continuous learning and improvement in the safety and quality of care provided to patients.

If you are a current patient or past service user that has encountered use of the system and have further questions or comments, please ask your healthcare provider directly for more information.

Summary:

- › We advise healthcare providers to carefully consider how to incorporate the use of Oxevision into their daily clinical practice to ensure that it is lawful, ethical and supportive of improving quality of care in a least restrictive manner for all patients and residents
- › Clinical staff feel that Oxevision helps them to create more time for direct, therapeutic care and supports them to have more meaningful interactions which improve their relationship with patients.

Is this a system designed to help care for everyone equally?

Oxevision has been co-developed with patients, their relatives and healthcare providers to help care for everyone. It has been designed using scientific techniques which are not limited to particular groups of people, in order to avoid any risk of exacerbating health inequalities.

Oxevision has been tested in studies involving groups of participants who represent the full diversity of our adult population in age, skin colour and other protected characteristics, to ensure it performs well for everyone. Clinical staff have also carried out usability tests to ensure that the user interface is equally easy to use for all members of staff, regardless of digital proficiency.

Summary:

- › Oxevision has been tested in studies involving groups of participants who fully represent our adult population in age, skin colour and other protected characteristics, to ensure it performs well for everyone and does not exacerbate health inequalities
- › Clinical staff have carried out usability tests to ensure that the user interface is easy to use for all members of staff.

What about privacy and data protection?

Oxehealth adheres to the highest standards for data protection and privacy compliance.

As is the case for many healthcare companies, Oxehealth processes personal data on behalf of our customers. In all circumstances, Oxehealth is the Data Processor and the healthcare provider is the Data Controller. This means that the healthcare providers, not Oxehealth, determine the purposes for which and the means by which personal data is processed.

All healthcare providers we work with complete and formally adopt a full data protection impact assessment and data protection protocol that govern how personal data from the system is processed in compliance with the General Data Protection Regulation (GDPR), the law and any national, regional and local requirements. Regular data processing reviews with our customers are undertaken to ensure that these principles and processes are compliant and complied with throughout the life of our partnerships.

For further information regarding data protection and processing, please contact your healthcare provider's data protection officer (they will be identified on the provider website). If you get stuck, please get in touch and we will help point you to them.

Summary:

- › Oxehealth adheres to the highest standards for data protection and privacy, and our processes and procedures are governed by, and compliant with, the general law and the specific rules set for us by the healthcare providers we serve.

How do you keep up to date with the evolving needs, interests and perspectives of patients and relatives?

Patient and relative engagement is a fundamental part of the work we do at Oxehealth.

Working closely with healthcare providers, we aim to ensure patients and relatives are partners in the process as early as possible, often before the decision is made by the organisation to engage in a partnership with us.

Healthcare providers engage patients and relatives throughout the implementation process, and once Oxevision is live, there is regular engagement to ensure their feedback and experiences are listened to and learned from to help improve care on the ward.

Patients' views and those of their relatives are actively represented within our organisation, through our partnerships with NHS trusts, academic institutions and leading research centres across the country both within our day to day work and within our academic research organisation, the Oxehealth Clinical Research Forum. This includes co-design, co-production and evaluation of new developments to the system.

Engaging with patients and relatives is an ongoing, living process. We are actively looking to expand the scope of our work, by forming active partnerships with patient and relatives organisations, charities and other parties representing patient and relative communities and their voices.

This is the First Edition of "A Guide for Patients and Relatives". We will publish revised editions as we learn together with all stakeholders who have an interest in our work.

If you would like to learn more or become involved in our work, we would love to speak with you. Please get in touch.

[**Get in touch**](#)

Summary:

- › Oxevision has been designed to help clinical staff increase patients' sense of wellbeing, independence, privacy and dignity, and to promote recovery where possible
- › Listening to and learning from service users, their relatives and their communities is a central part of our work and is a job that will never be completed. We actively seek all perspectives to inform our work in all respects, including through our partnerships across the NHS and within our research programmes
- › We are always open and willing to hear your thoughts to help us understand and improve our impact in the world; if you would like to become involved or learn more, please get in touch.

About Oxehealth

Oxehealth is a leader in vision-based patient monitoring and management. We help clinical staff to deliver safer, higher quality and more efficient care.

Oxevision, with its contact-free infrared-sensitive camera (housed in a secure unit in the patient's room), delivers additional insights to staff which supports them to help patients feel safer and more secure in their care setting. At the same time, the system helps to increase patients' sense of wellbeing, privacy, dignity and respect.

Our service supports customers to deliver a step change and then year on year continuous improvement in safety, quality and efficiency.

Oxevision is relied on by one in three English mental health trusts as well as acute hospitals, care homes, skilled nursing facilities, prisons and police forces across Europe.



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