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RE: Freedom of Information Request

24th June 2024

Dear Sir/Madam

With reference to your request for information received on 11th April 2024, I can confirm in accordance with Section 1 (1) of the Freedom of Information Act 2000 that we do hold the information you have requested. A response to each part of your request is provided below. Please accept our apologies for the delay.

In your request you asked:

Logistical Robots in Healthcare Environments

We would greatly appreciate if you could answer all the relevant questions to assist us with this study in the preferred format that has been given.

- 1. Does your organisation employ or utilise the use of logistical robots, or advanced equipment that can assist in operational tasks in a healthcare setting?**
 - Please select all box(es) that apply. If nothing applies, please proceed to Question 5.***
 - In the case the robot is multifunctional, please select one that best suits its primary purpose.***
 - In the case of multiple models and manufacturers under one application, please use the extra page given at the end of this form.***
 - For the purpose of this study, we are looking at logistical and supporting robots, with the exclusion of surgical and clinical robots (C-Arm, phlebotomy robots, exoskeleton/therapy robots, etc.). The term 'robot' used in this study refers to an advanced equipment or hardware that has an autonomous capability and can operate with minimal to no human intervention.***

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Delivery or transportation robots (delivering inpatient meals, empty food trays, medicines, samples/specimens, linen, etc.)

If yes, could you please give a general specification of the product/s:

Main delivery item : Food / Medicine / Specimen / Linen / Other

If Other :

Manufacturer :

Model :

Year of installation :

Generation : First/ Second/ Third/ Others

Other functions? :

Customer service/helper/care robot (greeting and assisting visitors in wayfinding and digital check-in, choosing inpatient meal options, etc.)

If yes, could you please give a general specification of the product/s:

Manufacturer :

Model :

Year of installation :

Generation : First/ Second/ Third/ Others

Other functions? :

Waste management robot (transporting waste, sorting waste, recycling, etc.)

If yes, could you please give a general specification of the product/s:

Manufacturer :

Model :

Year of installation :

Generation : First/ Second/ Third/ Others

Other functions? :

Cleaning or disinfecting robot (vacuuming, mopping, scrubbing, UV disinfecting, etc.)

If yes, could you please give a general specification of the product/s:

Manufacturer :

Model :

Year of installation :

Generation : First/ Second/ Third/ Others

Other functions? :

Pharmacy robots (sorting, storing, dispensing, etc.)

If yes, could you please give a general specification of the product/s:

Manufacturer : GPI SpABritannica

Model : RIEDL Phasys

Year of installation : 2024

Generation : Fourth

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Other functions? : Pharmacy medicine stock storage and supply system. Used to supply inpatient, outpatient and stock medications within the Trust and to supply medicines (under MHRA) to other organisations.

Manual handling robots (goods reception, sorting, storing, etc.)

If yes, could you please give a general specification of the product/s:

Manufacturer :
Model :
Year of installation :
Generation : First/ Second/ Third/ Others
Other functions? :

CSSD robots (sterile instrument automatic storing, packaging, delivering, etc.)

If yes, could you please give a general specification of the product/s:

Manufacturer :
Model :
Year of installation :
Generation : First/ Second/ Third/ Others
Other functions? :

Other logistical robots

Application/purposes :
Manufacturer :
Model :
Year of installation :
Generation : First/ Second/ Third/ Others

2. Was the installation of the robot(s) part of the hospital's development (as a new build, refurbishment, department enhancement, renovation, etc.) or a dedicated retrofit?

Refurbishment

| Type of Robot | Planned | Retrofit |
|---------------|---------|----------|
| | | |
| | | |
| | | |

3. When planning the use of robots, could you please tell us of any design decision(s) or adjustment(s) needed, if any, that was made to the hospital infrastructure and building

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design to enable their use? (E.g. installation of automatic doors, dedicated FM routes, adjustment to lifts etc.)

Must fit within the current footprint of the dispensary, Must have proven track record of being efficient in other similar organisations, must link to our pharmacy stock management system, increase the capacity of drug holding within the robot

4. What were the main intentions behind the decision to implement the robot(s)? What evidence-based factors supported the decision to implement the robot(s) i.e., savings projection?

| Type of Robot | Purpose of Use |
|---------------|---|
| | <p>Choose all that apply</p> <p><input checked="" type="checkbox"/> Easing staff physical workload</p> <p><input checked="" type="checkbox"/> Increasing efficiency of task</p> <p><input type="checkbox"/> Repurposing staff time for patient-centric tasks</p> <p><input checked="" type="checkbox"/> Reducing human error</p> <p><input checked="" type="checkbox"/> Maximising working hours</p> <p><input checked="" type="checkbox"/> Others, please explain below _____</p> <p>Must fit within the current footprint of the dispensary, Must have proven track record of being efficient in other similar organisations, must link to our pharmacy stock management system, increase the capacity of drug holding within the robot.</p> |
| | <p>Choose all that apply</p> <p><input type="checkbox"/> Easing staff physical workload</p> <p><input type="checkbox"/> Increasing efficiency of task</p> <p><input type="checkbox"/> Repurposing staff time for patient-centric tasks</p> <p><input type="checkbox"/> Reducing human error</p> <p><input type="checkbox"/> Maximising working hours</p> <p><input type="checkbox"/> Others, please explain below _____</p> |

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Have the robot(s) delivered the benefits envisaged when first considering using them? Please could you outline the positive and negative impacts of the robot(s) to the staff, patients, visitors, the hospital environment, and other stakeholders in the hospital:

Too early to get the impact of robot given it has only recently been installed.

| Type of Robot | Impacts |
|---------------|--|
| | <p><i>How does it serve its purpose? Are benefits realised in time and labour saving and operational efficiency?</i></p> <p><i>Is the system reliable? Is there a high uptime and is maintenance manageable?</i></p> <p><i>How does it affect its surrounding?</i></p> <p><i>How do the staff and patient interact with it?</i></p> <p><i>Are you considering the continuity or increased use of this type of robot?</i></p> |
| | |

5. Please only answer these questions if you are unable to answer Question 1-4

a. Has the organisation considered implementing logistical robots?

Yes

No

b. If yes, is the organisation going to implement logistical robots in the next 5 years?

Yes

No

If yes, what kind of logistical robot(s) and what is its intended purpose(s)?

Choose all that apply

Delivery or transportation robots

(Delivering inpatient meals, empty food trays, medicines, specimens, linen, etc.)

Customer service/helper/care robot

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(Greeting and assisting visitors in wayfinding and digital check-in, choosing inpatient meal options, etc.)

- Waste management robot *(transporting waste, sorting waste, recycling, etc.)*
- Cleaning or disinfecting robot *(vacuuming, mopping, scrubbing, UV disinfecting, etc.)*
- Pharmacy robots *(sorting, storing, dispensing, etc.)*
- Manual handling robots *(goods reception, sorting, storing, etc.)*
- CSSD robots *(sterile instrument automatic storing, packaging, delivering, etc.)*
- Other, please explain _____

c. If No, please share some of the reasons why you are not going to consider implementing logistical robots or decided not to proceed:

Choose all that apply

- Cost of the robot(s)
- Limited funding / higher priorities towards other areas of improvement
- Lack of evidence supporting the effectiveness and functionalities of the robot(s)
- Lack of requirement due to ease of recruitment for human personnel/manpower
- Complexity in implementation (lengthy business case, etc.)
- Requirement for staff training
- Existing infrastructure preventing the installation of enabling works (guide routes, automatic doors, wide corridors, sufficient vertical access, etc.)
- Staff uncertainty/unease towards new technologies and possible replacement of staff
- Satisfactory solution already exists, i.e., pneumatic tube, cage tug, contracted out food/linen service
- Others, please explain _____

6. Please could contact details be provided of anyone within the Trust who would be willing to take part in a more detailed discussion about automating logistical processes?

I trust this information answers your request. Should you have any further enquiries or queries about this response please do not hesitate to contact me. However, if you are unhappy with the way in which your request has been handled, you have the right to ask for an internal review. Internal review requests should be submitted within two months of the date of receipt of the response to your original letter and should be addressed to: Sally Brook Shanahan, Director of Corporate Affairs, King's Mill Hospital, Mansfield Road, Sutton in Ashfield, Nottinghamshire, NG17 4JL or email sally.brookshanahan@nhs.net.

If you are dissatisfied with the outcome of the internal review, you can apply to the Information Commissioner's Office, who will consider whether we have complied with our obligations under the Act and can require us to remedy any problems. Generally, the Information Commissioner's Office cannot decide unless you have exhausted the internal review procedure. You can find out more about how to

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do this, and about the Act in general, on the Information Commissioner's Office website at:
<https://ico.org.uk/your-data-matters/official-information/>.

Complaints to the Information Commissioner's Office should be sent to FOI/EIR Complaints Resolution, Information Commissioner's Office, Wycliffe House, Water Lane, Wilmslow, Cheshire, SK9 5AF. Telephone 0303 1231113, email casework@ico.org.uk.

If you would like this letter or information in an alternative format, for example large print or easy read, or if you need help with communicating with us, for example because you use British Sign Language, please let us know. You can call us on 01623 672232 or email sfh-tr.foi.requests@nhs.net.

Yours faithfully

Information Governance Team

All information we have provided is subject to the provisions of the Re-use of Public Sector Information Regulations 2015. Accordingly, if the information has been made available for re-use under the [Open Government Licence](#) (OGL) a request to re-use is not required, but the licence conditions must be met. You must not re-use any previously unreleased information without having the consent from Sherwood Forest Hospitals NHS Foundation Trust. Should you wish to re-use previously unreleased information then you must make your request in writing. All requests for re-use will be responded to within 20 working days of receipt.

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