Submission form to CSC Team

Project Title:

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| --- | --- |
| Collaborators Name  |  |
| Email Address |  |
| Institution |  |
| Department |  |

Contact Details:

Please complete the [HRA decision](http://www.hra-decisiontools.org.uk/research/) tool to clarify if your project is classified as research (<http://www.hra-decisiontools.org.uk/research/>)

*If the outcome is research which requires Ethics Approval, please do not submit this project proposal to the CSC Team*

1. Please describe the current clinical/patient pathways that are relevant to the project you are submitting as they stand to date and what clinical care guidelines are in place to ensure standards of care?

*e.g. Children with persistent rhinitis and respiratory symptoms who have a negative CFTR genotypes raise the suspicion of PCD.*

*Diagnosis of this genetic disease can be lengthy, complex and uncomfortable and can often require several assessment’s to be completed before a confirmation the diagnosis of PCD. Clinical care guidelines by the Nation PCD Service advice 4 diagnostic tests, included Nasal Nitric Oxide levels, TEM, CBF and CBF assessments.*

1. Briefly describe the problem you are trying to address in terms of frequency, occurrence, prevalence, cost *(if known),* population size etc.
* *Own, in Trust patient population- prevalence*
* *Nationally.*
* *Outcome occurrence of treatments.*
* *QOL, added life years of treatment*
1. Please describe any technology or publications you have to support the feasibility of the suggested project.
2. Please describe how the proposed AI Solution will change the current workflow
* *In an ideal world, how will the development of the technology will change practice?*
* *What are the ideal user requirements?*
	+ *The notification turnaround time*
	+ *How would you like the results be displayed*
* *Describe the Aims of the project*
* *What are the objectives of utilising a new technology?*
* *Who would be using the technology (e.g. the geneticist and the specialised PCD nursing staff)*
1. What data sets and/or systems would be relevant to develop your proposed AI solution?

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| *Data Required* |
| *Source of Data*  | *e.g., Kings, GSTT, Evelina Centre, PACS, EPR* |
| *Time Period*  | *e.g., From 2010 onwards,*  |
| *Health Care Intervention (Experiment)* | *e.g., GP Appointment, MRI, X-Ray,*  |
| *Pathology* | *e.g. Bleeds, Clots, Tumours,*  |
| *Anatomy of interest* | *e.g., Hand, Foot, Kidney* |
| *Label on data* | *e.g., Presence of perforation, Absence of fracture* |

1. Who will this solution impact?

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| --- | --- |
| Stakeholder | Potential impact |
| *e.g., Geneticist* | *Increased throughput however streamlined workflow* |
| *PCD Nurse specialists* | *Increased demand for nasal swabs and counselling of parents and families in the paediatric cohort* |
|  |  |

1. What, *if any*, Public and Patient Involvement (PPI) have you had to date? [*https://www.nihr.ac.uk/documents/briefing-notes-for-researchers-public-involvement-in-nhs-health-and-social-care-research/27371*](https://www.nihr.ac.uk/documents/briefing-notes-for-researchers-public-involvement-in-nhs-health-and-social-care-research/27371)
2. What are the minimal results you would want to see with the deployment of your solution, to show that it has been effective in changing the delivery of care?

Examples

* *Aiming to reduce the number of diagnostic tests to only 2 from the original 4*
* *To detect over 95% of Carpel bone fracture in children under 10*

*Please then explain the positive impact of this outcome*

* *Reduce hospital visits, costs of multiple tests, earlier access to treatment and prevention of secondary complications etc.*
1. How do you envisage the roll out into practice?
* *E.g. all staff training to use the technology solution or a subset of a staffing group?*
* *Trial basis with evaluation and further developments*
1. Have you considered what cost impact will be of your proposed solution?
* *Reduced length of stay*
* *Reduced number of Antibiotic courses over 1 year*
* *Reduced length of outpatient appointment time*
* *Reduced number of additional tests to complete and thus the cost saving of not having to complete them.*
1. Please complete this PICO table to demonstrate measuring the effectiveness of the technology solution proposed

|  |  |  |  |
| --- | --- | --- | --- |
| Patient/Population group | Intervention | Comparator | Outcome |
| *Example: CF Adults with haemoptysis- registry data shows approx. 40% population per year* | *AI algorithms to visualise site of bleed leading to embolization treatment.*  | *CF Adults with conventional imaging and Rx pathways.* | *Frequency of haemoptysis post intervention. No. of Complications**Number of haemoptysis episodes year before embolization for both groups*  |
|  |  |  |  |

1. Do you envisage any hazards or risks with the implementation of such technology? Please use the Risk Score matrix below to assign a level to any risk perceived any mitigation actions that could be taken.
* *Risk of lack of clinical engagement- rotational staff*
* *Risk of uptake/use*
* *Technological risks*
* *Financial risks*
* *Methodology risks*

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| --- | --- |
| **Likelihood** | **Consequence** |
| **Insignificant** | **Minor** | **Moderate** | **Major** |
| **Almost Certain** | Medium | High | High | Very High |
| **Likely** | Low | Medium | High | Very High |
| **Possible** | Low | Medium | Medium | High |
| **Unlikely** | Low | Low | Medium | Medium |
| **Rare** | Low | Low | Low | Low |

1. What funding is available ?

Please be aware if the solution is created and implemented it will be the responsibility of the clinical team to audit and review any new patient or workflow pathways.

References:

*Please list any reference you have used in the answers provided above.*