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PRESS STATEMENT: For Immediate Release

Innovation in Patient Care: Children's Acute Transport Service Trials Digital Pens to Improve Information Flow

Digital Pens are being trialed by the medical teams of the Children's Acute Transport Service (CATS) based at Great Ormond Street Hospital for Children NHS Trust with the aim of improving information flows during the transportation of critically ill children from local hospitals to specialist paediatric intensive care units.

What is a Digital Pen? A revolutionary electronic pen that looks and works just like an ordinary ballpoint, but captures handwriting and drawings from paper forms and notes which can then be transmitted instantly via a mobile phone. The system provides the user with an exact electronic image of their handwriting and the form it was written on. It also translates handwriting to text which can then be used for back office processing.

The objectives of the research, conducted as part of City University London's GHandI project, are to improve the sharing of complex medical information between the local hospital, the receiving intensive care unit and CATS staff. This is achieved by a unique combination of the digital pen technology with customised displays at the intensive care unit and CATS office. The research is being undertaken as part of the GHandI project's work on clinical handover and is funded by the Engineering and Physical Sciences Research Council.

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According to Stephanie Wilson, Senior Lecturer at the Centre for Human Computer Interaction Design at City University London, “We wanted to evaluate the digital pen because it is easy and natural to use whilst at the same time enabling data to be transmitted instantly and securely from the ambulance or hospital via a mobile phone. During the transportation process, information about the patient’s condition and the progress of the transfer can be seamlessly distributed to all the relevant parties, including the receiving intensive care unit who can then prepare more effectively for the arrival of the patient. Our objectives in this programme are to evaluate both the usability of the technology and the impact of real time information sharing on the work of the medical team.”

Dr P Ramnarayan, Consultant at the Children’s Acute Transport Service adds; “We transport more than 1000 sick children each year to intensive care units in London and the South-East. In each case, vital clinical information needs to be shared instantly between several geographically separated medical teams, something that has been difficult to achieve with our current practice of using paper forms for documentation. The digital pen is appealing because information collected as part of our normal process can now be converted to electronic form and shared with all caregivers instantly, allowing them to track the progress of the patient and plan for the patient’s care in advance of their arrival to the intensive care unit. We are delighted to work with City University London as a pilot site to test this innovative research technology”.

The digital pen technology including pens, digital forms and forms processing applications are being provided by Digital Field Solutions. “We’re delighted to have the opportunity to support such an important project which has the potential to enhance the care of critically ill children.” said Tim Howard, Founding Director.

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Notes to Editors

City University London – Centre For Human Computer Interaction Design

The Centre for Human Computer Interaction Design is a research-focused department dedicated to undertaking world-class research into the design and use of interactive technologies in wide-ranging domains. GHandl is a three year research project investigating clinical handover, funded by the Engineering and Physical Sciences Research Council (grant no. EP/D078636/1).

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CATS

The Children's Acute Transport Service (CATS) is a specialised NHS service designed to make intensive care rapidly available to critically ill children in the North Thames and East Anglia region. CATS is the largest dedicated children's intensive care transport team in the UK, and stabilise and safely transfer more than 1000 sick babies and children each year to intensive care units in London and the South East. The service is based at Great Ormond Street Hospital for Children NHS Trust in London.

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Digital Field Solutions.

Digital Field Solutions are specialists in creating integrated Digital Pen & Paper solutions – providing affordable and secure data capture for a wide range of business applications across broad spectrum of industries including financial services, healthcare, manufacturing, utilities and research.

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