hospedia

The Economic and Wider Benefits of ExtraMed InPatient Flow Manager from Hospedia

This White Paper draws on the substantive analysis, performed by Deloitte, of the ExtraMed Hospedia InPatient Flow Manager service, alongside recent industry commentary, to assist hospitals in creating an evidence base and business case for using the service to improve patient care while supporting Cost Improvement Programmes (CIPs)

Contents

Executive Summary 2

Introducing the Need for InPatient Flow Management 2

The Quantitative Benefits of InPatient Flow Management 4

The Qualitative Benefits of InPatient Flow Management 5

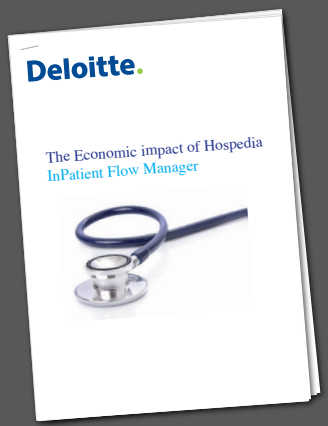
How InPatient Flow Management Works 7

Implementation - Process and Support from Hospedia 8

How InPatient Flow Management is Being Used Today 9

Conclusion 11

Based on economic assessment by



Executive Summary

The growing pressures on the NHS Acute sector to reduce costs while improving patient care indicate a serious need for Trusts to identify efficiencies to current processes and utilise existing resources to deliver on their Cost Improvement Programmes.

Investing in ExtraMed InPatient Flow Manager from Hospedia has been validated by Deloitte to deliver financial benefits in excess of £4.5m per annum in a typical hospital, supporting not only cost improvement goals but also patient experience and care quality improvements, and NHS initiatives such as the drive to become paperless.

This paper draws on substantive analysis performed by Deloitte, as well as recent industry commentary, to provide an independent evidence base for the use of ExtraMed[3] InPatient Flow Manager from Hospedia in your hospital.

Introducing the Need for InPatient Flow Management

The scale of the current NHS reform combined with the financial situation and unprecedented productivity targets[1], means that now is the time to consider how existing infrastructure and integrated IT services can be leveraged to support increased efficiency and improved patient services while driving through Cost Improvement Programmes (CIPs). Monitor guidance suggests that "the majority [of CIPs] should be based on changes to current processes, rather than 'top-slicing' current budgets.[2]" Therefore key hospital processes are the ideal avenue to deliver significant savings and efficiencies for the most impact.

IT solutions can deliver significant benefits to patients and clinicians, from improvements in patient wellbeing to streamlined workflows. Frequently, however, these benefits go unrealised, ultimately resulting in clinical staff duplicating effort and working inefficiently.

Many acute hospitals in the UK manage patient flow through phone and paper based processes. ExtraMed InPatient Flow Manager (IPFM) is a software-based system that supports clinical best practice through electronic whiteboards and desktop applications, monitoring patient flow and bed availability in real time. By integrating with existing IT systems, such as the hospital Patient Administration System (PAS), the system records and tracks the status of each patient, sharing this data in real time between departments, clinical staff and administrative functions.

In the interests of reducing bureaucracy and improving efficiency, a key priority identified by the government suggests that the use of electronic systems to keep and share patient information will make things more efficient, reduce the chance of mistakes that might compromise patient safety and make it easier for health and social care services to work together.[3]

IPFM saves time and improves accuracy; optimising patient journeys, delivering significant savings, and improving patient experience through the electronic collection and delivery of patient information. Going digital can deliver significant benefits to both patients and hospital staff, from clinicians using patient data on the ward to hospital management optimising operational performance.

---

[1] Source: NHS Operating Framework
[2] http://www.midstaffspublicinquiry.com/report
[3] https://www.gov.uk/government/policies/making-the-nhs-more-efficient-and-less-bureaucratic

©Hospedia Ltd 2014

Establishing the business case for electronic patient flow and bed management systems, alongside credible ROI calculations, can be an issue in the strategic decision making process for NHS Acute Trusts. We are therefore delighted to be able to provide independently produced business case support for IPFM, detailing not only the estimated financial savings but also the indirect benefits to patients and staff, based on a number of case studies produced by Deloitte detailing the quantitative and qualitative benefits arising from Hospedia's products and services.

Using Treasury Green Book Methodology, including in person interviews and deriving calculations from real world examples, Deloitte evaluated the economic impact of using Hospedia's IPFM service to provide patient flow improvements in the hospital.



Figure 1: Methodology Diagram[4]

[4] Source: Deloitte Report "The Economic benefits of Hospedia. Supporting hospitals and patients"

©Hospedia Ltd 2014

The Quantitative Benefits of InPatient Flow Manager

"IPFM is estimated to support in delivering benefits of £4.5m per annum, and wider benefits to patients of £864k per annum."[5]

Significant efficiency savings can be realised by hospitals through improving the productivity of ward processes. By eliminating the manual processes associated with communicating information gathered during clinical rounds, IPFM saves valuable time. Patient information is input directly into an electronic system, saving 1,000 clinical hours per annum[7].

Benefits	Hospitals p.a	Patients p.a. (QALY)
Clinical time saving	£170k	-
Reduced length of stay	£4.3m	-
Reduced isolation costs	£28k	-
Preventing hospital infection	-	£840k
Support during an infection outbreak	-	£24k
Total benefits	**£4.5m**	**£864k**

Timely admission and discharge planning is a key method of reducing patient length of stay. IPFM provides patient, bed and ward information, in real time, driving a reduction in the average length of stay by 13%[8]. Over the number of patients flowing through a typical hospital, this equates to a cost saving of £4.3m per annum[9].

IPFM can also generate savings through reducing infection rates by providing improved infection tracking abilities and reducing patient exposure through length of stay reductions. IPFM enables hospitals to trace patients and potential points of contact with infection quickly, reducing the time between infection outbreak and effective isolation being implemented. The benefit of reduced infection rates through IPFM is equal to 42 QALYs (quality adjusted life years[10]), translating to a value of £864k per annum to patients.

[5] Source: Deloitte Report "The Economic impact of Hospedia. InPatient Flow Manager"
[6] Source: Deloitte analysis
[7] Source: Deloitte Report "The Economic impact of Hospedia. InPatient Flow Manager"
[8] Source: Deloitte Report "The Economic impact of Hospedia. InPatient Flow Manager"
[9] Based on the number of patients expected to flow through a 500 bed hospital and an average bed day cost of £225
[10] QALYs provide a monetary value for calculating health outcome improvements

©Hospedia Ltd 2014

The Qualitative Benefits of InPatient Flow Manager

> "IPFM helps hospitals to improve patient experience and collect real time data supporting government initiatives."[11]

Replacing manually updated ward whiteboards with an electronic system designed to optimise patient journeys can provide benefits far in excess of the pure financial gains delivered by IPFM, contributing to patient experience improvements and supporting hospitals in achieving government priorities.

Patient Experience

Length of stay is a significant factor in overall patient experience. At the most basic level, through reducing length of stay, IPFM helps to improve patient experience, thereby releasing income from the CQUIN payment framework targeting improved patient experience[12].

Government Initiatives

IPFM is an ideal tool to track and record the assessments required for each patient, and uses visual displays and alerts to encourage assessment compliance and clinical accountability. In this way, IPFM supports the CQUIN initiatives focused on incentivising patient safety assessments.

IN 2012/13 the CQUIN scheme allowed for commissioners to provide a 2.5% uplift on contracted revenue, equal to around £5m[13], to reward hospitals for achieving certain targets. IPFM provides support in achieving a number of these targets, including the VTE risk assessment and the NHS Safety Thermometer. Part of the second incentive focuses on the consistent collection of data, a feature wholly supported by IPFM.

> "Flow is not about the what of clinical care decisions, but about the how, where, when and who of care provision... [which] can have as significant an impact on the quality of care as the actual clinical care received."[14]

Care Quality

Managing the flow of patients effectively, with accurate and up to date patient information alongside bed location data, helps to ensure that the right clinical and specialist teams can provide care at the right time and in the right place, contributing to the overall delivery of high quality care.

---

[11] Source: Deloitte Report "The Economic Impact of Hospedia. InPatient Flow Manager"
[12] http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/documents/digitalasset/dh_4118689.pdf
[13] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/146715/dh_133859.pdf
[14] Source: The Health Foundation White Paper "Improving Patient Flow" Apr 2013

©Hospedia Ltd 2014

At the point of care

A key feature of the Government's Information Strategy is the principle of recording information once, at first contact with professional staff, sharing that information securely and enabling data to flow between systems.[15] IPFM can interface with Hospedia's existing bedside software, providing a method of data capture at the point of care, allowing information to be recorded once and shared securely with the electronic patient record and other hospital IT systems.

The bedside method of accessing the IPFM system is flexible and easy to use, helping to promote adoption and demonstrating the value of patient flow management to front-line staff.

Enhanced Information and Operational Insights

The patient data collected by IPFM can be used for the purpose of gaining operational insight and optimising hospital processes. Where ward blockages occur, the causes and contributing factors can be investigated, providing information that enables improvements in future processes.

Users have also identified that IPFM provides an audit trail that can offer evidence when resolving challenges over clinical practice.[16]

> "In a nutshell [IPFM] provides strategic and operational clarity with regard to patient flow and departmental activity."
>
> John Goodenough – Deputy Director of Nursing – East Lancashire Hospitals NHS Trust

[15] http://informationstrategy.dh.gov.uk/about/main-ambitions/

[16] Source: Deloitte Report "The Economic Impact of Hospedia. InPatient Flow Manager"

©Hospedia Ltd 2014

How InPatient Flow Manager Works

IPFM replaces standard ward whiteboards with an integrated digital screens where staff can update and share information about patient locations, needs, referrals and discharge status, view information in a variety of formats and follow patient journeys in real time, at a glance. A whole hospital system allows managers to visualise hospital capacity, blockages and patient flow, as it happens. Customised views for each ward show nurses, matrons and ward managers which patient is allocated to which bed, listing patients by consultant, operational team or non-clinical departments depending on the needs of the ward.

The interactive screen displays not only the patient status but also allows users to view bed status information, including single-sex status, cleaning requirements and isolation details. Admissions, discharge and bed transfers are all handled by the system, immediately showing where a receiving ward has availability without the need to track down beds manually.

Fully customisable handover notes integrate with information in the ward whiteboards, ensuring that information captured at the start of the patient journey is available throughout their stay, annotated with new and updated information in real-time. IPFM provides bi-directional integration with existing clinical systems, such as PAS, order comms and infection control, supporting HL7 among many healthcare standards. Clinical coding functionality allows Trusts to save money through accurately integrating ICD10 and OPCS4 codes directly in the solution. GP letters can be sent directly through the solution, either within a specific module or via email, allowing Trusts to hit targets affecting this area of communication. The solution also integrates seamlessly with the Hospedia Patient Centred Care Platform, putting its powerful capabilities right at the point of care, and is complemented by Hospedia's bespoke smartphone application, "Mobile Medic".

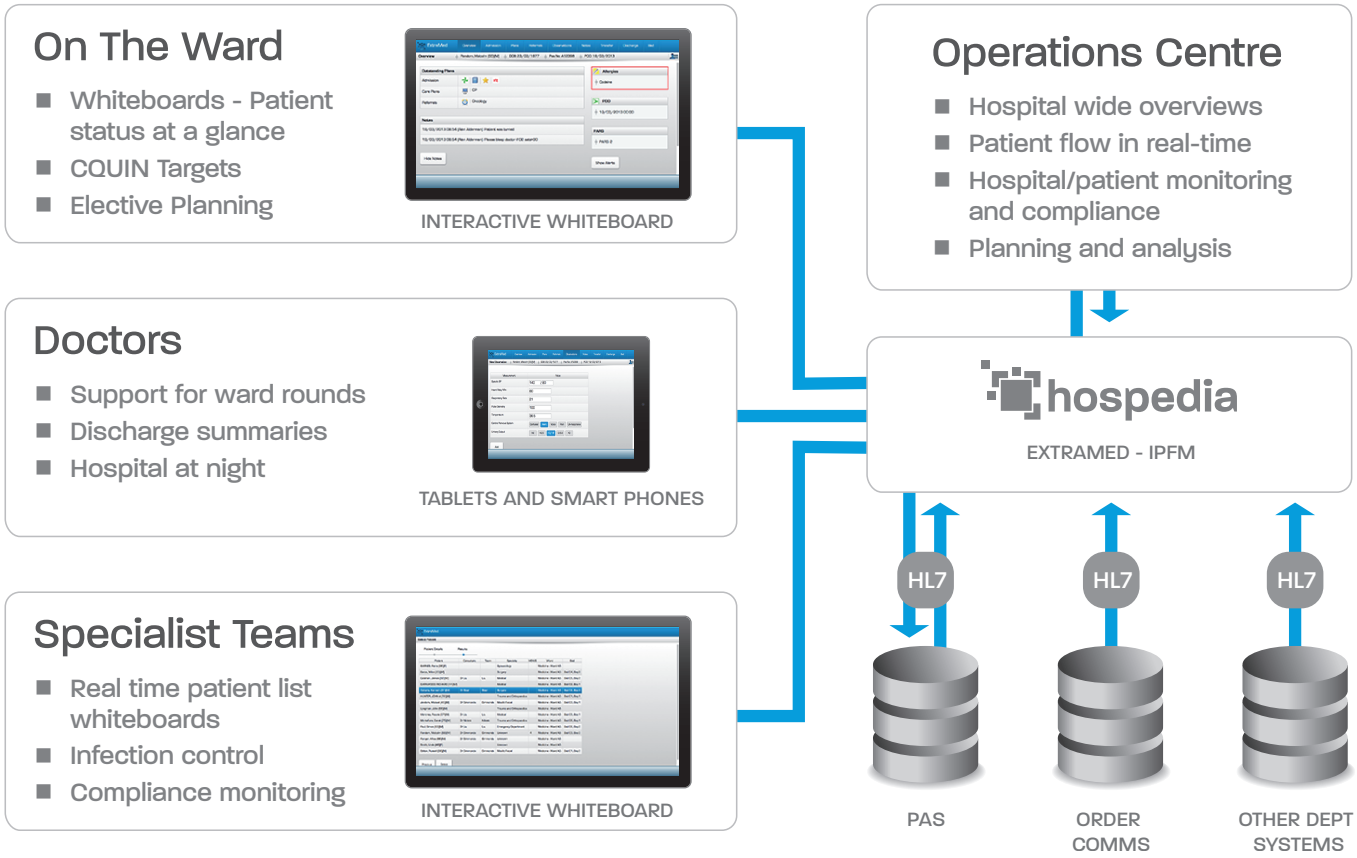


Figure 3: Connectivity Diagram[17]

[17] Source: Hospedia

©Hospedia Ltd 2014

Implementation - Process and Support from Hospedia

Hospedia have a dedicated team with experience of successfully and rapidly rolling out patient flow solutions to more than 20 hospitals and service providers across the NHS.

Working to PRINCE2 and observing best practice in risk management, Hospedia ensure that hospitals get an effective patient flow solution up and running quickly - making a positive impact on patient flow from day one, with screens that are intuitive for clinical staff and managers.

Our consultative approach during project initiation allows the project team to identify and focus on the key areas of strategic importance to the Trust and translate these requirements into practical improvements on the ground. Close collaboration with operational staff ensures that the deployment phase is rapid and effective with clear goal setting and staged delivery.

With the solution installed we continue to work with the Trust to make sure that the system becomes embedded in operational processes and remains relevant to managers and front line staff in a changing NHS. Regular update meetings with the Trust and the availability of upgrade assurance means that IPFM remains current with the Trust and NHS requirements.

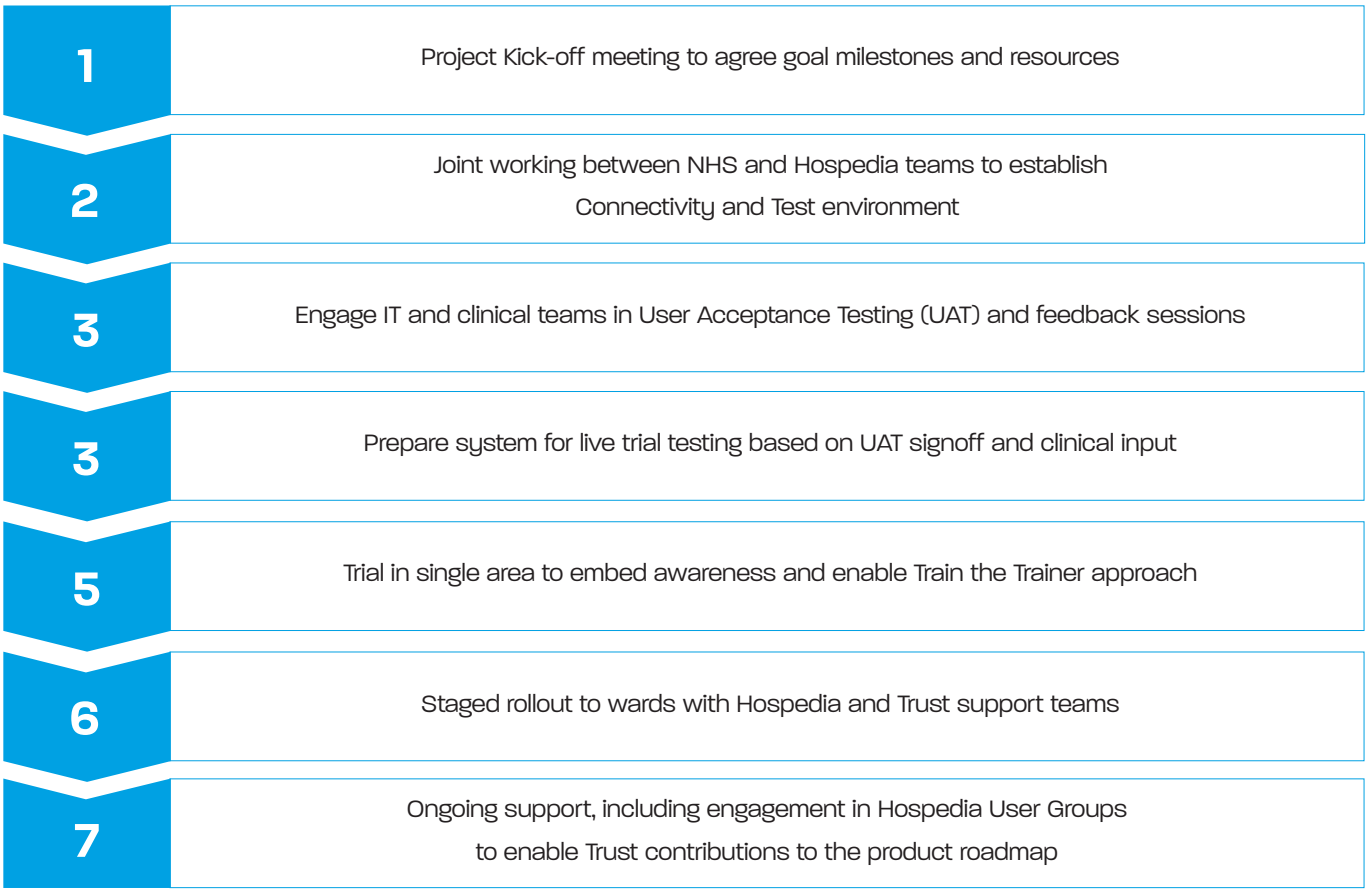


Figure 4: Implementation Process[18]

[18] Source: Hospedia

©Hospedia Ltd 2014

How InPatient Flow Manager is Being Used Today

Hospedia's ExtraMed IPFM solution is in use across the NHS, supporting thousands of users in over 20 hospitals, 24 hours a day. The system has such a wide range of of features; it supports hospitals in achieving different aims. Just a few of the myriad ways in which Trusts are using the system are detailed below.

East Lancashire Hospitals NHS Trust

East Lancashire NHS Trust has used IPFM for over 5 years to manage patient flow across 1,000 beds in 5 hospitals in the Trust. The system is deeply embedded in the Trust's processes and has become one of the first ports of call for adaptation to new NHS challenges.

In 2013 the Trust decided to utilise IPFM to support the new CQUIN targets for Dementia Assessments. The three parts of the CQUIN, identifying patients with dementia, assessing patients with dementia and referring patients for further support, are all supported by IPFM. The system also provides accurate and auditable data to verify the Trust's performance.

Within 2 months of beginning to use IPFM, the Trust had completely transformed their performance, consistently over-achieving against the 90% compliance required for each of the three stages of the target, necessary to release the CQUIN funding associated with the improvement of dementia assessments.

> "[Hospedia have] gone to extreme lengths to tailor the system to meet our needs as an organisation... In a nutshell, it provides strategic and operational clarity with regard to patient flow and departmental activity."
>
> John Goodenough – Deputy Director of Nursing, East Lancashire Hospitals NHS Trust

Luton NHS Foundation Trust

During the winter of 2012/13 Luton NHS Foundation Trust remained consistently among the top 5 performing Trusts in England against the A&E 4 Hour Wait target. While the hard work and dedication of the front line staff at Luton & Dunstable were the key drivers in this achievement, Hospedia are proud that the IPFM system played a key part in optimising the transfer to In-Patient wards.

The clear visibility of patient requirements, and transparency around Trust performance and capacity, displayed in IPFM allows quick and effective decision making to be shared throughout the front line staff – maximising efficiency, costs and improving overall patient satisfaction.

©Hospedia Ltd 2014

Derby Hospitals NHS Foundation Trust

With a commitment to making winter performance the Trust's number one priority, Derby Hospital used InPatient Flow Manager to improve their management of patient flow during the challenging winter months. The IPFM solution allowed the hospital to replace standard whiteboards with integrated digital screens that would ensure up to date information would be available across the hospital and out into community teams.

The Trust had a short timescale in which to implement and embed the solution, as well as a need to integrate with both McKesson and Lorenzo PAS systems, and working closely with Hospedia were able to engage over 600 users within the first 4 weeks.

Average length of stay across the medical inpatient wards reduced through the winter following implementation of the ExtraMed solution, representing a change in trend that the Trust had not previously seen. The Trust also saw a turnaround in the 4 hour A&E standard, achieving required performance levels in quarters 2, 3 and 4, as well as the year as a whole, demonstrating a positive trend even through a traditionally challenging time of year.

East Cheshire NHS Trust

Having used the system since 2007, East Cheshire NHS Trust have used IPFM to roll out improvements across the Trust, providing a wide and varied range of services beyond patient flow management.

Improving patient experience is a key component of the Trust's use of IPFM, with the most recent feature being designed specifically to improve patient care across departments. The feature identifies when patients on a specialist care register attend the hospital for any other reason, and alerts their primary Consultant. If an Oncology patient attends A&E, for example, their Oncologist will be alerted by the system, via text, email or whiteboards, improving the management of patients with long-term conditions and prioritising continuity of care.

These are just a handful of examples of how the system is being used to support hospitals in making efficiencies, improving patient experience and supporting CIPs. In addition to its primary function as a patient flow management tool, IPFM is also being used as part of workflows focusing on Medications Reconciliation, Single Sex Occupancy and VTE assessments, among many other key NHS initiatives.

> "In terms of managing patient flow, implementing IPFM whiteboards is the best thing we've done in years."
>
> Christine Scott – Operational Lead Nurse, East Cheshire NHS Trust

©Hospedia Ltd 2014

Conclusion

Generating direct cost savings of over £4.5m per annum, with additional patient benefits equating to £864k per annum and wider benefits extending beyond that, IPFM puts intuitive and productive control at the heart of the hospital, supporting front line staff in day to day activities while improving overall clinical workflows and bed management.

IPFM helps protect patients, not only by identifying infection control risks and reducing length of stay, but also through improved processes leading to timely discharges. The Health Foundation identified issues that hospitals can face with multiple points in the patient journey where patients can "get stuck" and miss the opportunity for discharge.

> "Especially for older people, this could be associated with deterioration and further necessary days or weeks in hospital.[19]"

IPFM allows hospitals to identify blockages and support improvements to patient flow. Consistently achieving operational performance standards requires hospitals to have an underlying patient flow process that supports front line staff in the drive to deliver the best patient care with the resources available.

Alongside IPFM, Hospedia also offers Patient Flow Consultancy. Using a model of care devised by Clinical Consultants, in conjunction with Hospedia's experience as the leading provider of patient flow software in the NHS, the consultancy programme helps hospitals to understand how best practice and excellence have been achieved in hospitals throughout the NHS and how that can be applied to their own unique environment

It is clear from the case studies and reports produced by Deloitte, as well as the NHS priorities identified throughout this paper, that IPFM is a powerful tool that delivers not only significant financial benefits but also provides improvements in patient experience, patient safety and staff workflows. By utilising the power of IT systems hospitals can save money, improve patient care and release staff time.

With the Health Secretary's aim of bringing the NHS paperless by 2018[20], digitising existing processes will be decisive in the success of hospitals reaching this achievement. IPFM provides a clinically advantageous approach to paperless processes, electronically sharing the information staff need, where and when they need it.

[19] Source: The Health foundation white Paper "Improving Patient Flow" APR 2013

[20] http://www.ehi.co.uk/news/ehi/8315/hunt-wants-paperless-nhs-in-five-years

©Hospedia Ltd 2014

About Hospedia

Hospedia is the world's leading provider of point of care systems in healthcare. Hospedia's Patient Centred Care Platform provides patient media, patient engagement and clinical workflow solutions that support hospitals, staff, patients and visitors worldwide, through powerful software, hardware and integration capabilities. The Platform delivers a range of services that make a real difference to patient care while providing clinical efficiencies and substantial financial benefits.

If this white paper has been of interest, and you would like more information about how the solution can be implemented to support your hospital priorities, please contact our team of experts. This paper summarises the case studies produced by Deloitte; our team can provide the full cases and work with you to help build a business case for individual circumstances, formulate an implementation plan that works around operational requirements and assess how to tailor the service to your specific needs.
info@hospedia.com

©Hospedia Ltd 2014