



Improving care, information sharing and professional supervision and support through electronic record keeping: An economic assessment of electronic record keeping in NHS Ayrshire and Arran

This briefing presents an economic assessment of an electronic *Child Assessment and Plan* template developed by NHS Ayrshire and Arran, which could avoid costs of between £59,800 and £88,700 per annum. Using electronic records allows information to be shared amongst multi-agency professionals working with children and supports the provision of safe, efficient, effective and person-centred care.

Understanding the service

NHS Ayrshire & Arran Early Years, Children and Families Community Nursing Service provides a health care prevention and early intervention service which is child outcome focused. This aligns with national policy to improve outcomes and wellbeing for all children in Scotland (Getting it Right for Every Child (GIRFEC), 2006). The nursing teams consist predominately of Health Visitors and School Nurses. They are led by Clinical Team Leaders who work within community localities in partnership with NHS colleagues and three Local Authority partners. Realising the GIRFEC vision is a multi-agency endeavour.

Communication and information sharing between health visitors and nurses caring for children and families is of fundamental importance. It ensures person-centred care that is consistent, continuous and safe. Record keeping is an integral part of nursing practice and nurses are required to meet professional standards of record keeping (Nursing and Midwifery Council, 2010). When families receive care from a range of professionals within different teams or agencies, the challenges of timely and effective communication and information sharing are exacerbated.

The innovation: electronic child health records

An Ayrshire-wide audit of paper record keeping identified a number of improvements needed in core record keeping standards. This included legibility of entries and recording of time and date. To facilitate communication and information sharing, and to address some of the deficits in record keeping standards, NHS Ayrshire and Arran developed an electronic Child Health Record. This was based on the GIRFEC practice model and the West of Scotland Child Health Record.

The electronic Child Health Record provides a framework for Health Visitors and School Nurses to record appropriate assessment information. Other NHS Ayrshire & Arran services, including Community Paediatric Nursing staff, Child and Adolescent Mental Health Services, Dental services and the Vulnerable Children's Health Team, also have access or record information on the electronic system.

The electronic Child Health Record is accessible to Accident and Emergency department staff and Paediatric inpatient ward nurses within Ayrshire. Improved access to information supports clinical decision making, particularly within the out of hours period. In addition the record can be accessed by the Child Protection Health Team and by Nurse Managers enabling more timely provision of clinical supervision and support. Access to an individual child's record is limited to those professionals involved in the care of that child. This is overseen by a governance group and electronic records are subject to regular scrutiny to ensure they are only accessed appropriately.

In addition to working closely with Health Professionals, Health Visitors and School Nurses work closely with colleagues in social work and education across three local authority areas, to provide multi agency support to children and families where needs are identified. This requires assessment information to be shared with the local authority agencies within education and social work. To ensure information shared is proportionate and to avoid duplication for nurses, a document known as the Child's Assessment and Plan was created which allows information already recorded within the Child's electronic record to be edited into a format suitable for sharing with local authority colleagues. Clinical Team Leaders currently review the quality of assessments and plans carried out by health visitors and school nurses before they are shared with Local Authority colleagues by email or by post.

The project was designed as an interim solution that could then feed into wider work being planned for an Ayrshire-wide electronic record system where information can be uploaded directly by Health Visitors, School Nurses, and Education and Social Work staff into a single child's folder.

Key costs of this innovation

The cost of developing the Child's Assessment and Plan to enable information sharing was valued as **£ 6,262.06**. This included:

Reviewing existing documentation: 1 x Band 7 (3 hours) @ £23.37 per hour = £70.11

Ensuring and testing new assessment is in required format: 1 x Band 6 (8 hours) @ £19.52 per hour = £156.16

Staff awareness and training for 111 Health Visitors and School Nurses (Band 6) provided by Clinical Team Leaders (Band 7): 111 x Band 6 @£19.52 per hour = £2,166.72 ; 111 x Band 7 @ £23.37 per hour = £2,594.07

The completion of multiagency assessments is an integral part of routine nursing care, so this innovation did not incur direct running costs.

Key benefits of this innovation

Electronic recording supports the provision of safe, efficient, effective person-centred care.

Benefits for children and families using our service

Children and families working with a number of health professionals within the same organisation often have to repeatedly "tell their story" to each member of

staff. Recording information from different services within a single system reduces the need for children and families to repeat this information to those involved in their care.

Children and families benefit from staff being aware of factors that may influence their treatment approach and care delivery. For example, this could include their previous history within services and outcomes from previous episodes. In addition, seamless sharing of information with partner agencies for multiagency child care supports vulnerable children. Professionals will have improved access to information such as the chronology of significant events within their life and the immediate management of vulnerable children attending Accident and Emergency and Paediatric inpatient wards. Families will also benefit from more timely responses to enquiries and complaints, as managers can access information regarding care online.

Benefits to the healthcare system:

Reducing duplication and sharing information, saves nursing staff time. There are also economic benefits of Clinical Team Leaders and Service Managers having access to information. The total **avoided costs are estimated between £59,819.15 and £88,723.55 per annum**. This is calculated as follows:

Time saved recording information electronically is 58 minutes per assessment. 1x Health Visitor or School Nurse Band 6 x 58 minutes = cost avoidance of **£18.87 per assessment**.

Health Visitors and School Nurses in 2011 carried out on average 10.7 multiagency partnership forum assessments per annum (sample: one local authority). For 111 Band 6 staff across the county, the cost avoidance is 111 x (£18.87 x 10.7) = **up to £22,412 per year**.

Demand is estimated to grow to staff providing 40 assessments or reports per annum. The cost avoidance would be 111 x (£18.87 x 40) = **up to £83,782.80 per year**.

There is a risk with any IT system of operator error or system failure. Worst case scenario, the time saved per assessment would be 38 minutes, not 58 minutes. 1 x Band 6 x 38 minutes = cost avoidance of **£12.36 per assessment and up to £54,878.40 per annum** across the service.

Clinical Team Leaders and staff members do not need to meet face to face to discuss cases. Average travel distance is 12.36 miles. 593.84 supervision assessments. 12.36 miles x 20.12p mileage x 593.84 supervision assessments = **£1,472.75 travel costs avoided**

Avoided 15 minutes of travel time per review meeting: 15 minutes of time @Band 7 costs = £5.84. £5.84 x supervision assessments = **£3,468 estimated staff time costs avoided**

The introduction of electronic child health records has led to automatic compliance with a number of core record keeping standards. Access to these records has also

enabled Clinical Team Leaders and Service Managers to use them for audit purposes without disruption to patient care activities through the removal of records from clinical areas. This reduces the risk of personal records being lost in transfer and any ensuing financial penalties incurred¹.

Benefits to the wider health and social care system:

Following the development of the Child's Assessment and Plan, a multiagency electronic information system known as *AYRshare* has been developed in conjunction with local authority partners. This system allows the Child's Assessment and Plan document to be shared directly from the electronic nursing record with local authority agencies. This enables efficient, effective and secure sharing of information when multi-agency intervention is required to address concerns about the well-being of children. It supports the sharing of concerns across agencies and reduces the time and effort required for assessment and action planning. This supports the use of GIRFEC principles in practice. It is recommended that work continues in this area, with learning shared across all Health Board and Local authority areas.

Using electronic records significantly reduces the risk of losing information and reduces the delay in important information being received, compared to paper records. However as very few Health Boards across Scotland have a complete electronic child's record, these risks remain when a child moves outwith Ayrshire. It is therefore recommended that a national electronic nursing recording system is developed to support the care of children and young people across Scotland.

Background to this economic assessment:

During 2012/13, the Office for Public Management and the Royal College of Nursing delivered a collaborative learning programme designed to empower nurses to understand, generate and use economic evidence to continuously transform care. The programme, funded by the Burdett Trust for Nursing, will engage up to 60 nurses across Scotland, Wales and Northern Ireland.

The author of this report, Jayne Miller, is an Assistant Clinical Nurse Manager in the Early Years, Children and Families Community Nursing Service, NHS Ayrshire & Arran. She qualified as a Registered Nurse in 1986 and worked as a Staff Nurse in both acute and community settings prior to undertaking Health Visitor training in 1996/97. On completion of training, Jayne worked as a Health Visitor in Ayrshire before taking up a management position within the Service, where she continues to work. Directors of Nursing are making an important contribution, by supporting nurses' participation and managing organisational agreements to share the learning. The programme partners would like to thank NHS Ayrshire & Arran for their support of Jayne.

¹ Financial penalties may be incurred from the Information Commissioner when information is lost. This may be up to £500,000 (ICO, 2011). Further examples are available on the Information Commissioners website <http://www.ico.gov.uk/enforcement/fines.aspx>