Stre@mline: integrating patient care and safety

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Stre@mline –innovative information technology
to integrate Patient Safety and efficient Health Service delivery

- Stre@mline is an exciting, innovative, integrated patient-centred health management informatics system. It follows the patient journey through the health care process providing valuable support for health workers including a range of important patient safety features facilitating safe prescribing and reducing the risk of medical errors and adverse events e.g. alerting staff to patient allergies, supporting triage to avoid delay in treatment of seriously ill patients, identifying patients who pose an infection risk to others etc. Kisiizi is the lead hospital in Uganda for the World Health Organization (WHO) Africa Partnerships for Patient Safety (APPS) and this experience informs Stre@mline development.

- Stre@mline collects 100% prospective data with clinician input significantly improving accuracy of data. This provides a superior evidence base for epidemiological studies of disease trends to facilitate appropriate targeting of resources by institutions and Ministry of Health.

- Stre@mline prompts staff to stimulate good care and will also facilitate communication with patients by producing summary print-outs in the local language or English as required.

- Stre@mline will integrate the administration of a Health Insurance Scheme, improving efficiency and reducing costs allowing more members of the community to benefit. The Kisiizi Health Insurance Scheme is the oldest and largest in Uganda with over 36,000 members and impacts health in hard-to-reach poor communities allowing them affordable access to quality healthcare.

- Kisiizi Hospital is currently piloting Stre@mline in Out-Patients and will expand this to include In-Patient discharge summaries, operating theatre records etc. in the next few months. This will be followed by a trial in another hospital and publication of the outcomes. The goal is a high quality affordable programme that will support clinicians especially in resource-poor situations.

- Stre@mline incorporates a range of functionality including on-going evidence-based training of clinical staff with links to relevant resources, financial monitoring of patient payments and expenses, inventory control of medicines and powerful audit and monitoring tools.

- Stre@mline is designed to be extremely easy to customize and update for use in individual units.

Stre@mline HISTORICAL BACKGROUND:

Stre@mline was first developed from 1996 onwards by Dr. Ian Spillman, Consultant Paediatrician, for use in a UK paediatric in-patient department where it is still in constant use and has proved a valuable resource. *(see example publication from 2001)*

It is now being developed by a multi-disciplinary team including software engineers and led by a Clinician to cover all clinical specialties serving out-patients and those admitted.

Stre@mline TECHNICAL:

Stre@mline was originally written using Microsoft Access but the new version piloting in Kisiizi uses a SQL database and browser front-end. This means the system will work on almost all computers and reduces the cost of introducing it to a healthcare institution. The design utilizes underlying tables that facilitate easy customization by the healthcare institution and users. It incorporates different levels of access to different users for security purposes, again this is very easy to customize.

Computer and information

G119 **STRE@MLINE >> A CHILD-CENTRED WARD COMPUTER PROGRAMME INTEGRATING SERVICE AND TRAINING**

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Aims: To improve quality of care of In-Patients and training of Staff, enhancing safety and communication.

Methods: Stre@mLine is written in Microsoft Access 97 combining a database of admissions with real-time Clinical Governance prompts. It is very flexible allowing easy update of warnings and other data.

Results: Stre@mLine produces:
- A safe take-home prescription
- An immediate Discharge letter facilitating communication with other health professionals within both hospital and Community
- A summary for Parents explaining diagnosis, medication and follow-up in lay terms. This can be translated automatically for families whose first language is not English [two languages currently].
- On-screen prompts and warnings for staff directly related to the diagnosis and medication of the child. Lessons from risk management can be incorporated.
- 100% prospective collection of audit data with immediate reports or statistics
- Pharmacy monitoring of drug errors to allow targeted feedback
- Journal References linked to each diagnosis
- Anonymous Education / Training Portfolio sheet for staff to add learning points
- Record of previous admissions [valuable when notes unavailable]
- On-screen reference centiles for weight and body mass index
- List of children on the Hospital-at-home scheme, Open Access and In-Patients.

Conclusions: We have received encouraging feedback from parents, GPs, Community health council and defence organisations. Stre@mLine represents real-time Clinical governance in practice, particularly valuable for new Staff and integrates training with everyday clinical work.

Stre@mline is designed to reside on a local server and does not require internet for functionality other than for some reference links. This again reduces costs to users and improves reliability in those rural locations where internet connectivity is challenging at times.

(See screenshot of demonstration patient screen)

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