Improving Outcomes at the point of care is a critical challenge for healthcare. Combining post acute processes and technology to provide a foundation for care provider collaboration via a common approach to secured electronic healthcare records is critical to the future success of the healthcare systems.

The following whitepaper has been developed to highlight innovative solutions and mobile technology that brings additional resources to the fingertips of nurses and homecare professionals at the frontline to support their clinical decision-making and contribute to improved client outcomes. With day to day changing patient needs, there is increasing evidence that mobile technology and applications will transform the industry and facilitate faster and better communications, as well as rapidly providing integrated outcome data to the front line field staff.
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Improving Care Team Efficiency with Electronic Clinical Documentation

Technology is shaping every aspect of our lives today. And home health care is inevitably being transformed through technology. Nursing workflow has changed each time new technologies have been introduced; sometimes for better, sometimes for worse. Standard Nursing process have been established as a modified scientific method and applied in nursing practice for over a half of a century. Nursing documentation is inseparable from nursing practice; it is a medium used to record the care provided by nursing process and keep track of changes over time.

There are many reasons that nurses document care:

- communicating and providing continuity of care
- accountability
- enable quality improvement and risk management
- facilitate evidence-based best practice
- legal and professional practice requirements

The requirements and standards for nursing documentation are have been established by professional nursing practice bodies like the CNO [1], ANA, Joint Commission [2] etc. Nursing documentations standards demand that the documentation should enable:

1. **Communication**
   
   *Nurses ensure that documentation presents an accurate, clear and comprehensive picture of the client’s needs, the nurse’s interventions and the client’s outcomes.*

2. **Accountability**
   
   *Nurses are accountable for ensuring their documentation of client care is accurate, timely and complete.*

3. **Security**
   
   *Nurses safeguard client health information by maintaining confidentiality and acting in accordance with information retention and destruction policies and procedures that are consistent with the standard(s) and legislation.[1]
The Tools are Shaping Nursing Documentation Workflow

Paper-based World
The process of nursing documentation has been affected over the time by changes in the documentation tools. These changes have also affected home care nursing workflow. With paper-based processes the documentation workflow is: work > chart > work > chart, which is in accordance with nursing standards by “documenting in a timely manner and completing documentation during, or as soon as possible after, the care or event”.

Computers introduced to Health Care
The introduction of computers as documentation tools changed the workflow significantly: work, work, work > chart at the end of your shift. This change was due to the fact that the workstations were either on a fixed spot away from patient bedside, or if they were portable, they were too clunky and perceived as a physical obstacle during providing care. On the plus side, computerization provided better access to documentation and better readability; on the negative side, the accuracy decreased because documentation was frequently not done at the Point of Care, or soon after the care, but at the end of the day.

Nursing documentation standard requiring timely documentation, ideally at the POC, was based on numerous studies that demonstrate that the recall accuracy decreases over time, thus diminishing the reliability of documentation [4]. With introduction of computers as documentation tool, the accuracy of information decreased, while access to information and communication within the care team improved.

Today the World is Going Mobile
The introduction of mobile devices as documentation tools has the possibility to provide the advantages of accessibility and readability of information as well as the capability to capture the information at the POC. Current mobile devices are lightweight, powerful and readily accepted by patients. The process can now go back to effectively completed at the point of care.

Interestingly, by the time mobile devices arrived, nurses who have integrated computerized documentation into the workflow, and are used to the workflow of charting at the end of day, see documenting at POC as an obstacle between the client and worker in the process of providing care.

With the introduction of mobile POC devices, documentation previously completed at the end of the day, can now be completed immediately while delivering care.
Problems with documenting “the old way”

- Recall accuracy diminishes over time.
- The HCW performs the capture twice, once on paper, and second time transcribing to electronic form, thus duplicating the paper-work.
- Incomplete documentation is one of the most frequent reasons for service payment delays. If information is missing on the paper document, it will either be completed with recalled information, or the completion would have to be delayed until the next visit to client. Either the accuracy or the timeliness will suffer.
- When incomplete documentation is submitted to the office, it is not detected until the review by administrative staff or care manager; then, they will have to contact the front line staff and request amendments - the timeliness will be affected. If there is no review, the information is submitted incomplete to payer and the payment is refused. The resubmissions and appeals process will increase administration costs.
- There are cases when it is not the nurse who does the transcription from paper record to electronic form but administrative staff. Needless to say, their clinical knowledge is not comparable to nurse’s level of knowledge, thus this process might introduce new errors or leave existing errors undetected; if there is any missing information, they have to cycle back to the source person and time is wasted.
- If the healthcare worker has a challenging decision to make, there are no available tools to consult additional sources of information. A consult call will solve some problems, provided that knowledgeable staff are available for consultation at the time of call. If not, the decision has to be delayed, potentially negatively affecting the outcomes.

Mobile Devices enable Real-time Clinical Documentation

- Staff are able to verify any information or doubts on the spot with the client present.
- Information is entered once.
- Electronic documentation tools enforce required information and provide feedback ensuring the record is complete and avoid incomplete documentation and resubmission to funders.
- Accuracy of the information is increased by providing only valid selection options. This reduces the amount of rejected submissions due to incorrect information.
- Adequate tools to search pre-verified information to consult at the POC.
Applications can have the capability to notify when a document is due and thus improve timelines.

The following graph highlights the thoroughness of data that is entered into an electronic format based on the time duration highlighting that documentation is in the 93% accuracy range if entered immediately. The accuracy range diminishes to 62% four hours post the assessment/conversation with a client/patient.

Graph author: Michael McGowan [3]

Communication

- Electronic documentation is uploaded to an Electronic Health Record (EHR) server as soon as it is completed and becomes immediately available to other staff caring for the client. If there is information that raises flags, the care coordinator can be informed and react immediately, not at the end of the day, or worse, until after the weekly documentation submission.
- Having faster response time to predetermined situations avoids complications that increase cost of care and negatively affect outcomes.
- The team members can see in near real time what has already been done thus avoid the duplication of work.
- The application can track the notifications and the state the documentation is in (initiated, %completed, complete) ensuring all team members have a complete view of the client health condition allowing them to take timely actions, without having to make additional inquiries.
- By improving the readability, completeness and timelines of documentation, all the team members have access to better quality information that enables them to make better decisions.
Having the information in EHR reduces errors resulting from incomprehensible documentation or delayed information exchange.

Accountability

Nurses are accountable for ensuring their documentation of client care is accurate, timely and complete.

- Accurate information captured at point of care.
- Review and manage their daily workload, quickly and accurately capture treatment data, progress notes and all other aspects of clinical charting information, without the burden of jotting notes and re-inputting "when they have time".
- Smart electronic documentation that "pre-populates" known Client information and will save data input time and reduce the likely hood of input error.
- Need to have complete client information records and documentation at their fingertips so they are equipped to make decisions and offer better care service.
- They need tools to track and communicate issues with colleagues and specialists, such as wound assessment and medication dispensing, to improve quality and speed of care delivery.

Security

Personal Health Information (PHI) is more easily secured than paper documentation. PHIPA and HIPPA regulatory environments are promoting consent-based access to PHI while protecting patient privacy.

- Paper documentation, with only opening a lost/stolen briefcase the documents became available. Electronic documentation, properly secured by password access and encryption, it is much more work to access and not available to average thief. The electronic mobile device can be wiped remotely, thus none of the information would be available.
- Using role based access; only the relevant information is displayed to any given HCW, according to access level. This is much harder to implement in paper world, all the documentation in client’s home is viewable by any family member/visitor or HCW, even if it is not relevant to their work.
- Provides secure communications and support for security authorizations managed in an auditable method with appropriate policies around any security or privacy breach.
Electronic Clinical Documentation is Worth It!

For home health care nursing, Point of Care electronic clinical documentation with mobile devices can increase the timeliness and accuracy of clinical documentation.

Most documentation systems provide a central repository to share information with the care team enabling collaboration, continuity of care and improved decision support.

Look at reducing or eliminating rejected and delayed funder payments due to inaccurate or incomplete documentation. Plus, eliminate the cost of printing, faxing, paper storage and archiving?

Yet, in the end, the most important return is in the quality of care for our patients. Electronic clinical documentation enables evidence-based informed care that focuses on improving patient outcomes. Our clinical goals in home healthcare remain improving health outcomes and reducing re-hospitalization. You can ask your funder how much that will save by avoiding unnecessary care.

References:

2. Joint Commission Nursing Documentation Standards
4. To Err is Human, IOM - [http://www.nap.edu/openbook.php?record_id=9728]

About CellTrak Technologies:

Founded in 2006, CellTrak Technologies, Inc. is the leading provider of integrated mobile solutions for the home healthcare, hospice, and private duty markets. Our patented software-as-a-service solutions run on GPS-enabled mobile devices via a homecare technology platform which automates clinical workflow and reduces cost. Data is transmitted wirelessly to an internet site making the data available real time and secure instantaneous integration is provided to the back-end clinical systems and the payer networks. Home Healthcare Workers across Canada, the United States and the United Kingdom have delivered millions of successful visits via CellTrak. For more information please visit: [www.celltrak.com](http://www.celltrak.com)