

Stages of Clinical Transformation for Ambulatory Clinics/Physician Offices

- **Stage "Zero"**
 - Paper charts are the only means of storing and accessing clinical information (even if there is a computerized billing system).
 - Web browsers are not routinely used for any clinical purposes.
 - Physician notes still handwritten.

- **Indicators of Stage One**
 - Web browser on physician and/or nurse desktops for access to online reference material, eligibility information, lab results, etc.
 - Permanent electronic storage of chart notes after transcription, but notes are only free text. Accessible from multiple computers via local area network.
 - Electronic messaging for informal, unstructured intra-office communication.

- **Indicators of Stage Two**
 - Computers may be at point-of-care but use is partial or optional.
 - Physicians are generating an electronic problem list.
 - Electronically assisted ordering of tests and referrals (but no closed-loop tracking yet).
 - Beginnings of a clinical data repository -- ability to search for patients with particular diagnosis or particular medication.
 - Electronic messaging is increasingly relied upon for clinical collaboration.
 - Email interactions with consults and patients.

- **Indicators of Stage Three**
 - Computers have replaced the paper chart, and may be used at the point-of-care (or may be documented at clinical workstations).
 - Basic medication management - electronic prescribing, maintaining medication lists, refill tracking, with basic drug/drug interactions.
 - Basic clinical decision support for medication interactions, medication allergies used before patient leaves the office.
 - Electronic import and storage of lab results in structured form.
 - Capture of some structured data from within encounters -- vital signs, immunizations, etc.
 - Secure electronic messaging is the standard means of intra-office clinical collaboration.
 - Connectivity to hospitals for electronic receipt of discharge summaries and transmission of admission documents (side by side workstations may accomplish this without true integration with hospital systems).
 - Reminders for required testing (e.g. colonoscopy or mammogram – personal information reminders).

➤ **Indicators of Stage Four**

- Advanced clinical decision support -- protocols, preventive care reminders based on diagnoses, medications, results, orders.
- Population-based quality measurement.
- Secure messaging and online consultations between physician and patient.
- Maintenance of an online personal health record for patients.
- Multiple payer eligibility, claims status inquiry and referral information messaging transactions between physician and payer.
- Structured messaging between physician, physician staff and payers for automation of disease management cases & communication and reminders to support clinical guidelines.
- Integrated hospital information exchange (one workstation can access clinic and hospital data seamlessly).
- Reporting that meets pay for performance reporting.

➤ **Indicators of Stage Five**

- Proactive and automated outreach to patients for preventive care and chronic disease management
- Proactive searching for patients with particular conditions and medications as new clinical evidence (includes recalls) develops.
- Interconnected regional/community of physicians, hospitals, lab companies, health plans, pharmaceutical industry, imaging companies and patients to easily share and exchange information and collaborate for improved patient care.
- Ability to mine data for clinical research.