What is electronic prescribing? It is the computer-to-computer transfer of prescription data between pharmacies, prescribers, and payers. It is not the use of an email or a facsimile transaction. Electronic prescribing functions include messages regarding new prescriptions, prescription changes, refill requests, prescription fill status notification, prescription cancellation, and medication history.

Who is involved in electronic prescribing? Prescribers – individual practitioners, clinics, hospitals, provider associations; facilities; pharmacies; software vendors; trade and professional associations; labs and ancillary services; state and federal governments, standards development organizations, terminology and code set organizations; health plans, payers and processors.

The Institute of Medicine recommends that all prescribers and pharmacies use electronic prescribing by 2010.¹

<table>
<thead>
<tr>
<th>Why is electronic prescribing important</th>
<th>If I’m a prescriber?</th>
<th>If I’m an EMR vendor?</th>
<th>If I’m a trade or professional association?</th>
<th>If I’m a pharmacy?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compliance with regulatory requirements</td>
<td>Regulatory requirements of customers</td>
<td>Support for members</td>
<td>Compliance with regulatory requirements</td>
<td></td>
</tr>
<tr>
<td>Supports efforts to improve the standard of care</td>
<td>Industry movement</td>
<td></td>
<td>Supports efforts to improve the standard of care</td>
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<tr>
<td>Will increase administrative efficiency</td>
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<tr>
<td>Provides a service to patients</td>
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<tr>
<td>Is safe and secure</td>
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<td>Is safe and secure</td>
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<tr>
<td>Is allowed in all 50 states</td>
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<td>Is allowed in all 50 states</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>What do I need to begin electronic prescribing</th>
<th>If I’m a prescriber?</th>
<th>If I’m an EMR vendor?</th>
<th>If I’m a trade or professional association?</th>
<th>If I’m a pharmacy?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select an electronic prescribing, Electronic Health Record (EHR) or Electronic Medical Record (EMR) vendor (if you don’t have one)</td>
<td>Contact NCPDP for transaction standards</td>
<td>Consider development of electronic prescribing awareness information</td>
<td>Contact NCPDP for transaction standards</td>
<td></td>
</tr>
<tr>
<td>Contact your vendor and request electronic prescribing functions</td>
<td>Certify with appropriate network business partners</td>
<td></td>
<td>Certify with appropriate network business partners</td>
<td></td>
</tr>
<tr>
<td>Consider development of electronic prescribing awareness information</td>
<td>Contact Certification Commission for Healthcare Information Technology (CCHIT) (<a href="http://www.cchit.org">www.cchit.org</a>) for certification requirements.</td>
<td></td>
<td>Consider development of electronic prescribing awareness information</td>
<td></td>
</tr>
<tr>
<td>See Meaningful Use information at <a href="http://www.cms.gov/EHRIncentivePrograms/30_Meaningful_Use.asp">http://www.cms.gov/EHRIncentivePrograms/30_Meaningful_Use.asp</a></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

¹ The Institute of Medicine Reports in 1999 and 2001, “To Err is Human” [http://www.iom.edu/?id=12735](http://www.iom.edu/?id=12735) and “Crossing the Quality Chasm” [http://www.iom.edu/CMS/8089.aspx](http://www.iom.edu/CMS/8089.aspx).
Electronic prescribing standards

NCPDP SCRIPT Standard:
The NCPDP SCRIPT Standard was first published in 1997 and has been updated at least annually based on the business needs identified by the industry. SCRIPT is a standard created to facilitate the transfer of prescription data between pharmacies, prescribers, intermediaries, facilities, and payers. Within SCRIPT, basic business operations such as the communication of prescription information between prescriber and pharmacy and medication history information between entities can all be handled electronically (computer to computer).

The SCRIPT Standard supports transactions for new prescriptions, prescription changes, refill requests, prescription fill status notification, prescription cancellation, medication history, transactions for long term care environments, and prior authorization exchanges. Enhancements have been added for Drug Use/Utilization Review (DUR) alerts, standardized sig (instructions), allergies, structured diagnosis information, clinical exchanges, and the use of RxNorm for standardized medication nomenclature. Enhancements for the future include more robust clinical values exchanges and prescription transfers.

The ability to include the Sig (prescription instructions) in a structured and codified way is available in SCRIPT version 1.0.4 and above. More robust enhancements to structured sig were added in SCRIPT version 2.013.011. In 2013 WG11 Implementation of Structured and Codified Sig Task Group was created to provide guidance for implementers of SCRIPT version 1.0.6 structured sig.

In 2013, NCPDP published the SCRIPT version 2.013.071 with electronic prior authorization business functions. The industry is requesting SCRIPT version 2.0131.01 be named in the appropriate regulations for prior authorization use between the prescriber and the payer for the pharmacy benefit.

Future enhancements to SCRIPT include pharmacy to pharmacy prescription transfer transactions and more robust fill status notification exchanges.

<table>
<thead>
<tr>
<th>PHARMACY</th>
<th>PRESCRIBER</th>
<th>Entities</th>
</tr>
</thead>
<tbody>
<tr>
<td>The pharmacy typically will:</td>
<td>The prescriber typically will:</td>
<td>typically will:</td>
</tr>
<tr>
<td>• initiate a request for a refill</td>
<td>• initiate a request for a new prescription</td>
<td>pharmacy, prescriber, intermediary, payer/processor/health plan</td>
</tr>
<tr>
<td>• initiate a request for a change to a new prescription</td>
<td>• initiate a response to a refill request from a pharmacy</td>
<td>• request medication history request from another entity</td>
</tr>
<tr>
<td>• initiate a request for a password change</td>
<td>• initiate a response to a prescription change request</td>
<td>• provide medication history</td>
</tr>
<tr>
<td>• initiate a notification of a dispensed, not dispensed, or partially dispensed prescription</td>
<td>• initiate a request for a password change</td>
<td>intermediary, payer/processor/health plan</td>
</tr>
</tbody>
</table>

Where can I get more information on electronic prescribing
http://www.cms.gov/EHRIncentivePrograms/30_Meaningful_Use.asp
http://www.cms.hhs.gov/EHealthRecords/
http://www.ehealthinitiative.org/
http://www.surescripts.com/
http://www.nationalerx.com/
http://www.thecimm.org/faq.htm
- initiate a response to a cancel prescription request
- initiate a request for a medication history to a prescriber
- initiate a request for a medication history to a payer or other entity
- initiate a request for a new prescription
- initiate a request for a medication history to a pharmacy
- notify the pharmacy about census events (acting as a facility in a long term care environment)
- modify the prescription order and notify the pharmacy (in long term care environments)
- send a refill request from a facility to a pharmacy
- notify an entity of a medication event for a medication dispensed and administered
- notify an entity of a sample medication
- notify a pharmacy or other entity of drug administration events such as suspending administration
- initiate a response to a new prescription request
- initiate a request for information required to submit a prior authorization request
- initiate a request for a prior authorization
- initiate a request for an appeal of a prior authorization response
- initiate a request to cancel a prior authorization request
- respond to an initiation request with information required to submit a prior authorization request
- respond to a prior authorization request
- respond to a prior authorization appeal request with information required to submit a prior authorization appeal
- respond to a prior authorization appeal request
- respond to a prior authorization cancellation request

Intermediaries/Switches/Clearinghouses/Aggregators are entities that accept an electronic transaction from another organization and electronically routes the transaction to a receiving entity.

**NCPDP Formulary and Benefit Standard:**
The NCPDP Formulary and Benefit Standard provides patient benefits information to physicians at the point of care. The goal is to enable the physician to consider the following kinds of information during the prescribing process, so that he/she could make the most appropriate drug choice for the patient. Formulary and benefits data can consist of the following types: Formulary Status, Payer-specified Alternatives, Coverage Information, Copay Information, and Drug Classifications. Lastly, a Cross-Reference may be used to tie the different types of information to a particular benefit plan or group.

- Information about which drugs are considered to be "on formulary," and alternative medications for those drugs not on formulary.
- Limitations that may impact whether the patient’s benefit will cover a drug being considered (such as age limits, gender limits, step therapy rules, benefit-specific coverage exclusions, etc.)
- The cost to the patient for one drug option versus another.

**ASC X12N 270/271:**
ASC X12N 270 Health Care Eligibility/Benefit Inquiry and ASC X12N 271 Health Care Eligibility/Benefit Response used for a prescriber system to request eligibility information about a patient, in this case, specifically for pharmacy benefit eligibility information. This standard is maintained by the Accredited Standards Organization (ASC) X12. [www.x12.org](http://www.x12.org).

**Continuity of Care Record (CCD):**
The HL7 Continuity of Care Document (CCD) Component describes the document content that summarizes a consumer’s registration/medication information. See HL7 Implementation Guide: CDA Release 2 - Continuity of Care Document (CCD), April 01, 2007. [www.hl7.org](http://www.hl7.org) The ability to include a clinical information attachment has been added in SCRIPT and the Specialized Standard.

**National Provider ID (NPI):**
and the Medicare Prescriptions Drug Program (Version 8.1); Final Rule2. In this rule, the NPI is adopted for electronic prescribing to identify an individual health care provider to Medicare Part D sponsors, prescribers and dispensers, in electronically transmitted prescriptions or prescription-related materials for Medicare Part D covered drugs for Medicare Part D eligible individuals. It is important to note that the NPI is used to identify the individual prescriber and dispenser in the electronic prescription process. The NPI was not created to be used for routing of transactions.

The electronic prescribing standards are not HIPAA covered transactions and as such are not required to use the NPI. Entities covered by the Medicare Modernization Act are required to comply with the MMA, including the NPI usage. The Department of Health and Human Services published September 5, 2012 a final rule federal regulation for the use of NPI in HIPAA transactions. See http://www.gpo.gov/fdsys/pkg/FR-2012-09-05/pdf/2012-21238.pdf

DEA ISSUES RULE ON ePRESCRIBING
Electronic prescribing of controlled substance prescriptions is actively being implemented, with almost all states with updated regulations. See http://www.ncpdp.org/Resources/ePrescribing under Federal Regulations and Information banner.

STANDARDS VERSIONS SUPPORTED
See http://www.ncpdp.org/Resources/ePrescribing-Regulatory-Timeline

Medicare Improvements for Patients and Providers Act of 2008 (MIPPA) – Eprescribing Incentive Program Information is available at http://www.cms.gov/ERxIncentive/

NCPDP Work Underway
Task Groups are open to any interested party (NCPDP member or non-member) who is willing to participate and work
• Collaborative, focused, problem solving activities
• Work done via conference calls, email

To see the list of Task Groups - http://www.ncpdp.org/Standards/Standards-Info - lower left Task Group Listing

Specialized Standard Implementation
The NCPDP Specialized Standard Implementation Guide is also an XML-based set of transactions for the following functions:
• Census Functions
• Medication Therapy Management Functions
• Query Functions
• Central Fill Functions

The pharmacy typically will:
• Respond to a request for census events
• initiate a request for clinical information
• initiate a response for clinical information

The prescriber typically will:
• notify a pharmacy or other entity of drug administration events such as suspending administration
• initiate a request for clinical information
• initiate a response for clinical information

Entities (pharmacy, prescriber, intermediary, payer/health plan) typically will:

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2 The rule was published in the Federal Register on April 7, 2008
- initiate a request by the facility in a long term care environment to notify the pharmacy about census events
- initiate a request for clinical information
- initiate a response for clinical information
- initiate a request for central fill fulfillment
- initiate a response for central fill fulfillment

**History of NCPDP**

NCPDP, located in Scottsdale, AZ, is a not-for-profit ANSI-accredited Standards Development Organization consisting of over 1,600 members who represent chain and independent pharmacies, consulting companies and pharmacists, database management organizations, federal and state agencies, health insurers, health maintenance organizations, mail service pharmacy companies, pharmaceutical manufacturers, pharmaceutical services administration organizations, prescription service organizations, pharmacy benefit management companies, professional and trade associations, telecommunication and systems vendors, wholesale drug distributors, and other parties interested in electronic standardization within the pharmacy services sector of the health care industry.

NCPDP Standards have been instrumental in enhancing the technical connectivity of the health care industry; from pharmacy claims submission to electronic prescribing. These Standards have been named in various state and federal laws and regulations including HIPAA and MMA. Developed by NCPDP members to address business needs, the existing standards are continually evolving and new standards are created as needed to support new business requirements.

**Case Studies of Interest/Articles of Interest**

CDN E-prescribing Pilot Project

http://www.eclinician.org/ePrescribing/

National E-prescribing Patient Safety Initiative

http://www.nationalerx.com/

**References**

Surescripts National Progress Report on E-prescribing

http://www.surescripts.net/e-prescribing-statistics.html

Emdeon electronic prescribing

http://www.emdeon.com/eprescribing/