Index

A
Access to care, 76, 163-164
Access to information, 125-127, 130-132, 207-211
Access to records, 115
Administrative activities, 83
    providers, 83-84
    providers and payers, 84-87
Administrative simplification, 31-32, 80-83
Advanced Research Projects Agency, 170
Agency for Health Care Policy and Research, 72, 73, 127, 129, 131, 154, 157, 188, 203
AHICPR. See Agency for Health Care Policy and Research
AHSC. See American Hospital Supply Corp.
AITN. See Arizona-International Telemedicine Network
AMA. See American Medical Association
American Hospital Supply Corp., 93
American Medical Association, 155, 156, 157
American Self-Help Clearinghouse, 25
American Society for Testing and Materials, 68, 138
American Telemedicine Association, 179, 187
Analytic Systems Automated Purchasing, 93
ANSI, 68
ANSI X12, 69
Arizona-International Telemedicine Network, 173
ARPA. See Advanced Research Projects Agency
Artificial neural networks, 51-52
ASAP. See Analytic Systems Automated Purchasing
ASTM. See American Society for Testing and Materials
Australia, telemedicine, 176-177
Authentication, 116
Automated data collection, 46, 50-51

B
Brigham and Women’s Hospital, 46

C
Canada, telemedicine, 176
CancerNet, 131
Cards, 55, 99-100
CBA. See cost-benefit analysis
CDC. See Centers for Disease Control and Prevention
CD-ROMs, 131
CEA. See cost-effectiveness analysis
Centers for Disease Control and Prevention, 73, 103
CHESS. See Comprehensive Health Enhancement Support System
CHI. See Consumer health informatics
CHIN. See Community Health Information Network
CHMIS. See Community Health Management Information System
Claims inquiry, 87
Claims services, 91
Claims submission, 86
Client-server architecture, 66-67
Clinical decision support, 52-54, 124-142, 197-200
    applications of, 197-200
    effectiveness and safety, 138-140, 153-155
    evaluation, 140-142
    information content, 136-138
    standards, 136-138, 155-158
    technology development, 135-136
Clinical information systems, 35-38
Clinical literature, 126
Clinical practice guidelines, 127-129
Clinical practice improvement, 134
Clinical protocols, 127-129, 133-134
Clinical research, 126
Clinical Telemedicine Cooperative Group, 179, 181, 203
Cochrane Collaboration, 131
Communications primer, 63-65
Community Health Information Network, 16, 63, 95-96, 108-109
D

Databases, 42
Data distillation, 49-54
Data security, 115-118, 183
Data sets, maximum, 120
Decision support system. See Clinical decision support
Demand management system, 24, 65
DEMPAQ. See Developing and Evaluating Methods to Promote Ambulatory Care Quality
Department of Commerce, 203-204
Department of Defense, 188, 189, 204
Department of Health and Human Services, 9, 121, 159, 183, 202-203
Department of Veterans Affairs, 179, 188, 190, 205
Developing and Evaluating Methods to Promote Ambulatory Care Quality, 145, 154
DHHS. See Department of Health and Human Services
DICOM, 58
Direct data entry, 87
Dxplain, 139

E

East Carolina University School of Medicine, 170-171, 174
EDI. See Electronic data interchange
EDI standards. See Standards
EFT. See Electronic funds transfer
Electronic commerce, 79, 82
Electronic data interchange, 81-83, 87-95, 103-122
cost savings, 104-109
system costs, 103
Electronic funds transfer, 92
Electronic health information sources, 207-211
Electronic house call, 168, 173-175
Electronic order entry, 93
Electronic publishing, 132
Electronic signatures, 114
Eligibility, 87
Encounter reports, 87
Encryption, 116
Enrollment, 87
Enterprise information systems, 35
Enterprise networks, 102-103
EOE. See electronic order entry
Evidence-based medicine, 131
Expert systems, 52-54, 132-133

F

FDA. See Food and Drug Administration
Fee-for-service plan, 81, 143
Financial institutions, 92-93
Food and Drug Administration, 67-68, 76, 141, 154
Forms, standardized, 93

G

General Accounting Office (GAO), 108
Grassroots computer networking, 26-27

H

Handwriting recognition, 46-47
Harvard Community Health Plan, 174
HCFA. See Health Care Financing Administration
Health care expenditures, 5-6
Health Care Financing Administration, 13, 17, 19, 36, 87, 90, 104, 110, 112, 119, 121, 145, 154, 155, 157, 171, 177, 178, 188, 191, 202-203
Health care reform, 6
Healthcare Open Systems and Trials consortium, 72
Health Evaluation through Logical Processing System, 52-54, 133, 137
Health Informatics Standards Planning Panel, 72
Health information, life cycle, 34-42
Health information, regulatory environment for, 112-115, 121
Health information sources, electronic, 207-211
Health maintenance organization, 8, 81
Health Plan Employer Data and Information Set, 145-147, 154
HEDIS. See Health Plan Employer Data and Information Set
HELP system. See Health Evaluation through Logical Processing system
High-Performance Computing and Communications Program, 73, 179, 203
HISPP. See Health Informatics Standards Planning Panel
HL7 standard, 70, 84
HMO. See Health Maintenance Organization
Hospital information systems, 37
HOST. See Healthcare Open Systems and Trials consortium
HPCC. See High-Performance Computing and Communications Program

K
Kansas University Medical Center, 168-170
Knowledge-based systems, 52-54, 132-133

L
LDS Hospital, 129, 133
Legacy systems, 35
Legislative activities, 9-10, 122, 160, 187, 188
Lewin-VHI, 104
Liability, physician, 184
Licensing, physician, 183-184
Little, Arthur D., Inc., 104

M
Managed care, 6, 7, 81, 143
Mayo Clinic, 170
MDIS. See Medical Diagnostic Imaging Support
Medicaid, 8, 87, 154, 155, 177
Medical College of Georgia, 166-168
Medical Diagnostic Imaging Support, 204
Medical informatics, 30
Medical Information Bus, 50-51
Medical logic modules, 137
Medicare, 8, 87, 112, 114, 121, 154, 155, 177
Medicare Transaction System, 110, 112
Meditel, 139
MEDLINE, 130
MIB. See Medical Information Bus
MTS. See Medicare Transaction System

N
NACHA. See National Automated Clearing House Association
NASA. See National Aeronautics and Space Administration
National Aeronautics and Space Administration, 73, 159, 170, 189, 204-205
National Committee for Quality Assurance, 145
National Center for Health Services Research, 153, 154
National Committee on Vital and Health Statistics, 156, 157, 158
National Consortium for Telemedicine Evaluation, 179-180
National Council for Prescription Drug Programs, 69, 76, 95
National Information Infrastructure, 8, 103, 160, 181, 188, 201
National Information Infrastructure Testbed, 188, 189
National Institutes of Health, 73

J
Job roles. See Workforce effects
Joint Commission on Accreditation of Healthcare Organizations (JCAHO), 38, 146, 184
National Library of Medicine, 72, 131, 137, 153, 155, 157, 158, 159, 179, 188, 190, 203
National Networks of Libraries of Medicine, 130
National provider file, 112
National Provider Identifier, 112, 121
National Science Foundation, 73
National Telecommunications and Information Administration, 171, 203-204
National Uniform Billing Committee, 93
NCPDP. See National Council for Prescription Drug Programs
NCQA. See National Committee for Quality Assurance
Networks, 79-122
Neural networks, 51-52
NIH. See National Institutes of Health
NII. See National Information Infrastructure
NLM. See National Library of Medicine
Norway, telemedicine, 176
NPL. See National Provider Identifier
NSF. See National Science Foundation
NUBC. See National Uniform Billing Committee

Office of Rural Health Policy, 171, 172, 179, 188, 190, 202
OncoLink, 63, 131
Optical character recognition (OCR), 42, 46
Order entry, electronic, 93
Oregon ED-NET, 172
Organizational change, 3-4
ORHP. See Office of Rural Health Policy

PACS. See Picture Archiving and Communications Systems
Patient data management systems, 58-60
Patient information, entering and retrieving, 129-132
Patient information, limitations, 124-125
Patient records
computer-based, 41-42
contents, 39
paper-based, 38-41
storage, 41
weaknesses, 40-41
Patients, information for, 208
Pattern recognition, 49-51
PDQ, 131
Pen and quill laws, 4, 43
Performance assessment, 142-152
Performance Indicator Projects. See Report cards
Personal digital assistants, 45
Pharmaceutical benefit managers, 76
Pharmaceutical industry EDI, 94-95
Picture Archiving and Communications Systems, 58, 173, 204
Portable computers, 45
Practice guidelines. See Clinical practice guidelines
Practice management systems, 84
Prisons, telemedicine, 175
Privacy, 17, 114-118, 183
Privacy Act, 117, 118
Professional organizations and journals, 210
Protocols. See Clinical protocols
Provider assessment. See Performance assessment
Providers, access to information, 125-127
Public health networking, 103
Public Health Service, 145
Publication bias, 126

Q
QMR, 139
Quality of care, 18-20, 123-158
Clinical decision support, 124-142
Performance assessment, 142-152

R
REACH-TV, 171
Regenstrief Medical Record System, 36, 133
Regional networking, 95-103
Regulatory environment for health information, 112-115, 121
Reimbursement, telemedicine, 177-178, 191
Remittance advice, 86
Report cards, 144-150
RODEO NET, 171-172
Rural area networks, 181-182
Rural Utilities Service, 188, 203

S
Scope of the study, 10-11
SCORPIO, 130
Security. See Data security
Shared decision support, 24
SNOMED, 72
Software, 67-68
Space Technology Applied to Rural Papago Advanced Health Care, 159, 203, 204
Speech recognition, 46-47
Standards, 13-14, 17, 68-72, 77, 110-111, 136-138, 210
DICOM, 58
EDI, 88-89, 110-111, 119
Forms, 93
HL7, 70, 84
ICD-9-CM, 70, 107, 156, 157
Identifiers, 111-112, 120-121
Messaging, 42, 68-69, 70, 72, 136
of care, 126
STARPAHC. See Space Technology Applied to
Rural Papago Advanced Health Care
Structured data entry, 42
SUPPORT model, 139

T
Tablet computers, 45
Telecommunications and Information Infrastructure
Assistance Program, 203-204
Telemedicine, 20-23, 159-191, 209
Access, 163-164
Applications, 165-177
Costs, 161-163, 180
Development costs/financing, 185
Evaluation, 178, 179
Executive branch activities, 201-207
Government role, 188-191
Home-based, 173-175
Human infrastructure, 186
IITF subgroup on, 160, 189, 190-191, 201
Legal/regulatory, 181, 183-184
Other countries, 176-177
Other sites, 175-176
Potential effects, 160-165
Quality of care, 164-165
Research, 178-179, 190
Technology and implementation, 185-186
Telecommunications infrastructure, 179-180
Teleconsultations, 166-172
Teleradiology and telepathology, 172-173
Telemedicine Information Exchange, 190, 203
Texas Telemedicine Project, 168
Tiber Group, 104
TIE. See Telemedicine Information Exchange
TIIAP. See Telecommunications and Information
Infrastructure Assistance Program
Tri-Service Telemedicine Testbed Project, 204

U
Unified Medical Language System (UMLS), 72,
137, 155, 157
Urban telemedicine, 176
User interfaces, 99, 101

V
Value-added network (VAN), 83, 92

W
Wisconsin Health Information Network (WHIN), 63
Workforce effects, 4, 5
Workgroup for Electronic Data Interchange
(WEDI), 93, 104, 116, 117
World Health Organization (WHO), 157
World Wide Web (WWW), 63, 207