

# Introduction to Health and Medical Sciences (8302- 36 weeks)

Introduction to Health and Medical Sciences  
(8302- 36 weeks) IHMS

- 1 Demonstrate creativity and innovation. IHMS.1
- 2 Demonstrate critical thinking and problem solving. IHMS.2
- 3 Demonstrate initiative and self-direction. IHMS.3
- 4 Demonstrate integrity. IHMS.4
- 5 Demonstrate work ethic. IHMS.5
- 6 Demonstrate conflict-resolution skills. IHMS.6
- 7 Demonstrate listening and speaking skills. IHMS.7
- 8 Demonstrate respect for diversity. IHMS.8
- 9 Demonstrate customer service skills. IHMS.9
- 10 Collaborate with team members. IHMS.10
- 11 Demonstrate big-picture thinking. IHMS.11
- 12 Demonstrate career- and life-management skills. IHMS.12
- 13 Demonstrate continuous learning and adaptability. IHMS.13
- 14 Manage time and resources. IHMS.14
- 15 Demonstrate information-literacy skills. IHMS.15
- 16 Demonstrate an understanding of information security. IHMS.16
- 17 Maintain working knowledge of current information-technology (IT) systems. IHMS.17
- 18 Demonstrate proficiency with technologies, tools, and machines common to a specific occupation. IHMS.18

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- 19 Apply mathematical skills to job-specific tasks.** IHMS.19
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- 20 Demonstrate professionalism.** IHMS.20
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- 21 Demonstrate reading and writing skills.** IHMS.21
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- 22 Demonstrate workplace safety.** IHMS.22
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- 23 Examine aspects of planning within an industry/organization.** IHMS.23
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- 24 Examine aspects of management within an industry/organization.** IHMS.24
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- 25 Examine aspects of financial responsibility within an industry/organization.** IHMS.25
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- 26 Examine technical and production skills required of workers within an industry/organization.** IHMS.26
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- 27 Examine principles of technology that underlie an industry/organization.** IHMS.27
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- 28 Examine labor issues related to an industry/organization.** IHMS.28
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- 29 Examine community issues related to an industry/organization.** IHMS.29
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- 30 Examine health, safety, and environmental issues related to an industry/organization.** IHMS.30
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- 31 Identify the purposes and goals of the student organization.** IHMS.31
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- 32 Explain the benefits and responsibilities of membership in the student organization as a student and in professional/civic organizations as an adult.** IHMS.32
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- 33 Demonstrate leadership skills through participation in student organization activities, such as meetings, programs, and projects.** IHMS.33
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- 34 Identify Internet safety issues and procedures for complying with acceptable use standards.** IHMS.34
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- 35 Identify the types of work-based learning (WBL) opportunities.** IHMS.35
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- 36 Reflect on lessons learned during the WBL experience.** IHMS.36
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- 37 Explore career opportunities related to the WBL experience.** IHMS.37
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- 38 Participate in a WBL experience, when appropriate.** IHMS.38
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- 39 Highlight the major developments of healthcare history.** IHMS.39
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- 40 Differentiate among the types of health insurance.** IHMS.40

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- 41 Differentiate among the types of medical care delivery systems. IHMS.41**
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- 42 Describe the roles of healthcare team members. IHMS.42**
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- 43 Differentiate among the scope and functions of the Virginia Department of Health Professions and the Virginia Department of Health. IHMS.43**
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- 44 Examine the influence of the Internet on the healthcare industry and on the individual consumer. IHMS.44**
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- 45 Identify common medical prefixes, roots, and suffixes and their meanings, and medical terms related to human systems. IHMS.45**
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- 46 Describe how word parts are combined to form medical terms. IHMS.46**
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- 47 Interpret common abbreviations used in the healthcare field. IHMS.47**
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- 48 Define terminology that relates to the various elements and systems of the body. IHMS.48**
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- 49 Identify basic anatomical structure and body cavities. IHMS.49**
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- 50 Identify chemical components of the body. IHMS.50**
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- 51 Identify the structures and functions of the cell. IHMS.51**
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- 52 Identify the structures and functions of tissues. IHMS.52**
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- 53 Identify the structures, functions, and diseases of the integumentary system. IHMS.53**
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- 54 Identify the structures, functions, and diseases of the skeletal system. IHMS.54**
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- 55 Identify the structures, functions, and diseases of the muscular system. IHMS.55**
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- 56 Identify the structures, functions, and diseases of blood. IHMS.56**
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- 57 Identify the structures, functions, and diseases of the heart. IHMS.57**
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- 58 Identify the structures, functions, and diseases of blood vessels and blood circulation. IHMS.58**
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- 59 Identify the structures, functions, and diseases of the lymphatic system. IHMS.59**
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- 60 Explain immunity and its relationship with the lymphatic system. IHMS.60**
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- 61 Identify the structures, functions, and diseases of the respiratory system. IHMS.61**

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- 62 Identify the structures, functions, and diseases of the gastrointestinal system.** IHMS.62
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- 63 Identify the structures, functions, and diseases of the endocrine system.** IHMS.63
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- 64 Identify the structures, functions, and diseases of the reproductive system.** IHMS.64
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- 65 Identify the structures, functions and diseases of the nervous system.** IHMS.65
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- 66 Identify the structures, functions and diseases of the urinary system.** IHMS.66
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- 67 Identify the structures, functions, and diseases of the sensory system.** IHMS.67
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- 68 Describe specimen preparation and handling.** IHMS.68
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- 69 Identify the diagnoses, laboratory tests, and procedures used in the treatment for the diseases/disorders of each body system.** IHMS.69
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- 70 Examine body fluids and cells for bacteria, parasites, and other microorganisms.** IHMS.70
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- 71 Analyze the chemical content of fluids and tissues.** IHMS.71
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- 72 Examine cells to determine the quantity of and/or to look for abnormal cells in blood and other body fluids and tissues.** IHMS.72
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- 73 Assess lab findings, using automated equipment and computerized instruments.** IHMS.73
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- 74 Document the results of laboratory findings.** IHMS.74
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- 75 Report lab results to physicians.** IHMS.75
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- 76 Identify the six essential nutrients, sources, and functions for optimal health and wellness.** IHMS.76
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- 77 Describe the digestion and metabolism of food.** IHMS.77
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- 78 Describe dietary guidelines recommended for health promotion.** IHMS.78
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- 79 Identify the principles of food management and safety.** IHMS.79
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- 80 Explain basic dietary management techniques.** IHMS.80
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- 81 Identify common medical conditions related to poor nutrition.** IHMS.81
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- 82 Identify dietary patterns.** IHMS.82
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- 83 Identify general principles of pharmacology.** IHMS.83

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- 84 Describe sources, types, and uses of common drugs.** IHMS.84
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- 85 Explain the naming processes for drugs.** IHMS.85
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- 86 Explain the importance of pharmacokinetics.** IHMS.86
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- 87 Describe the elements of a prescription.** IHMS.87
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- 88 Explain common abbreviations used on prescriptions.** IHMS.88
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- 89 Calculate doses of medications.** IHMS.89
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- 90 Identify drug administration routes.** IHMS.90
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- 91 Explain the importance of drugs and supplements in preventive medicine.** IHMS.91
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- 92 Explain current state and federal regulations regarding the practice of pharmacy.** IHMS.92
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- 93 Summarize the approaches to health care for a variety of patient categories.** IHMS.93
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- 94 Explain the nature and importance of a medical history.** IHMS.94
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- 95 Examine concepts of care relating to ethnic, religious, cultural, and personal preferences.** IHMS.95
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- 96 Explain the principles of effective communication.** IHMS.96
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- 97 Apply principles of communication in establishing therapeutic relationships.** IHMS.97
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- 98 Explain the concept and importance of the Patient, "Bill of Rights."** IHMS.98
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- 99 Explain the function and importance of advance directives for health care.** IHMS.99
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- 100 Examine the concepts of death and dying.** IHMS.100
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- 101 Explain the concept of integrated and holistic care.** IHMS.101
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- 102 Explain the concept of infection control and asepsis.** IHMS.102
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- 103 Explain the chain of infection.** IHMS.103
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- 104 Demonstrate hand hygiene procedures.** IHMS.104
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- 105 Explain transmission-based precautions.** IHMS.105

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- 106 Demonstrate the use of personal protective equipment (PPE) and safe workplace practices. IHMS.106**
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- 107 Describe policies and procedures for handling and disposing of infectious and/or hazardous materials. IHMS.107**
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- 108 Explain sterile processes. IHMS.108**
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- 109 Identify the importance of the CDC and Occupational Safety and Health Administration (OSHA) guidelines. IHMS.109**
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- 110 Identify emergency protection areas and devices. IHMS.110**
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- 111 Explain methods of fire safety. IHMS.111**
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- 112 Identify environmental hazards. IHMS.112**
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- 113 Describe the principles of body mechanics. IHMS.113**
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- 114 Explain radiographic safety. IHMS.114**
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- 115 Explain the importance of maintaining a safe and clean work environment. IHMS.115**
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- 116 Explain the process and importance of patient identification. IHMS.116**
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- 117 Explain the purpose of medical records. IHMS.117**
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- 118 Identify the components of the electronic medical record (EMR). IHMS.118**
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- 119 Explain basic traumatic and medical emergency procedures. IHMS.119**
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- 120 Identify the essential components of disaster planning. IHMS.120**
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- 121 Identify items found in a basic emergency kit. IHMS.121**
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- 122 Describe the causes, symptoms, and treatments of selected medical emergencies. IHMS.122**
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- 123 Demonstrate CPR with the AED. IHMS.123**
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- 124 Explain the concept of biotechnology. IHMS.124**
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- 125 Identify the effects of innovations in biotechnology. IHMS.125**
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- 126 Describe the effects of biotechnology on preventive health care. IHMS.126**
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- 127 Describe the role biotechnology plays in medical forensics. IHMS.127**
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- 128 Identify professional agencies and organizations in the healthcare field and the roles of each. IHMS.128**

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- 129** Examine the legal issues related to the health and medical science profession. [IHMS.129](#)
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- 130** Explain confidentiality and its connection to HIPAA. [IHMS.130](#)
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- 131** Analyze the role of public health in providing health care. [IHMS.131](#)
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- 132** Conduct a self-assessment to determine career interests in the healthcare field. [IHMS.132](#)
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- 133** Describe the major career fields in health and medical sciences. [IHMS.133](#)
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- 134** Research selected healthcare career(s). [IHMS.134](#)
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- 135** Explain the importance of ongoing professional development and methods of attaining ongoing training in the healthcare industry. [IHMS.135](#)
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- 136** Describe the history and current state of the opioid crisis in the United States. [IHMS.136](#)
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- 137** Describe the history and current state of the opioid crisis in Virginia. [IHMS.137](#)
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- 138** Define the pharmacological components and common uses of opioids. [IHMS.138](#)
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- 139** Examine the science of addiction. [IHMS.139](#)
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- 140** Explain prevention and early intervention strategies. [IHMS.140](#)
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- 141** Identify addiction and its behavioral elements, as defined by the Diagnostic and Statistical Manual of Mental Disorders (DSM-5). [IHMS.141](#)
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- 142** Describe the treatment models of addiction therapy. [IHMS.142](#)
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- 143** Describe the medication management antidote used to prevent fatal opioid overdoses. [IHMS.143](#)
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- 144** Explain the science of physiological and mental pain. [IHMS.144](#)
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- 145** Describe the diagnostic tools used in developing pain management plans. [IHMS.145](#)
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- 146** Describe pain treatment options available to various populations of patients. [IHMS.146](#)
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- 147** Describe the effects of opioid dependency on the human body systems. [IHMS.147](#)
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- 148** Explain the mechanism and physical effects of opioids on the human body. [IHMS.148](#)

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**149** Explain the use of opioids in practice settings, the role of opioids in pain management, and risk factors associated with the use of the medication. IHMS.149

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**150** Describe the withdrawal and tapering side effects of opioid use. IHMS.150

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**151** Describe storage and disposal options for opioids. IHMS.151

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**152** Explain community resources for education about opioid use. IHMS.152

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**153** Describe key communication topics involving opioids for patients. IHMS.153

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**154** Describe communication topics for caregivers and family members. IHMS.154