



Pandemic Influenza Planning Document

Last updated May 22, 2007

Guiding Values and Principles

The following values and principles form the foundation for the assumptions and decisions involved in MSU's influenza pandemic planning, and they will continue to guide the institution through the management of an extended infectious disease emergency:

- *Protection and preservation of human and animal life*
- *Protection and preservation of the ability of the University to continue/resume its core missions*
- *Minimization to the disruption in people's lives that occur with pandemics and treatment of students and employees with concern for the impact such events have on individuals*
- *Open and sustained communication with students, employees, other constituent audiences, and the general public about the university's responses to a pandemic*

"It is not a matter of 'if,' but 'when.'"

Situational Analysis

Speaking at a pandemic influenza planning summit held in California in spring 2006, U.S. Health and Human Services Secretary Mike Leavitt said, "Pandemics happen....They are a biological fact of life." He also observed that they are particularly hard to talk about, because "anything you say in advance of a pandemic feels alarmist, but anything we have done once a pandemic starts seems inadequate."

For the past two years, the Centers for Disease Control (CDC) and the World Health Organization (WHO) have been actively involved in planning for an influenza pandemic. While a flu pandemic is likely and therefore predictable, the timing is not. Most scientists and public health officials believe that the next influenza pandemic will occur within the next two to four years, with the current strain of avian (bird) flu (H5N1) as the most likely—but not only—candidate for triggering the next global pandemic.

Despite widespread efforts to contain avian flu, experts estimate it has resulted in the death or destruction of more than 150 million birds. As of early 2007, it had affected birds in 60 countries and infected 60 species, including scavengers or species that prey on birds.

This strain also is infecting an increasing number of people. As of April, 2007, there were 291 confirmed human cases (172 deaths) reported to the WHO. These cases

have occurred in 12 countries, primarily in Asia and Africa, among people who have close contact with birds and domestic poultry. Although there have been a few isolated cases of suspected transmission of the virus between family members, to date there has been no sustained human-to-human transmission.

Unlike other naturally occurring or human-initiated crises, infectious disease emergencies are neither location specific nor time limited. This makes advance planning more challenging. Until the virus is able to spread easily from person to person, neither the timing nor the severity of a pandemic is predictable.

The impact of a flu pandemic on society also is unknown, but history suggests that it will cause disruption in many sectors of life: closing of schools; disruption of business activities and critical infrastructure services, including transportation, utilities, supply of common goods, and emergency services; and severe overburdening of the health care system.

In a research-extensive university with teaching and research locations throughout the state and beyond, planning for pandemics or other infectious disease emergencies is a particularly daunting, yet obviously essential task. A successful planning process for a complex university recognizes that it is too late to prepare for some potential outcomes if decisions are deferred until after a pandemic begins. Yet we also recognize that advance planning in great detail is impossible because situational variables will define the nature of the emergency we face.

The strategic approach, then, in preparing for pandemic flu in a large research university is to focus first on the issues and questions that require significant advance consideration and to articulate the key assumptions that create the “boundary” within which planning must take shape. With this blueprint in place, more detailed implementation plans may be developed for each critical function of the University to provide a framework into which smaller, situation-specific details can be inserted into the planning process once a pandemic event emerges and becomes more clearly defined.

The overarching goal of planning for extended infectious disease emergencies is to preserve the critical missions of the University, specifically its research, educational, and service priorities; and to diligently protect to the fullest extent possible the students, faculty, and staff who live, work, and learn at the institution.

Planning Process

In August 2006, building on emergency preparedness work done by the Department of Police and Public Safety, President Lou Anna K. Simon, together with Provost Kim A. Wilcox and Vice President Fred Poston, appointed a steering committee to oversee and direct planning for a potential influenza pandemic (See [Attachment A](#)). The steering committee comprises a cross section of campus leaders representing the following areas of the University:

- Undergraduate programs
- Graduate programs
- Academic services
- Research
- Human resources and employee benefits
- Communications
- Operations and finance
- Physical plant
- Housing and foods services
- Information and communications technology
- General counsel
- Police and public safety
- Health and safety

The committee is chaired by the University Physician, the person charged with oversight of health and safety policy for the campus community. In addition to the areas directly represented on the steering committee, a number of other units on campus were involved in the planning process and reported on their efforts to the steering committee. Appendix B provides a membership list for the steering committee, identifies each member's focus in the planning, and lists the other units and groups essential to the planning effort.

Planning Assumptions

For productive planning to occur, the steering committee had to make certain assumptions about the nature of a pandemic flu crisis that would allow some critical decisions to be made in advance of a pandemic. The steering committee adopted a practice of regularly reviewing information and data from established national and international public health and scientific authorities and altering assumptions as the scientific data evolved.

The committee initially planned for the most severe scenario anticipating that we could more readily scale back our planning for a less severe situation than compensate for an underestimation of the impact of a pandemic event.

Listed below are the assumptions adopted in the planning process. The assumptions embedded in the World Health Organization and the Centers for Disease Control scientific literature were most important in framing our work.

General planning assumptions

- A pandemic flu will occur sometime within the next few years.
- The current H5N1 influenza A virus (avian flu), although not the only virus capable of causing a pandemic, is likely to cause the next pandemic.
- Estimates of the duration of an influenza pandemic are from two to 24 months, with the first wave lasting from two to four months and a second wave occurring the following year.

- Two of the three criteria outlined by WHO as necessary for a pandemic to occur already exist. These three criteria are:
 - There is no immunity among the global population for the virus
 - The virus must be able to infect people
 - The virus must be able to spread easily from person to person
 The first two criteria have been met by H5N1. The third has not been met as of the writing of this document.
- The WHO description of phases of alert for global influenza preparedness guided the planning. The U.S. government has similar guides of pandemic staging. ([See Attachment B](#)) During the planning period and as of the writing of this document, we are at stage 3.

PHASES OF ALERT IN THE WHO GLOBAL INFLUENZA PREPAREDNESS PLAN
(NOVEMBER 2005)

Inter-pandemic phase New virus in animals, no human cases	Low risk of human cases	1
	Higher risk of human cases	2
Pandemic alert New virus causes human cases	No or very limited human-to-human transmission	3
	Evidence of increased human-to-human transmission	4
	Evidence of significant human-to-human transmission	5
Pandemic	Efficient and sustained human-to-human transmission	6

- Once a flu virus (H5N1 or another influenza A or B virus) changes genetically so that there is significant person-to-person transmission, WHO stage 4 will have arrived.
- WHO stage 4 is most likely to begin in Asia, but there will probably be widespread global disease within four to six weeks of viral mutation. (This four-to-six-week window allows active implementation of plans to begin, along with the insertion of situation-specific and smaller details into implementation and further response decision-making.
- If H5N1 mutates to spread readily from person to person, the disease may have either a higher or lower mortality rate than it does now (currently, 55-60 percent of all infected people die). If it has a higher mortality rate, a pandemic is less likely because the virus will have difficulty spreading. If the mutated virus has a lower mortality rate, the resulting influenza is more likely to cause a pandemic.
- Because a vaccine to prevent a specific flu strain cannot be developed and produced until the “final form” of the virus is known, most experts predict that there will be little or no vaccine during the first six to eight months of a pandemic. Currently, with current technology, it takes six months to produce a vaccine.
- There will be limited supplies of antiviral medication, which currently is stockpiled by various countries and national and international health agencies.
- In any pandemic, there is likely to be a shortage of health care personnel and resources, such as hospital beds.

- Social distancing and careful preventive measures such as hand washing will be the primary means of protecting healthy people from getting sick. Because of the need for social distancing, it is likely that there will be recommendations or orders to cancel/suspend public events and close K-12 and post secondary schools for instruction for a period of two to four months.
- Both the governor and public health authorities possess the authority to close schools and prohibit large gatherings and events; the Michigan State University President also has the authority to issue directives or executive orders during a campus emergency in order to protect the interests of the University. Such a directive or executive order might include suspending classroom instruction, as well as other large gatherings of people on campus.
- Currently, widespread workplace closure at MSU is not predicted, so long as social distancing measures can protect employees.
- Many experts believe that international borders will not be closed since this strategy was not effective in containing SARS; however, individual countries may still decide to do this. This assumption has implications for study abroad programs and international travelers.
- Best estimates are that 30-35 percent of personnel would not report for work in a serious pandemic due either to personal illness, family illness, dependent care, or personal decisions about risk. Best estimates are that 30-35 percent of people would be infected during a pandemic event.
- If the virus mutates into one that has a lower mortality rate (the 1918 mortality rate was about 2 percent), then a second tier of plans would be needed, with reduced personnel and student attendance being the primary challenges.

Michigan State-specific planning assumptions and decisions

- In the event that the genetic footprint of H5N1 virus changes to allow transmission from person to person (WHO stage 4), MSU will begin preparations for implementation of the institution's pandemic plan. This will likely include cancellation of classroom activities when there are multiple influenza cases within the United States. This response will likely occur four to eight weeks after confirmation of genetic change in the virus.
- All students living on campus will either return home or be directed to alternative appropriate housing if they cannot go home. The Cherry Lane and Spartan Village apartments will remain available to occupants.
- Academic research will continue, if supplies are available; key cultures, plants, and animals will be maintained, as much as possible. Workplace schedules designed to ensure social distancing and minimization of infection risk among coworkers may need to be put into place. Use of masks and gloves for employees will follow public health guidelines. Those students, faculty, and staff who are abroad at the onset of a pandemic will be advised whether staying abroad or returning to the United States is the safest option. This advice is dependent upon the nature of the virus, the proposed route of transportation, individual health status and conditions, and the difficulty of arranging travel across borders. The Office of Study Abroad will manage communication to travelers, with appropriate medical guidance. Currently the Travel Clinic is recommending that travelers to East Asia carry a mask with them in the event that the pandemic stage changes.

- Key research and other support buildings have been identified and prioritized, as buildings that must be maintained, with power, water, and other essential services.
- Some critical employees may choose to live on campus during a pandemic. Current options for this include Kellogg Center, Candlewood Suites, and a designated residence hall.
- It is possible, though not known, that we will be asked to provide both quarantine facilities and an isolation facility during a pandemic. The facility criteria for isolation and quarantine are on file in the Office of University Physician., and buildings that meet these criteria have been identified.

Planning Priority Areas

Given these assumptions, the committee established planning priorities for MSU by considering situations in which lack of advance planning would jeopardize the safety of people and animals more than necessary, compromise the main missions of the University, or place the institution's physical facilities at risk. Advance planning was most important for the following areas:

- Academic continuity—graduate and undergraduate
- Research continuity
- Human resources and benefits
- Communications
- Infrastructure support
 - Housing and food services
 - Physical plant/facilities
 - Technology and communications infrastructure
- Health care personnel/facilities
- Business operations and university services
- Central administration, including operations of the Trustees
- Student issues, including international students
- Travel issues
- Public safety and campus security
- Cancellation of large events
- Off-campus operations (employees located throughout the community and state and often having shared reporting lines)
- Recovery of damages and resumption of operations

Questions Considered

Assuming a pandemic of the severity and magnitude to force a significant reduction of educational operations (either by MSU presidential, public health, or gubernatorial order), the steering committee and other working groups were asked to consider the following questions:

- What are the critical functions within your area that must be maintained to support preservation of human and animal life, institutional infrastructure, and important (nonreplaceable) research and academic missions?

- Who are the employees that support these critical functions, and in the event of significant illness or absence from work, what is the succession or cross-coverage plan for keeping these functions going?
- What are the supply chain issues that need consideration in advance of a prolonged reduction of operations?
- Depending on the time during a semester that a pandemic occurs, what are the arrangements for orderly reduction of academic operations?
- What areas of research have the highest priority and must be preserved? What research might be placed in hibernation? What research could be suspended and then resumed?
- What is the plan for housing both domestic and international students who cannot return home?
- What is the financial impact of a prolonged (two to four months) significant reduction of operations on the institution?
- What are the current contractual arrangements that need consideration in the event of a pandemic?
- What is the leadership chain of command for such an event?
- What is the best use of the University's health care resources, both for MSU and the wider community?
- What are Human Resources' issues that need advance planning?
- How do we best resume normal operations after a prolonged reduction of some functions?
- What are the issues related to information technology and communication that require advance planning?
- What is the best communications plan, and who are the lead people authorized to speak on specific communications issues?

Challenges and Issues

The steering committee and other working groups noted the following challenges and issues requiring attention in order for planning to move forward as effectively as possible:

Layering and timing of planning phases

It became clear fairly early in the planning process that some issues needed consideration before work could go forward on other issues. For example, it was necessary to create a definition for "necessary critical function to maintain during a reduction of campus services" before units could identify human resources needs and to identify key research buildings and other support buildings that would need essential building services.

Separating big decisions from small ones

Throughout the planning process, it was important to stay focused on the larger issues that required significant advanced planning and thought rather than to be distracted by small problems that can be handled readily once the outline and scope of the problem is more defined. Failure to maintain this focus on larger issues threatened to slow the planning process and overwhelm participants with the magnitude of the task.

Maintaining credibility of planning effort related to the public's perception that there isn't a problem

There are always wise and thinking people who will question whether or not this much attention to this issue is warranted. Time will be the judge. Considering the magnitude of consequences for not planning, the University has chosen to invest resources in planning. However, the possible credibility issues surrounding the topic of pandemic flu underscore the importance of ongoing communication to campus constituents.

Structuring planning to provide utility for other potential emergencies, particularly those extending over time and space

One of the ways to create the most value from this planning effort was to structure it in modules that transcend this particular potential emergency and extend to dealing with other potential catastrophes, particularly those involving an extended crisis or infectious disease.

Timing of communication

If a pandemic is two years away, communication about details that are not pressing is often ignored or forgotten. A phased strategy must be adopted. Our initial communications goal was to generate ideas to benefit the planning process, to inform people that there is an ongoing planning effort, and to direct people to the most reliable Web sites for information.

Michigan State University's Pandemic Influenza Plan

As described above, the University's approach to planning was to divide the work into areas, or modules, to create plans that, in combination with this planning document and its attachments and appendices, represent the Michigan State University Pandemic Influenza Plan. These area activities and plans are summarized below:

Policy Development

The planning process included consideration of the need for new policies or revisions to existing policies to allow the University to effectively manage situations and issues that might arise during a pandemic. To date, one such policy—an ordinance imposing penalties for failure to obey a directive or executive order issued by the MSU president during a declared campus emergency—has been developed and approved by the MSU Board of Trustees. The ordinance states: No person shall fail to obey a directive or executive order issued by the President of Michigan State University or his/her designee during a declared campus emergency.

Academic Continuity

MSU is committed to sustaining academic continuity, quality, and degree progress to the fullest extent possible within the scope of its primary commitment to the preservation of human life and well being. During a pandemic, the University may decide to reduce operations, including suspension or cancellation of courses. Acknowledging the complexity of the institution, its teaching and research responsibilities, and the geographic reach of its programs, it is possible, though highly unlikely in the case of a

true pandemic, that distinctions may be made between students and instructors located in an affected geographical area and students and instructors located in an unaffected geographical area. (Generally, the nature of a pandemic is such that all geographic areas are affected, although with some infectious disease emergencies, this is not the case.)

In the event of the suspension or cancellation of central campus classroom activity, the University will make efforts to provide instruction and services for students in alternative ways, including use of the Internet and other technologies. The Code of Teaching Responsibility (www.reg.msu.edu/read/UCC/Updated/teaching.pdf) will provide policy guidance for all students and instructors.

In an emergency situation, a 12-week semester is the minimally acceptable semester length. Review and evaluation of academic performance will occur after the University resumes regular operations and courses begin again. Adherence to established MSU and federal financial aid policy and practice will occur, with the hope that the federal government will hold MSU and its students “harmless,” as it has historically done in other disaster contexts.

Undergraduate

Undergraduate degree programs are predominantly coursework-based but also often include other types of learning opportunities including internships, study abroad, and off-campus service learning projects.

- To minimize social contact, undergraduate students located in an affected geographical area will adhere to the University decision to cancel or not cancel courses.
- Undergraduate students enrolled in a research opportunity, independent study, internship, etc. in an unaffected area may be able to continue their (enrollment and participation in the program. This will be decided on a case-by-case basis. Ultimately, the Provost, together with the Deans and Chairs will guide these decisions.

Graduate

Graduate degree programs are both coursework-based and research focused depending on the type of program and the student’s stage of completion.

- Plan B master’s degree students located in an affected geographical area will adhere to the University decision to cancel or not cancel courses_(however, 899 and 999 courses will continue).
- Plan A (thesis) master’s degree students and doctoral students enrolled in an early stage of their programs and located in an affected geographical area will adhere to the University decision to cancel or not cancel courses.
- Graduate students enrolled in 899 or 999 courses and working actively on research will follow the research continuity plan for their research activities.
- Graduate teaching assistants will adhere to the University decision to cancel or not cancel courses.

- Graduate teaching assistants may be included in plans for temporary, part-time instruction. This will require additional discussion with administrators of colleges, depending on the affect on coursework.
- Graduate research assistants will follow the research continuity plan for their research-related activities, when feasible.

Research Continuity

In the event of a pandemic flu emergency, limited critical research programs, facilities, and operations, as well as research-related administrative services, will continue.

Academically, research will continue with research-related personnel in a fashion that is similar to what takes place during the break between fall and spring semesters, with faculty principal investigators (PIs) identifying the individuals who will perform the “maintenance” operations of individual research projects. Practice dictates that individual PIs develop disaster plans for their research activities. Office of Regulatory Affairs (ORA) personnel are available to support PIs in the development of these plans as desired.

To support continued operation, even at limited level, ORA must maintain function in four key compliance oversight areas: Animal Care Program (ACP), Environmental Health and Safety (EHS), Export Controls and Trade Sanctions Compliance (EC&TSC), and Human Research Protection Program (HRPP). Detailed disaster plans have been developed for each of these areas. In general, these plans identify key personnel, chain of command and incident response procedures, and essential functions to be maintained during an emergency.

In a pandemic situation, the research regulatory and support personnel identified as critical in these plans will be reviewed in tandem with a review of the particular research activities underway at the time of the pandemic event to ensure that the minimum number of people is called upon to report to work. ORA will make all possible efforts to use technology to allow remote task performance. Each of ORA’s four compliance oversight areas has provisions in place to coordinate with the other areas.

Key planning decisions related to a pandemic emergency included in these plans are:

- Detailed provisions for emergency animal supplies have been made for a sustained emergency event (i.e., water, food, bedding, and cage cleaning) The Animal Care Program plan places emphasis on maintaining acceptable operations.
- No new research involving animals will be approved during a pandemic situation.
- Environmental Health and Safety will continue to provide for research-related incineration, as well as provide additional pandemic-related incineration, during a pandemic event.
- Export Controls and Trade Sanctions Compliance will secure and maintain the records of sensitive and controlled research in a pandemic situation, and these records will be reviewed to identify the PIs for sensitive and controlled research in progress at the onset of a pandemic event. These PIs will be contacted to ensure that their federally required technology control plans remain properly implemented. If

necessary, additional MSU or federal resources (i.e., campus or federal law enforcement) will be contacted to help secure affected research during the pandemic emergency.

- The Human Research Protection Program, which ensures the safety of human research subjects by reviewing research protocols on a continuous basis, will suspend in-person meetings of its institutional review boards during a pandemic emergency and substitute teleconference and webcam meetings to continue essential business.

Another dimension of planning for research continuity is prioritizing research facilities for critical infrastructure protection. Several facilities have been identified by 1) science and technology discipline associate deans for research, 2) select science and technology departmental chairs, and 3) the Office of Radiation Chemical and Biological Safety and Animal Care Program personnel as being critical. To the extent possible, these facilities should be maintained without interruption. In addition, a number of other facilities supporting research or research infrastructure have been prioritized for maintenance during a sustained emergency situation according to a variety of criteria. ([See Attachment C](#))

Human Resources and Benefits

Consistent with the guiding principles and values adopted by MSU to shape planning for a pandemic emergency, planning in the areas of human resources and benefits focused on preserving lives (human and animal), maintaining the physical plant/infrastructure of the University, and continuing essential research, academic learning, and business services. Areas of particular focus and analyses have included:

- Identifying essential functions and required resources that must be maintained during a pandemic;
- Assessing the impact of a pandemic on human resource policies, procedures, practices, union contracts, payroll and benefits for all affected stakeholders;
- Identifying staffing needs, areas for potential staffing shortages, and flexible staffing arrangements to continue essential functions;
- Determining the potential financial impact of a pandemic on individuals and on the University and developing strategic approaches to address these issues;
- Developing plans to work collaboratively with University Relations to communicate important MSU workforce information throughout the various stages of a pandemic; and
- Focusing on workforce recovery planning.

Analyses and planning efforts have resulted in the development of numerous descriptive documents, modeling tools, and other resources to help inform the decision-making process and handle the HR-related challenges of a pandemic.

Communications

The institutional-level communications plan has been developed to align with the stages of pandemic alert identified by the WHO. The plan identifies the broad range of audiences with whom the University must communicate during active planning (stage

3), implementation (stage 4), crisis management (stages 5 and 6), and staged recovery. The plan emphasizes the importance of coordinating and aligning University-level communication with communication generated in various specific areas of the University including athletics, student affairs, housing, etc. It also notes the importance of coordination with partners and authorities outside the institution while maintaining control over the University's communication to the fullest extent possible.

The audiences identified in the plan are:

- Students: undergraduate, graduate, international (unlikely to be able to travel home), online and continuing education, Global/noncredit, summer school;
- Parents/emergency contacts; undergraduates; international students (undergrad, and grad if possible)
- Faculty
- Staff: with and without access to e-mail
- Visitors/clients of MSU
- Individuals and organizations that do business with MSU
- Alumni
- Legislators and other key elected officials
- Media
- Higher education community

The plan identifies key messages and information to be disseminated at each stage of alert and recovery, as well as the variety of tactics that will be used to communicate. A primary communication tactic for all stages of pandemic alert and emergency is the MSU pandemic/avian flu Web site www.pandemicflu.msu.edu.

Infrastructure support

Housing and Food Services (HFS)

The plan developed by the Division of Housing and Food Services focuses on the areas outlined below.

Facilities to remain open, operations that must continue, and special functions to be performed during a pandemic emergency:

- University Apartments;
- Alternative housing for those working and remaining on campus—e.g., hotel operations;
- Ongoing but reduced coordinated food service operations, perhaps with a shift to prepackaged food;
- Stores and purchasing facilities and operations, with altered inventory to support continued operations during a period of supply chain challenges, which must be anticipated;
- Laundry facilities;
- Management operations for HFS;

- Use of facilities for alternative purposes to support campus or community operations during a pandemic.

Development of protocols and training necessary to maintain critical functions during an infectious disease event:

- Laundry handling protocols
- Cleaning protocols related to food service
- Use of masks for workers with higher risk of exposure
- Custodial cleaning protocols
- Other infection control protocols and training

(Generally, all protocols such as these follow public health guidance.)

Business continuity planning:

- Maintenance of work from home whenever possible
- Online scheduling system for employees to help with shifting workload needs and personnel status
- Security systems for servers to allow work from home
- Identification of essential vehicle needs for reduced operations

Other:

- Contracts that need review in light of pandemic emergency planning
- Communication with HFS employees, students in residence halls to be coordinated with University Relations

Physical Plant/facilities

Key services provided by Physical Plant include power, water, heating, cooling, maintenance, custodial, waste management, and snow removal. The plan for this area focuses on the following:

Management Planning

- Identifying critical functions and critical positions
- Identifying potential supply chain issues

Services Planning

- Development of a building services management plan for a pandemic emergency addressing:
 - Water and power maintenance
 - Building Services (i.e. custodial, maintenance) that will need to be maintained and services that could be reduced
 - Supply chain disruption, especially related to cleaning supplies, coal, and chemicals for power plant maintenance
 - Integrated planning with the Office of Land Management to maintain services for south campus farms
 - Ensuring employee depth to run the power plant
 - Protocol for proper cleaning procedures for infection control

Transportation

- Providing essential vehicles including associated repairs and maintenance

- Managing fuel supply and demand for vehicles

Technology and Communications Infrastructure Support

Planning and management for a pandemic requires management from several University units and touches on a broad array of topics. Planning focused on:

Communication infrastructure, systems, and services

- Telephone
Planning related to maintaining the telephone system and service also specifically included:
 - Plan for campus telephone conferencing needs; units anticipating this service should request set up of accounts in advance of emergency situation.
 - Identification of critical functions and positions for MSU switchboard and planning for necessary cross training
 - Plan to keep coaxial, fiber cable system active
- Reverse 911
- Data networking, internal and external
- E-mail
- Web sites and services
- ANGEL

Key administrative information systems and technology services

As a foundation for planning to keep key administrative and IT-based communication systems functioning at the highest level possible during a pandemic emergency, Libraries, Computing, and Technology did the following analysis:

- Conducted an inventory of essential systems
- Assessed system capacity to withstand increased demand loads
- Assessed staff capacity able to run each system
- Assessed ability of individual essential staff to work effectively from home or another remote location
- Assessed critical dependencies for external services or supply chains

Health Care Professionals Utilization

Planning for the use of health care professionals employed by the University during a pandemic flu emergency has focused on these areas:

- Planning for how these professionals will continue to serve existing patient load in the event of a pandemic
- Planning for appropriate use and continuation of education of health care professionals in training, under the guidance of the relevant deans of each college, so that these students are not conscripted and put in harm's way by those needing additional health care personnel
- Consideration of issues that need advance attention regarding work of MSU employees who are health care professionals, including
 - Plans for adequate mask supply and mask fitting
 - Plans for inventory of other supplies needed for the protection of health care workers and patients during a pandemic

- Training issues for health care professionals (See [CDC guidance for healthcare professionals on pandemic flu](#))
- Use of existing facilities
- Coordination with other community resources and contribution to other community planning efforts, including:
 - Options for quarantine facility, if needed (link)
 - Options for isolation facilities, if needed
 - Plans for large-scale administration of vaccines and medication to MSU students, employees, and their families

Health care providers that are a part of athletics will integrate with the larger MSU Health Team providers during a pandemic and follow those protocols if student-athletes are not on campus.

Student Issues

The primary areas addressed in the student issues plan are:

- Communication with students and their families (coordinated with University Relations)
- Orderly occupant move-out of residence halls
- Arrangement of housing for students, both international and domestic, who cannot return home, in ways that do not increase spread of illness
- Communication with and advice to students (and supervising faculty and staff) who are abroad during the onset of a pandemic

Particular planning consideration was given to MSU's on-campus international student population (683 in the 06–07 academic year and expected to increase in subsequent years). The Office of International Student and Scholars initiated a survey (results due May 1) of international students living in residence halls to determine the percentage of students who believe they would need housing during a pandemic flu event vs. those who would rely on friends or other resources. These results will aid planning efforts.

Planning for providing housing for international students outside residence halls has focused on consideration of the following options.

- First and best option: use vacant University apartments for emergency accommodation (number available anticipated at approximately 50). Considerations: students may need assistance in relocating; unfurnished apartments will need basic furnishings
- Enlist members of Community Volunteers for International Programs and leaders of MSU's nationality clubs to assist individual students and to contact additional networks including church groups and national networks to assist in finding housing for students.

Business Operations and University Services

Business operations and university services has significant interdependencies with factors outside the institution. In addition, the duration and severity of the pandemic

event have a direct and significant impact on this area. These factors increase the complexity of planning.

A high-level review was performed to identify essential services within the business operations and university service units. These were determined to be:

- Payroll (Payroll system response will be driven by human resource and benefit policies for an extended period of reduced operations. Contingency programming may be undertaken to provide more flexibility in responding to pay requirements)
- Invoice and voucher payments and monthly ledger creation
- Contract and grant function with respect to essential research
- Cashiering function
- Other cash management functions (but may be performed from an alternate location)
- Procurement of goods and services
- Student accounting services, depending on the time of semester and policies associated with tuition refunds and financial aid in a pandemic emergency (contingency programming may be needed to provide increased flexibility to respond to requirements)
- Receiving and delivery of goods and movement of campus and U.S. mail, taking degree of social distancing necessary and feasible into account

Additional planning preparation decisions, actions, or considerations:

- A pandemic financial planning model incorporating many variables has been developed to help assess potential revenue loss to the institution and changes in institutional expenditures anticipated during a pandemic.
- The university's asset liquidity has been reviewed in anticipation of significant reduction of normal cash flow.
- Currently, the finance and operations area is working to make check producing functions redundant.
- University Stores has added stock for the Heath Team in alignment with pandemic planning; further assessment is required to determine whether other units of the University need critical supplies/materials.
- MSU plans to increase authorized limits for procurement cards.
- More work must be done to identify and/or cross train employees capable of assisting with critical functions if necessary. More depth is needed in procedure documentation.

Cancellation of Large Events: Planning and Impact

Athletics

- Based on planning assumptions, the athletic event assumption is that there will be no athletic competitions for a period of two to four months once pandemic flu cases in humans have occurred within the United States. Athletic competitions would not resume until close contact is permissible.

- Canceling athletics events or shortening, delaying, or canceling the competitive season may require the athletics department to administer refunds or credit for ticket purchases
- A pandemic emergency will have a substantial negative impact on athletic revenue, depending on the season.

Planning for major revenue loss has included:

- Identifying various revenue streams
- Reviewing with general counsel all existing written agreements as well as any new athletic event contracts or corporate sponsor agreements for any suggested contract language changes in light of a potential pandemic.
- Identifying needed personal protective equipment and supplies.
- Athletic scholarship continuation decisions will be determined by the academic staff, according to regulations and policies that apply to all students with scholarships.
- Introducing pandemic planning topic at the Big Ten Conference and NCAA levels.

Security/Public Safety

- Security and Safety
- Campus Access Plan

Off-Campus Operations

Planning to support extension sites and off-campus research and service units has focused on:

- Supply chain disruption
- Power and water maintenance
- Care of animals

Campus Planning and Administration

Campus Planning and Administration manages construction contracts for MSU capital projects, the W. J. Beal Botanical Garden, and the Campus Woody Plant Collection. It also has a GIS system that has been a key part of campus emergency management.

Pandemic planning in this area has focused on:

- Staffing GIS lab at a levels sufficient to keep it open during a pandemic event
- Mapping locations of key research activities
- Developing power management map of campus
- Developing a building services management
- Identifying small scales to provide building services to climate sensitive areas for buildings outside research set.
- Arranging seminar conducted by the University Physician for contractors and MSU contract administrator to discuss implications of pandemic
- Planning to preserve plant collection in Beal Botanical Garden should regular care be unavailable

Recovery

Recovery planning has focused on the following:

- Timing and staging of resumption of full campus operations
- Attrition of personnel
- Identification of operations most critical to limit downtime

Contact Information

Questions about Michigan State University' pandemic influenza planning process or individual area written plans should be addressed to the following people:

General questions	Beth Alexander University Physician (517)353-8933 beth.alexander@ht.msu.edu
Academic continuity	Linda Stanford Associate Provost for Academic Services (517)355-5767 stanford@msu.edu
Research continuity	Cordell Overby Assistant Vice President for Regulatory Affairs (517)432-4500 overby@msu.edu
Human Resources	Pam Beemer Assistant Vice President for Human Resources (517)884-0101 beemer@hr.msu.edu
Finance & Business operations and Infrastructure support	Kathy Lindahl Assistant Vice President for Finance and Operations (517)355-5016 lindahlk@msu.edu
Technology	David Gift Vice Provost for Libraries, Computing & Technology (517)353-0722 gift@msu.edu

Communications

Heather Shupp
Assistant Vice President for
University Relations
(517)355-2262
shupp@ur.msu.edu

Public Safety

Bill Wardwell
MSU Police Inspector
(517)432-1594
wardwel4@msu.edu