Ohio Health Quality Improvement Summit Planning Committee
Patient Safety Focus Group Strategy Recommendations

Caveats:

Suggested tactics and metrics for each strategy are examples only, derived from a general literature review and survey of other states' initiatives and policy brainstorming. Further work is needed to (1) determine the extent to which these tactics and metrics are already under development or being used in Ohio, (2) probe the merit and viability of these tactics and determine whether there are better tactics for achieving the desired goals, (3) assess which mix of tactics would work best for Ohio, and (4) determine appropriate timeframes and targets for achieving the indicated metrics.

Additionally, our committee wishes to emphasize the importance of the seven cross-cutting "areas" reflected in the fourth column. In many ways, each of the seven topics in this column could form its own "strategy," and it is our hope that when the work of the November conference is done, the tactics in all 7 areas can be mapped and tracked across all four focus areas of the conference (cost and efficiency, patient safety, chronic disease management, and prevention).

Finally, not all committee members supported every strategy or tactic and indeed, some members may oppose certain strategies and tactics. Also, not every strategy or tactic currently being supported or pursued by each of our committee members is listed in this chart. Nonetheless, the strategies and tactics listed in this chart had sufficiently broad support among our committee's members to warrant further consideration at the November summit.

Proposed strategy	Rationale (with citations, and estimated return on investment)	Supporting tactics (general)[1]	Supporting tactics in the areas of (1) health information technology; (2) payment reform; (3) addressing and reducing disparities[2]; and (4) workforce development[3]	Metrics for measuring progress
Reduce Preventable Healthcare-Associated Infections (HAIs).	The federal Centers for Disease Control and Prevention (CDC) estimated there were 1.7 million health care-associated infections in 2002, with 99,000 deaths from those infections. Other policy analysts have more recently estimated that the	Successfully tackling HAIs requires full commitment to a culture of safety in healthcare settings. Some tactics aimed at promoting this culture include: • **Quality Improvement** Implement standardized /consistent proven quality interventions across all	• Health IT: e-prescription standards with clinical decision tools; EHR standards to help with care transitions; predictive technology is available but not widely used and may need to be incentivized; automated surveillance systems should be	**Outcomes:** HAI rate reductions • days, dollars, lives saved; • reduced surgical site infections; • reduced catheter-associated bloodstream

	annual costs associated with these infections nationally is between $4.5 and $5.7 billion.
	
	Reducing HAIs is one of the National Quality Foundation's top 7 priorities. These priorities are endorsed by 27 key stakeholders, including NQF, IHI, CMS, AHRQ, and many others. In addition, HAIs form an integral part of the CMS's new no-payment policy.
	
	Central Line-Assoc. Bloodstream Infections: Hospitalization is prolonged by a mean of 7 days and the attributable cost per bloodstream infection is estimated between $3,700 to $29,000.[4]
	
	There are approx. 5.3 CR-BSIs per 1,000 catheter-days in ICUs. However, ICUs that have implemented multifaceted interventions similar to the central line bundle have nearly eliminated CR-BSIs.[5]
	
	Ventilator-Assoc. Pneumonia: VAP occurs in up to 15% of patients receiving mechanical ventilation and adds an estimated cost of $40,000 to a typical hospital admission.[6]
	
	Surgical Site Infections: Postoperative infection is a major cause of patient injury, mortality, and health care costs. An estimated 2.6% of nearly 30 million operations are complicated by a surgical site
		HAIs.
		
		Use checklists/bundles/evidence-based guidelines to prevent central line catheter, ventilator, and blood stream infections.
		
		Improve antibiotic stewardship / patient adherence to antibiotic usage – perhaps through checklists.
		
		Improve communication at care transitions (see tactics under care coordination strategy below).
		
		Improve architectural and staffing support in care settings (e.g., need sinks for hand washing).
		
		Use automated systems of surveillance modeled on NQF recommendations.
		
		• **Consumer Engagement**
		
		Implement public reporting of HAI metrics (across care continuum, not just hospitals).
		
		Consider formation of an Ohio-specific Healthcare Compare website (modeled on Hospital Compare) that makes it easy for employers, payers, and consumers to access and evaluate performance on HAI metrics (among others). Such a website could be co-developed /co-branded with Ohio Department of Health and OHA
		
		Review Ohio House Bill 197 HAI reporting against NQF-endorsed measures.
		
		Make infection data part of a consumer choice dashboard.
			developed to identify type, venue and scope; data across the care continuum.
			
			• Payment reform: share savings through both public and private payment systems; implement payment incentives such as an average cost per preventable infection figure (for particular types of infections), and bonus payments equal to half of the captured savings.
			Regardless of whether the state system is modeled on the private system or vice versa, the two systems should adopt similar incentives and benchmarks to reduce the reporting and monitoring burden on hospitals and other healthcare facilities.
			
			• Value purchasing: state medical school, hospital, and other healthcare facilities' purchase of HAI-reducing technologies (e.g., hand-held medical records to help with care transitions; automated surveillance systems, predictive technologies) could be aggregated for volume discounts.
			
			• Leveraging partnerships: OHA, OCHA, and the Ohio Association of Health Plans have capacity to develop metrics, tactics, and payment incentives that could be adopted by enough payers to incentivize widespread adoption throughout Ohio's health system.
			
			Seek opportunities to partner with QIO (Ohio KePRO) 9th SOW project for reduction of SSI
				infections per 1000 pt days;
				• reduced catheter-associated urinary tract infections,
				• reduced ventilator-associated pneumonia.[7]
				
				Processes:
				• Antibiotics delivered 60 minutes pre-surgery and discontinued within 24 hours;
				• Central Line Bundle
				  • hand hygiene;
				  • maximal barrier precautions upon insertion;
				  • chlorhexidine skin antisepsis;
				  • optimal catheter site selection;
				  • daily review of line necessity.
				• Ventilator Bundle
				  • Elevation of the head of the bed;
				  • Daily "sedation vacations" and assessment of readiness to extubate;
				  • Peptic ulcer disease prophylaxis;
				  DVT prophylaxis.
				• Surgical Site Bundle
				  • Prophylactic antibiotic received within one hour prior to surgical incision;
				  • Prophylactic antibiotic selection

	infection (SSI) each year. 4% -16% of all nosocomial infections among hospitalized patients are SSIs. As IHI reports have repeatedly demonstrated, this can be changed in many cases through relatively straightforward interventions, such as appropriate preoperative administration of antibiotics.	Develop standard protocol for reporting – harmonizing measures and reporting specifications to assure better understanding by consumers. • **Payment** Establish consistent non-payment for payers (public and private) or 'warranty' for providers' methodologies / schedules that are appropriately adjusted for risk. Build effectiveness of HAI prevention into accountable payment and gain-sharing along with other payment changes bridging inpatient-outpatient settings. Insurance/employer payers develop reimbursement or other rewards for favorable HAI rates. To incent providers to adopt use of recommended checklists, consider providing narrowly crafted favorable evidentiary presumptions against medical malpractice claims relating to acquisition of HAIs for physicians who comply with recommended pre- and post-discharge checklists and guidelines.	in hospitals. An effective network of regional healthcare collaboratives is already in place and should be expanded and enhanced. Technical assistance resources are available through OHA and others. Cardinal Health Foundation is investing philanthropic dollars to reduce to zero healthcare associated infections and medication errors. Through Cardinal Health Foundation relationships additional support can be provided from IHI, APIC and others. The Ohio Business Roundtable and/or the Employers Health Coalition of Ohio can convene and lead larger employers toward the same end. Hospital CEO leadership is engaged and critical to internalizing culture at their hospitals and developing the best on-the-ground tactics to reduce HAIs. The State and its private partners can leverage the investments made by the Commonwealth Fund, RWJ, IHI, and NQF in the area of reducing HAIs. CMS (IPPS) will no longer pay higher rates for the following infections if they were acquired during the hospital stay (not POA): • Catheter-Associated Urinary	for surgical patients; • Prophylactic antibiotics discontinued within 24 hours after surgery end time; • Deep sternal wound infection rates for CABG; • Postoperative sepsis;

			Tract Infection (UTI) • Vascular Catheter-Associated Infection • Certain surgical site infections • Leveraging state programs: see above comments under payment reform. • Cultural disparities: software standards should track race and ethnicity so that HAI disparities can be measured and addressed.	
Prevent Medication Errors	Medication errors are a major source of preventable adverse outcomes. At least a quarter of medication errors are preventable. By some estimates, for example, expanded e-prescribing and use of other technologies could reduce outpatient adverse drug events by 25% per year, eliminating more than 2 million adverse drug events and 190,000 hospitalizations saving $44 billion/year. [8] Care coordination can also prevent medication errors at patient transition points. Over half of all hospital medication errors occur at the interfaces of care.[9] 20% of changes of medications from discharge to nursing homes result in ADEs.[10] Medication errors do not simply involve errors in writing scripts. Polypharmacy and overuse also increase healthcare spending and negatively affect health. By	**Quality Improvement** Prevent high impact medication errors and adverse drug events. Refine and publicize lists identifying medication abbreviations that should not be used. Utilize technology to support medication safety, such as machine-readable identification, smart IVs, and automated medication profiles/patient-carried cards. Assure care coordination in relation to medications / promote medication reconciliation through, for example, developing a standard medication reconciliation process across the continuum through a collaborative similar to Massachusetts Coalition for the Prevention of Medical Errors. Compare actual with prescribed list of drugs patient is taking at transition times/admission. Target “at risk” populations – e.g. elderly, high use, chronic / complicated therapies and diseases.	• Health information technology: implement universal e-prescribing and related clinical decision tools that check dosages and monitor for harmful drug-drug interactions; establish timeline for implementation of e-prescribing by providers serving public health insurances; all emergency departments have access to Rx prescribing info in a unified, on-line, secured access point in 12 months. • Payment reform: consider payment for pharmacist medication management and support national programs to pay for medication therapy mgt.; consider payment for polypharmacy management interventions. • Leveraging partnerships: Build on pilots for use of certified medication aids, other staff. Ohio Medicaid is launching an e-prescribing initiative; expand to	Outcomes measures: • Reduction in prescriptions / patient • Clinical outcomes for selected diseases using nationally accepted measures

	some estimates, 34% of prescriptions in the U.S. are unnecessary. [11]	Implement mechanism for the identification and management of patients with 4 or more medications. Implement a fall-focused pharmaceutical intervention program. Implement active internal monitoring programs that complement voluntary internal reporting and promote a culture of safety • **Consumer Engagement** Establish and maintain a strong provider-patient partnership. Provide meaningful data to the public and tools patients can use to take charge of their own care Improve written information and verbal communication. Implement use of 'Medication Cards' to consumers. Create a 'safe-haven' protected medication error reporting system for identification of targets and evaluation of impact of previous strategies. • **Payment** Identify patients who do not have access to appropriate medications (minimize polypharmacy) and identify sources of funds to provide them.	other payers. OHA, OCHA, and the Ohio Association of Health Plans have capacity to develop metrics, tactics, and payment incentives that could be adopted by enough payers to incentivize widespread adoption throughout Ohio's health system. A effective network of regional healthcare collaboratives are already in place and should be expanded and enhanced. Technical assistance resources are available through OHA and others. Cardinal Health Foundation is investing philanthropic dollars to reduce to zero healthcare associated infections and medication errors. Through Cardinal Health Foundation relationships additional support can be provided from IHI, ISMP and others. The Ohio Business Roundtable and/or the Employers Health Coalition of Ohio can convene and lead larger employers toward the same end. Hospital CEO leadership is engaged and critical to internalizing culture at their hospitals and developing the best on-the-ground tactics to reduce medication errors. The State and its private partners can leverage the investments made by the Commonwealth	

			Fund, RWJ, IHI, and NQF in the area of reducing medication errors. • Cultural Disparities: Address poor adherence from cost/access/language issues.	
Reduce error rates and improve communication during "hand-offs" and transitions from one setting to another	Transitions occur within a brief timeframe, are unplanned, result from unanticipated medical problems, occur in real time during nights and on weekends, involve clinicians who may not have an ongoing relationship with the patient, and happen so quickly that formal and informal support mechanisms cannot respond in a timely manner.[12] A recent AHRQ Hospital Survey illustrates the problem[13]: (% indicate strongly agree/disagree based on response category) 42% - things fall between the cracks between units; 49% - important care information is lost between shifts; 42% - problems often occur in exchange of information across units; 46% - shift changes are problematic for patients There are few mechanisms in place to coordinate care across settings – results in inefficiencies, duplication of services, duplication of tests.[14] Few dispute the inefficiency and communication gaps created by paper-based record and payment	• Evaluate best practices and develop / expand existing improvement collaboratives to implement them. • Promote medication reconciliation – comparing list of drugs patient is taking with list you think they are taking at transition (See National Transitions of Care Coalition - http://www.ntocc.org/). • Reconnect patient to primary care physician. • Deploy APN or transition coach for high-risk patients. An advanced practice nurse home follow-up program reduced 1 year hospitalization for elderly heart patients by over 60% with a mean cost savings of $4,845 per patient.[17] • Use evidence-based guidelines to assess clinical readiness for discharge. • Develop education strategies to empower consumers to understand disease process; identify and overcome barriers to appropriate care management; adhere to all aspects of regime; and recognize and respond to early return of symptoms. • Prepare patients to be more assertive participants in care transition[18] • Assure patient has follow-up appointment scheduled before transition.	• Health IT: ensure care plan, orders, clinical summary precede patient's arrival at next care setting; develop and promote use of standardized approach (checklists). Establish procedures to ensure that processes which use electronic technoly are interactive and effective and allow time for questions/updates regarding the care of the patient. • Payment reform: include financial incentives to promote effective care transitions – bundling acute and post-acute care for a distinct episode of care; add procedure code for physicians to devote more attention to transfers; build capacity to provide advanced medical homes.[19] • Leveraging partnerships: establish disease-specific multi-disciplinary discharge teams or compact agreements related to methods of communicating, timeliness of communication, follow up standards and expectations related to ongoing management.[20] Provide referring hospital with updated list of services and capacities of receiving facility or agency. • Cultural Disparities: develop patient and provider-focused education campaigns to address poor adherence from	Care Transitions Measure[21] Rate of 30-day re-hospitalizations

	systems, but adoption of electronic health records and e-prescribing is proceeding slowly. Multiple medical records result in incomplete information, and this can lead to costly and damaging errors. Some of our health system's worst errors are concentrated at care transition points. For example, 66% of healthcare associated adverse events occurring within 3 weeks of transfer. The estimated/ projected cost of morbidity due to medication errors nationwide: – Hospital care: $3.5 billion (2006 dollars) – Outpatient Medicare: $887 million (2000 dollars).[15] Care transitions also lead to costly and potentially preventable hospital readmissions. 23 percent of hospitalized patients 65-years-old and older are discharged to another institution, and nearly 12 percent are discharged to home health care. 19% of these cases are readmitted to the hospital within 30 days. Homes are increasingly used as care centers and patients have to take on more responsibility for follow-through treatment.[16]		cost/access/language issues.	
Reduce levels of preventable adverse/reportable events with special focus on pressure ulcers, VTE, radiation	Adverse healthcare events are a leading cause of death and injury in the United States.[22] Serious reportable events are of concern to both the public and	**Pressure ulcers** • Conduct a pressure ulcer admission assessment for all patients. Quantify risk of ulcer development based on age, immobility, incontinence, inadequate nutrition, sensory deficits, multiple co-	• Health IT: institute a computerized physician order entry system with procedure-specific fields for monitoring and adjusting anticoagulation therapy and related laboratory tests to	More research is needed to determine reasonable target percentages of certain data and timeframes for collection, but the following metrics could serve as

exposure, and unintentional injuries resulting from falls.	healthcare professionals and providers. Moreover, these events are clearly identifiable and measurable, and thus feasible to include in a reporting system. Lastly, serious reportable events are such that the risk of occurrence is significantly influenced by healthcare facility policies and procedures.[23] While we recognize NQF 28 preventable adverse events and CMS 10 hospital acquired conditions are all important, our initial focus should be on (1) pressure ulcers, (2) VTE, (3) radiation exposure, and (4) unintentional falls. **Pressure ulcers** The prevalence of pressure ulcers is increasing with an estimated 2.5 million acute care patients affected each year (point prevalence 15%)[24] and with an incidence in acute care hospitals of 0.4%-38% (mean 7%).[25] In addition to causing patient discomfort, pressure ulcers are a nidus for systemic infections and account for approximately 60,000 deaths annually. The estimated cost to heal each ulcer is $500 to $40,000.[26] Pressure ulcers are also associated with an extended length of stay and increased mortality.[27] The total cost for treatment of pressure ulcers in the United States is estimated to be $11	morbidities, circulatory abnormalities, and dehydration. • Reassess risk for all patients daily – include a visual cue on each admission documentation record for the completion of a total skin assessment and risk assessment. • Use one standard risk assessment tool for each point of entry level of care. • Use multiple methods to visually cue staff as to which patients are at risk. • Inspect the skin daily • Manage moisture -- use underpads made of materials that absorb moisture and present a quick-drying surface to the skin. Also use topical agents that act as moisture barriers and that moisturize the skin. • Provide supplies at the bedside of each at-risk patient who is incontinent—in the form of a kit or supplies bundled together and placed at the bedside. • Optimize nutrition and hydration using dietary consultants • Minimize pressure, turning/repositioning patients at least every two hours and using pressure-relieving surfaces. • Hourly rounding on patients with toileting opportunities. **VTE** For surgical patients continue with the NQF-Endorsed Voluntary Consensus Standard for Hospital Care, which is used for the CMS Surgical Care Improvement Project (SCIP):[45] • Include appropriate quality improvement activity/monitoring for all phases of care with periodic (as defined by institutional policy) Assessment of compliance with policies and measures; and Provide for a system of provider education that encompasses all aspects of VTE prevention and care including	maintain therapeutic range. Non-punitive reporting to a central organization (i.e. PSO) that will use data to focus on process improvement. Ensure systematic documentation of anticoagulation therapy administration, radiation accumulative dose, skin assessment fall risk, and VTE/PE assessment on every patient chart (paper or electronic). Institute a computerized order entry system with specific fields for anticoagulation therapy monitoring. Institute a computerized process to monitor the patient across the continuum of care. • Ensure systematic documentation of antibiotic administration on every patient chart (paper or electronic). Standardize delivery process to ensure timely delivery of preoperative antibiotics. Institute a computerized order entry system with specific fields for anticoagulation therapy monitoring. Institute a computerized process to monitor the patient across the continuum of care. • Leverage partnership: with QIO (Ohio KePRO) 9th SOW project for reduction of pressure ulcers in Nursing Homes and associated hospitals. Leverage additional partnerships with home health, hospice, and other community agencies for reduction of pressure ulcers. Use growing quality collaborative around the state to encourage voluntary tracking/best practices reporting on hospital-	benchmarks for measuring progress on a systems level: **Pressure ulcers** Primary measures: 1. Pressure ulcer incidence per 100 admissions 2. Pressure ulcer incidence per 1000 patient days. 3. Pressure ulcer incidence by race/ethnicity. 4. Estimated cost savings 5. Estimated lives saved Secondary Measures: 6. Percentage of patients receiving pressure ulcer admission assessment 7. Percentage of at-risk patients receiving full pressure ulcer preventive care 8. Daily inspection of the skin 9. Management of moisture 10. Optimal nutrition 11. Repositioning 12. Use of pressure redistribution surfaces 13. Percentage of patients receiving daily pressure risk reassessment **VTE** Primary measures: 1. Incidence of potentially preventable VTE 2. Estimated cost savings 3. Estimated lives saved Secondary Measures: 4. Surgery patients with recommended venous thromboembolim prophylaxis ordered.

	billion per year. See generally [28, 29,30, 31,32,33, 34,35, 36,37,38]. **VTE** VTE is preventable and remains the most common preventable cause of hospital death. It is estimated that each year 12 million hospital patients are candidates for VTE prophylaxis.[39] Annually, 900,000 patients develop VTE, and of this number, 300,000 die.[40] Two thirds of these cases occur in hospitals where effective means of prevention is readily available. In addition, VTE prophylaxis initiated in hospital is frequently not adequately addressed at the time of discharge with inadequate "bridging" of anticoagulant therapy from inpatient to outpatient settings.[41] Return on investment is complex because of the variance in patients requiring prophylaxis. Published reports estimate the direct cost of VTE approaches $3-$4 billion annually.[42] A 2000 study from Duke reports the cost-effectiveness of VTE prophylaxis for surgical patients with gynecologic malignancy; this is a high-risk population for VTE. Estimates for the cost-effectiveness of prophylaxis ranged from $27 per life-year saved for a 55-year-old endometrial cancer patient to $5,132 per life-year saved for a 65-year-old with ovarian cancer.	primary and secondary prevention, risk assessment and stratification, prophylaxis, diagnosis, treatment and monitoring. • Provide for risk assessments on all patients based on evidence-based institutional policy (institutions have the flexibility to determine how patient risks are assessed/ stratified). • Require documentation in the patient's health record that risk assessment/ stratification was completed. • Provide for type and intensity of prophylaxis based on and commensurate with assessment and documentation of risk/benefit and efficacy/safety for the patient; and • Prophylaxis is based on formal risk assessment and is consistent with nationally accepted, evidence-based measures/guidelines including NQF-endorsed™ Safe Practice 17 ("Evaluate each patient upon admission and regularly thereafter, for the risk of developing DVT/VTE. Utilize clinically appropriate methods to prevent DVT/VTE"). The Joint Commission lists the following requirements to providers prescribing warfarin therapy: • The organization implements a defined anticoagulation management program to individualize the care provided to each patient receiving anticoagulation therapy. • When pharmacy services are provided by the organization, warfarin is dispensed for each patient in accordance with established monitoring procedures. • The organization uses approved protocols for the initiation and maintenance of anticoagulation therapy	level metrics included in next column. Leverage partnership Dept of aging, nursing homes, hospitals, home health to increase geriatric assessment for potential for fall risk in elderly and fall risk prevention program along the continuum of care. • Workforce development: identify effective practices to enhance learning regarding prevention and need for workforce development for all categories of professional, paraprofessional, and nonprofessional health care workers.	5. Surgery patients who received appropriate venous thromboembolim prophylaxis within 24 hours prior to surgery to 2 hours after surgery 6. ICU prophylaxis (includes ICU & CCU) 7. Patients with overlap of anticoagulation therapy. (Patients who received parenteral and warfarin therapy and require ongoing anticoagulant therapy.) 8. Anticoagulant discharge instructions 9. Patients receiving unfractionated heparin with dosages / platelet count followed by protocol nomogram. 10. Patents (exclude pediatric/OB pts) assessed for risk of VTE/PE on admission 11. Prophylaxis ordered within 24 hours of admission if at high risk for VTE/PE **Unintentional falls** Primary measures: 1. Decrease number of falls. 2. Decrease in number and severity of fall related injuries. Secondary measures 1. Older adults enrolled in fall prevention programs. 2. Older adults engaged in

	Their conclusion is that VTE prophylaxis for gynecologic cancer patients is an efficient use of health care resources. "Even in the worst case scenario, a 65-year-old with advanced ovarian cancer and relatively short life expectancy, the cost per year-life saved of prophylaxis is well below the $50,000 threshold commonly used in health policy analysis."[43] NQF has subcontracted JCAHO for the development of measures for VTE prophylaxis. The Joint Commission listed the safe use of anticoagulants as a 2008 addition to its National Patient Safety Goals (Goal 3E). JCAHO articulates its rationale: "Anticoagulation is a high risk treatment, which commonly leads to adverse drug events due to the complexity of dosing these medications, monitoring their effects, and ensuring patient compliance with outpatient therapy. The use of standardized practices that include patient involvement can reduce the risk of adverse events associated with the use of heparin (unfractionated), low molecular weight heparin (LMWH), warfarin, and other anticoagulants."[44] **Ionizing radiation** There is an accepted linear relationship between cumulative doses of ionizing radiation and the risk of carcinogenesis.	appropriate to the medication used, to the condition being treated, and to the potential for drug interactions. • For patients initiating warfarin therapy, a baseline International Normalized Ratio (INR) is available; and for all patients receiving warfarin therapy, a current INR is available and is used to monitor and adjust therapy. • When dietary services are provided by the organization, the service is notified of all patients receiving warfarin and responds according to its established food/drug interaction program. • The organization provides education regarding anticoagulation therapy to staff patients, and families. • Patient/family education includes the importance of follow-up monitoring, compliance issues, dietary restrictions, and potential for adverse drug reactions and interactions. • The organization evaluates anticoagulation safety practices. In addition, NQF includes monitoring for heparin induced thrombocytopenia and the use of standardized protocols / nomograms for patients receiving intravenous unfractionated heparin.[46] **Ionizing radiation** • A requirement for x-ray facilities providing CT scans, nuclear scans, or fluoroscopy to measure and record the radiation dosage associated with these procedures and report them to a central database. • A requirement for x-ray facilities that provide these procedures to access this database prior to providing these procedures and inform the patient of the risk of carcinogenesis above a		physical activity programs. 3. BRFSS – fall prevalence 4. ER visit rates for falls

	Medical exposure to ionizing radiation is increasing and associated primarily with CT scans, radionuclide scans, and fluoroscopy with CT scans accounting for more than two-thirds of radiation exposures in most radiology suites. Accordingly, there is reason to be concerned about an association between exposure to medical radiation and cancer, especially in children. At present there is no monitoring of cumulative longitudinal radiation exposure for individuals. **Unintentional falls** 1 in 3 older adults will fall, and falls are recurrent. What is more, fall injury and death rates are increasing. Fall injury and death rates are considerably higher for ages 65+. 70% ($830 million from '02-05) of inpatient charges for falls are among Ohioans 65+, resulting in >$207 million in annual treatment charges for falls aged 65+ in Ohio.	cumulative risk dose (to be established by further expert research). • Require x-ray facilities to establish procedures to deliver the lowest possible dose of radiation for these procedures: 1. Utilizing the manufacturers' systems such as the CAREdose 4D mA modulation available for Siemens CT to minimize radiation exposure; 2. Educate radiologists and referring physicians to make them aware of the radiation dose associated with each procedures; 3. Routinely record the dose of each CT procedure and include this information in the Digital Imaging and Communication in Medicine (DICOM) information of the patient's study for future analysis. 4. Radiologists and technologists should routinely review current protocols and evaluate where the tube current (mA) might be reduced. 5. Review spiral scan acquisitions and question any protocols with a pitch factor less than 1. For body imaging, select a pitch factor greater than 1 (preferably 1.5). 6. Always limit the scan volume to the area needed using digital localization information to set scan boundaries. 7. Radiologists should be allowed to review requests for CT and recommended alternative studies (MR and US) when appropriate. (Currently a violation of Stark). 8. CT is used extensively in the		

		ED after hours sometimes because of availability of telemedicine. Other modalities should also be available after hours with the availability of immediate interpretation. 9. Shield critical organs when possible: thyroid, breast, gonads, and eyes – especially in children and young adults. Thyroid shield reduces thyroid dose by 26%; bismuth breast shield reduces breast irradiation by 41%; and eye lens exposure is reduced by 38%. **Unintentional falls** • Conduct fall screenings to determine fall risk at physician offices, ERs, etc. • Support home visit programs. • Health care facilities establish a fall reduction program appropriate for patient population. • Fall reduction program includes interventions to reduce the individual's fall risk factors. • Individual/family education as appropriate on fall reduction program and individualized fall reduction strategies. • Medication/alcohol consumption review as it relates to medication induced falls. • Gait screening/assessment of walking aids. • Environmental assessment.		
Improve use, publicity, and standardization (including definitions of metrics) of collected data and eliminate collection of data that	Many states, including, to some degree, Ohio, have recently created – or are in the process of creating – public bodies responsible for mandating, collecting, and publishing data regarding patient safety and	• Mandatory reporting of e-codes. • Non-punitive reporting of adverse drug events. • Creation of core data content standards • Coordination and collaboration across the spectrum so that benefits of performance measurement can flow to	• Health IT: non-punitive reporting of events to a central organization (i.e. PSO). Derive future measures from data that are approved by NQF (validated). • Payment reform: conduct simple data collection planning tied to	• Same metrics reported by primary care healthcare team members • Same metrics reported by hospitals (i.e. all-cause readmissions

is not being used or offers little promise for use	quality. Transparency can play a key role in incentivizing healthcare providers and consumers alike to elevate their consciousness of patient safety issues. But data should not be collected for collection's sake, and it is important that data reporting requirements be limited to data that is actually used. Moreover, such requirements should impose the minimum administrative burden needed to accomplish the desired policy objective, utilize consistent definitions, be as uniform as possible, and, without usurping regulatory authority of existing health-related regulatory bodies, be "transferrable" across – or at a minimum collated across – state agencies so as to avoid duplicative reporting.[47]	all citizens. • Periodic review of measures for continued value and prioritize measures that can lead to innovation.	payment incentives when metrics are met. Educate and build consensus to prioritize considerations re: data management approach. Synchronize collection of data and reporting across entities (including 3rd party payers). Finally, establish ground rules for management of results through consensus. • Leverage partnerships: through OHA, BRT, Commonwealth Fund and Aligning Forces Communities to build momentum for race/ethnicity and other data reporting. • Reducing disparities: adopt U.S. Census guidelines for classifying race and ethnicity. Provide capacity to report all quality-related data across continuum by race and ethnicity through standardized approach to race and ethnicity data collection and reporting. Disseminate toolkit to educate front-line staff in appropriate collection of race and ethnicity data.	within 30 day of charge) • Same metrics reported by long-term care facilities (i.e. readmission referrals to hospitals – all cause)

[1] Note: suggested tactics are examples only, derived from a general literature review and survey of other states' initiatives and policy brainstorming; further work is needed to (1) determine the extent to which these tactics are already under development or in progress in Ohio through, for example, the quality collaborative of the OHA, (2) probe the merit and viability of these tactics, and (3) assess which mix of tactics would work best in Ohio.

[2] Note: disparities could include, but are not limited to, the following examples: age, culture, disability, ethnicity, gender, geography, race, religion, and sexual orientation.

[3] Note: suggested tactics are examples only, derived from a general literature review and survey of other states' initiatives and policy brainstorming; further work is needed to (1) determine the extent to which these tactics are already under development or in progress in Ohio through, for example, the quality collaborative of the OHA, (2) probe the merit and viability of these tactics, and (3) assess which mix of tactics would work best in Ohio.

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[5] Institute for Healthcare Improvement "Prevention of Central Line-Associated Bloodstream Infection."

[6] Institute for Healthcare Improvement "Implement the Ventilator Bundle"

[7] July 2008 NQF/NPP Priority Areas and Corresponding Goals Draft Report at 4.

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[47] Agency for Healthcare Research and Quality "AHRQ Conference on Health Care Data Collection and Reporting." For data regarding costs associated with performance measurement mandates, see Booz Allen Hamilton "Hospital Quality Reporting in the United States: A Cost Analysis for the Hospital Quality Alliance." Spending associated with a cycle of prioritization averages $209,000 and varies from $11,000 to $400,000. This cost analysis concluded there is no clear relationship between the number of measures in a set and cost, or the time to complete and cost. The findings state the data source, measure set size, measure type, and development time are actually cost drivers, but that the rigor applied when developing measures varied so widely that these cost drivers are muted. Hospitals bear the majority of the cost burden for measure implementation, data collection, and transmission and data aggregation. Estimated vendor spending for implementation of a single measure set ranged from $65,000 to $583,000. The nationwide estimate to implement the four HQA-approved measure sets in hospitals was approximately $52M. The annual cost for the four HQA-approved measure sets, scaled to a national level, is estimated to be $6.7M. Hospital data collection costs within the AMI measure set, for example, costs ranged from $10 to $132 per record.