



Louisiana State University Health Science Center  
School of Public Health

## Ortho - Research Ideas

### Data Exports, Reports, and Stats

### Ideas

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Record ID record_id	Project Title title	Faculty Advisor faculty_advisor	Study Design study_design	Research Question Resource: <a href="http://twp.duke.edu/uploads/media_item..._search-questions.original.pdf">http://twp.duke.edu/uploads/media_item..._search-questions.original.pdf</a> research_question	Rationale Why is this topic of interest to you and the orthopedic ... (understand disease mechanisms) rationale	Hypothesis A declarative statement predicts the relationship between ... (control variable and an outcome). hypothesis	Primary outcome Provide name, unit of measure and definition on how ... (charge - date of admission") primary_outcome
<u>1</u> 11282017_Dasa - TKA vs. No TKA	What happens to bone on bone patients who don't receive a TKA	Dasa Vinod (4)	2. Retrospective chart review (2)	Do patients who don't receive a TKA with Bone on Bone Osteoarthritis have a decline in health compared to patients who receive a TKA?	Patients with severe arthritis who are unable to receive a TKA (ie Medicaid) will cost the system more than if we figured out how to allow them to have a TKA at the outset.	Patients with severe bone on bone knee osteoarthritis who are candidates for TKA and do not receive one become less healthy and more costly compared to patients who receive a TKA.	Number of diagnoses, ER visits, PCP visits and healthcare utilization increase in patients who do not receive TKA.
<u>2</u> 11282017_Dasa - Physician like patient?	Do patients prefer physicians who look like them?	Dasa Vinod (4)	4. Other (4)	Do patients prefer physicians who appear more like them?	Patient perception of quality may be dictated by subtle biases we don't openly appreciate	Gender and race of the patient and physician influence perception of quality	NOT SURE
<u>4</u> 11082017_Dasa - Narcotics usage in TKA	How do narcotics impact outcomes in total knee arthroplasty	Dasa Vinod (4)	2. Retrospective chart review (2)	Do patients who take fewer narcotics have better or worse outcomes? What patient characteristics determine higher narcotic utilization	Can we pre-operatively determine who will require more narcotics to create strategies to reduce their use post-op?	Patients with higher narcotic use will have worse Patient Reported Outcomes scores? African American, young, and male patients will have lower scores and higher narcotic use	Morphine equivalent narcotic Rx following TKA at 12 weeks and 6 months as a function of patient reported outcome score

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5 12202017_Dasa - MRI: to do or not to do?	Are cost control mechanisms impacting pain and function in patients with knee pain?	Dasa Vinod (4)	2. Retrospective chart review (2)	In patients who are candidates for an MRI, is there a difference in PROMIS and KOOS scores at 3,6,12 months between patients who receive an MRI order at their first visit vs. those who don't?	Insurance companies like Medicaid have instituted a number of mechanisms to control cost. One of them is requiring therapy for patients prior to obtaining an mri. This often times does not work, delays care, and worsens patient symptoms. Does delaying or denying advanced imaging in help to come to an early conclusive diagnosis impact patient pain/function over the long term? Does the patient have to unnecessarily suffer in the name of cost containment? If mri was obtained when physician wanted, would patient have faster improvement in pain/function?	Patients who are unable to obtain an MRI at the first visit w dr dasa have poorer outcomes (promis/kooos) at 3, 6, 12 mos compared to patients who are able to obtain an mri earlier.	KOOS, PROMIS, VAS PAIN, MRI OBTAINED WITHIN 30 D OF INITIAL OFFICE VISIT, TREATMENT RENDERED IN PATIENTS POST "FIRST VISIT" AND POST MRI (IE SURGERY, THERAPY, INJECTION...)
6 122017_Dasa - Intraartic fracturs for OA surg?	Which and when do intra-articular fractures go onto definitive osteoarthritis surgery?	Dasa Vinod (4)	2. Retrospective chart review (2)	Which common lower extremity intra-articular fractures go onto definitive treatment most commonly?	The rate and severity of post traumatic oa in the lower extremity varies greatly based on the joint involved. Joints with more protective mechanisms and less constraint like the knee will go on to tka following tibial plateau fractures much less frequently than joints that do no have this mechanism. We will compare hip vs knee vs ankle and progression to arthroplasty/fusion based on joint involved.	Hip and ankle will more likely go on to definitive oa management than knee despite significant articular cartilage damage from trauma.	Date of intrarticular injury requiring ORIF and time to fusion/arthroplasty (if it occurs) after a min of 5 years.

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Z 122017_Dasa - Xrays and TKA	Accuracy of xrays with measuring limb alignment in TKA	Dasa Vinod (4)	2. Retrospective chart review (2)	How accurate are day to day xrays at measuring limb alignment before and after TKA	Many of our day to day xrays are far from perfect. If the provider doesn't take the time to ensure appropriate imaging then our assessment of limb alignment to measure surgical quality will be flawed. We will find patients w "perfect xrays" then compare all subsequent xrays on that patient to that "gold standard xray" and measure alignment. There will most likely be great variation and using the most recent xray to establish alignment may not be appropriate. We need to ensure any xrays used to measure quality must be done well and not simply be the most recent. As image recognition software becomes more available, having this info may help create more effective technology.	>75% OF OUR XRAYS WILL BE UNABLE TO APPROPRIATELY MEASURE LIMB ALIGNMENT USING A WELL DONE XRAY ON THAT SAME PATIENT AS A CONTROL	FEMORAL ALIGNMENT, TIBIAL ALIGNMENT, OVERALL ALIGNMENT ON PRE OP AND POST OP XRAYS FOLLOWING TKA
10 022318_Dasa - Patella Maltracking in TKA	Patella maltracking is significantly undiagnosed in patients undergoing knee arthroscopy	Dasa Vinod (4)	2. Retrospective chart review (2)	How many patients undergoing arthroscopy have normal appearing patella tracking on MRI/Xray compared to arthroscopic visualization? Will patients with undiagnosed patella maltracking have worse outcomes following knee scope?	MRI and Xrays are very poor at detecting patella maltracking because of the inability to imagine the patella within the trochlea in mid-flexion thus a significant number of patients have undiagnosed patella maltracking. Undiagnosed patella maltracking is responsible for poorer outcomes compared to patients with normal tracking.	More than 50% of normal appearing MRI/Xrays will have patella maltracking seen during arthroscopy. Patients with undiagnosed patella maltracking will have worse outcomes following knee scope.	Number of patients with patella maltracking during arthroscopy, number of patients with normal appearing MRI/Xray