Approved: 2-25-09
Date

MINUTES OF THE HOUSE HEALTH AND HUMAN SERVICES COMMITTEE

The meeting was called to order by Chairman Brenda Landwehr at 1:30 p.m. on January 27, 2009, in Room 784 of the Docking State Office Building.

All members were present.

Committee staff present:
Norm Furse, Office of the Revisor of Statutes
Melissa Calderwood, Kansas Legislative Research Department
Reed Holwegner, Kansas Legislative Research Department
Janet Grace, Committee Assistant

Conferees appearing before the committee:
Dustin Bozwell, Nurse Anesthesia Student (Attachment 1)
Charles Herring, Nurse Anesthesia student
Mike Good, Center for Innovative Biomedical Orthopedic Research (CIBOR) (Attachment 2, 3)

Others attending:
See attached list.

Chairman Landwehr called the meeting to order, and asked for bill introductions.

Representative Neighbor made a motion for the Board of Healing Arts to increase in their fees. They have not had a fee increase in 5 years. The demands on the board has increased without the resources necessary to meet the demands. Representative Morrison seconded the motion. The motion was carried.

Representative Crum presented a conceptual bill regarding high deductible health plans. The motion was seconded by Representative Schwab. The motion was carried.

Representative Landwehr introduced five committee bills as one motion.

1. Fixes the COBRA issue from last year **SB 81;**
2. Medicaid reform develop an HSA waiver Medicaid started allowing this in 2007;
3. Physician's Assistants perform independent from the direct supervision of the physician with written protocol from a physician, this is done only in underserved rural areas;
4. Mandate free health care plan, individuals can create their plan based on needs and finances;
5. Health care transparency bill.

Representative Morrison seconded the motion. The committee was informed that health transparency was for all. Research will be done and answers provided to the committee about the ERISA plan at a later date.

The motion carried.

Leslie Allen provided the Behavioral Sciences' bill introduction.

1. Removing language preventing people coming from out of state from obtaining a license
2. Increase the application fee for psychology application. Approximately 60% are from out of state and are not intending on being licensed in Kansas. They are paying the lower fee than those who want to be licensed in Kansas

Representative Schwab made a motion by seconded by Representative Neighbor, to accept the above changes. The motion carried.

Dustin Bozwell and Charles Herring, nurse anesthesia students representing the three programs (University of Kansas, Newman University, and Texas Wesley University-Topeka), provided an overview on the profession, The Kansas Association of Nurse Anesthetists (KANA), Certified Registered Nurse Anesthetists (CRNA's) (Attachments 1, 2, 3, 4). They are licensed professional registered nurses who obtained certification as anesthesia nursing specialists through additional education and successful completion of a national examination. CRNA's administer approximately 65% of the over 26 million anesthetics given in the U.S. each year. In Kansas, CRNA's make up 70% of the anesthesia providers in the state. Overall, two-thirds

of all rural hospitals in the U.S. rely on CRNA to deliver anesthesia to their patients. Over 80% of all hospitals in Kansas rely exclusively on CRNA's for anesthesia service. CRNA's practice both independently and with physicians such as an anesthesiologists. Anesthesia provided by CRNA's has been so safe that malpractice premiums have dropped approximately 60% in the last ten years.

Representative Mast thanked the students for coming and introduced Joe Conroy, a practicing CRNA, to convey a concern the profession has and would like help from this Committee. Mr. Conroy provided background information on the statues for CRNA's. In 2007, the Department of Nursing decided that CRNA's are not able to write orders anytime, anywhere and the hospitals would be written up if they allowed the CRNA's to proceed in their past capacity. This will greatly impact the majority of hospitals throughout Kansas. Proposed amendment to: K.S.A. 65-1158

(A) (2) develop a general plan of anaesthesia care With the physician or dentist —"which includes ordering appropriate medications and diagnostic studies during the pre-operative period."

The Committee discussed introducing a bill for the CRNA's. A motion submitted by Representative Schwab and seconded by Representative Mast to work with the CRNA's to present a bill. The motion carried. Mr. Conroy stated the CRNA's submitted a request in October to the Attorney General for clarification of their responsibilities. The Attorney General sent his response two days ago. The CRNA's and Representative Mast were not informed of the decision until during the committee meeting. The response is quite extensive and literal, and it does not favor the CRNA's. Representative Mast and Dan Morin offered to go back and work with both sides to come to a resolution. A bill had been introduced and the committee will continue with the bill. Meetings need to continue with all affected parties impacted to expedite an agreement. Dan Morin requested to speak to the Committee to inform them that the Attorney General's opinion is coming out this morning.

Mike Good and Dr. Paul Wooley from the Center of Innovation for Biomaterials in Orthopedic Research (C.I.B.O.R) presented an overview of the potential facility and its research ability (Attachments 2,3). Dr. Wooley provided insight on a unique implant for hip and knee replacement surgery. The United States will soon face an epidemic level of need for hip and knee replacements. Baby boomers do not want to be restricted or have their activities slowed. Dr. Wooley is developing a composite material that can be used for implants. The need for alternative procedures for hips and knees is necessary. The material could also make surgery tables, surgical instruments, etc. The new composite material would provide additional cost savings to hospitals/patients and decreases patient risks by decreasing the surgery/anesthesia time, the radiograph can be taken through the table, etc.

Mike Good provided the positive economic growth potential from this facility. There will be an increase in job opportunities and the ability for the universities and industries in Kansas to partner with the facility and its research. The locality will provide the building but they do need the funding for supplies, equipment, and staff. This facility would keep highly skilled people in the airline industry employed. CIBOR has requested funding from other areas including the Kansas Bioscience Authority (KBA). It has been a very frustrating process. CIBOR's unique approach has lead to some issues with KBA. They had the University of Kansas develop a traditional academic proposal and CIBOR developed theirs. They combined the two proposals and thought it was well presented. KBA has not provided any response nor funding. CIBOR has the people to make this work but they are lacking the instrumentation.

The next meeting is scheduled for February 3, 2009.

The meeting was adjourned at 3:07 p.m.

HOUSE HEALTH & HUMAN SERVICES COMMITTEE

DATE: 1/27/09

NAME	REPRESENTING
PATRICK VOGELSBERG	Kearney and Assoc.
Charles Herring	Kansas University Med Center
Tara Brunin	University of Kansas Medical Center
Dustin Boswell	KUMC
Nancy Whitson CRNA	Kansas Association of Nurse Anesthetist's
Rachel Edgerton CRNA	KANA
Andrea Jack CRNA	KANA
Donna Vierthaler CRNA	Ks Assoc of Nurse Anesthetists
Judy Schrock	Ks. State Nurses Assn.
Stephen Young	Asst. House Minority Leader
Caryl Goodyear-Bruch	University of Kansas Medical Center (KUMC)
Paul Hertel CRNA	KU School of Nurse Anesthesia
Donna Nyght	KU School of Nurse Anesthesia Education
Christopher G Deffenbaugh	University of Kansas Medical Center
Kerry Blair SRNA	Newman University-Wichita
Josh Luce RRNA	Texas Welyan University
Brenda D. Toland	Newman University-Nurse Anesthesia Program
SAM MOORE RRNA	Texas Wesleyan University - Stormont-Vail
Matt Schmidtlein RRNA	Texas Wesleyan University - Stormont Vail

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HOUSE HEALTH & HUMAN SERVICES COMMITTEE

DATE: 1/27/09

NAME	REPRESENTING
Michelle Butler	Capitol Strategies
Marlee Carpenter	KAHP
Bruce Wilt	UCHS
David Rowe	KU Med Center
Leigh Keck	Hein Law firm

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Presentation to

Kansas State House of Representatives

Health and Human Services Committee

January 27, 2009

(Introductions)

I want to thank the Chair and the committee members for meeting with us today. I think we can all agree that these are tough times financially for many in our country. I am sure that your committee and the other committees on which you serve are met with a nearly constant barrage of monetary requests and stories of how bad things are for various professions and industries. But that is not why we are here before you today. We are student registered nurse anesthetists in a program of education and clinical training that will prepare us for a a profession which we are very excited to be joining. Therefore it is our intent to impart to each of you the contributions by Certified Registered Nurse Anesthetists, or CRNAs, to the health and welfare of the citizens of Kansas.

It is very appropriate that we are meeting with you during Nurse Anesthesia Week. This week is a chance for those of us in the nurse anesthesia profession to celebrate our history, recognize our accomplishments, and look with great anticipation to our future. But this week has another purpose, it's an opportunity for us to educate the public at large. Our profession, despite its rich, proud and extensive history in the delivery of anesthetic services to the people of the United States and of Kansas, is not one most people are familiar with. When people ask me what I do and I state that I am a nurse, they immediately understand. When I state that I am in school to be a CRNA or nurse anesthetist I am usually met with a puzzled look. Nurse Anesthesia Week is a time that our profession is focused on promoting and highlighting our profession. That is what we want to do with all of you today.

Since this is a healthcare committee you may well be aware of what a CRNA is, but allow me to elaborate. According to the Kansas Association of Nurse Anesthetists (KANA), CRNAs are licensed professional registered nurses who have obtained, through additional education and successful completion of a national examination, certification as anesthesia nursing specialists. CRNAs are qualified to make independent judgments relative to all aspects of anesthesia care, based on their education, licensure, and certification. When administered by CRNAs, anesthesia has been deemed to be a practice of nursing. There has been recognition of this fact by courts in the U.S. since 1917. Also, you may not have realized that the history of nurse anesthesia is quite extensive as nurses have been administering anesthesia for nearly 150 years.

Today, CRNAs administer approximately 65% of the over 26 million anesthetics given in the U.S. each year. In Kansas, CRNAs make up 70% of the anesthesia providers in the state. And, as you can see by the provided visual aid, 83% of the hospitals in Kansas rely exclusively on CRNAs for anesthesia care. Overall, two thirds of all rural hospitals in the U.S. rely on CRNA delivered anesthesia. If not for these CRNAs many of these hospitals would be unable to maintain trauma stabilization, surgical and obstetrical capabilities. Without CRNAs many rural Kansans would have to travel many hours to an urban center such as Topeka, Kansas City, Wichita, or even Denver for their anesthesia services, even for such procedures as colonoscopies, obstetric anesthesia, or tonsillectomies. CRNAs have traditionally made high quality anesthesia services accessible to the underserved rural populations despite the cost constraints and possible geographic isolation of these areas. CRNAs also provide anesthetic services in the urban centers of Kansas working in the major hospitals and clinics in these areas. The three largest metropolitan areas in Kansas, Kansas City, Wichita, and Topeka, are also the home of the three nurse anesthesia training universities. Therefore, in our own way, CRNAs improve the health, lives and welfare of the majority of Kansans.

So as you can hear, there are no limits to the type of setting in which CRNAs provide anesthesia. We are able to provide our services in rural hospitals, tertiary care hospitals, surgery centers, dental offices, labor and delivery rooms, physician offices and clinics. CRNAs also perform all aspects of the anesthetic delivery including pre-anesthesia assessment and evaluation, induction, maintenance, emergence, and post-anesthesia care including follow-up evaluation and care. The anesthesia services provided include general anesthesia, spinals, epidurals, peripheral nerve blocks, and sedation. CRNAs practice both independently and with physicians such as anesthesiologists.

Now I would like to turn it over the Charles Herring.

My name is Charles Herring. I am a second-year SRNA at the University of Kansas.

CRNAs provide high quality anesthesia. As mentioned before, CRNAs provide approximately 65% of the more than 26 million anesthetics delivered each year and never has anesthesia been safer. With new, more reliable patient monitoring techniques, better anesthesia equipment, safer drugs, and increased awareness of anesthesia complications the mortality rates related to anesthesia have continually fallen. In the 1950s the mortality rate of anesthesia was approximately 1: 1500 cases compared to the most recent mortality rates for anesthesia of approximately 1 per 200,000. In 1990, the Center for Disease Control had proposed to undertake research on the morbidity and mortality in anesthesia. After initial review, the CDC concluded that the rates were too low to warrant the expenditure of funds for such research. Anesthesia provided by CRNAs has been so safe that malpractice premiums have dropped approximately 60% in the last ten years. Also, studies continue to show that CRNAs provide anesthesia as safely as any provider of anesthesia.

Considering what you have just heard, I hope you are not surprised to learn that CRNAs love what they do. Many CRNAs feel that their affect on the patient is the most satisfying aspect of the job. Many patients fear the anesthesia more than the surgery itself. The part of our training as nurses that focuses on the patient's mental and emotional health as well as their physiological well-being provides the CRNA with knowledge that they are making a difference for their patients.

CRNAs also make a difference for their country. There is a long history of CRNAs serving in the military both in peacetime and in war zones. Nurse anesthetists have been the main administrators of anesthesia for the U.S. military since World War I. Today CRNAs remain the leading provider of anesthesia in the war zones of Iraq and Afghanistan as well as at home for the VA. They are often the only licensed provider of anesthesia at many military facilities including Navy ships at sea. Here in Kansas there are several CRNAs who have served or are serving in the military or the reserves, including three faculty members at KU.

Another reason that job satisfaction is so high is that our profession is continually looking to improve itself. CRNAs continually strive for personal and professional self-improvement. Currently, CRNAs have a bachelor's degree in nursing and must work at least one year in critical care before being accepted into nurse anesthesia school. The nurse anesthesia degree is a master's degree with most nurse anesthesia programs being between 27 to 36 months in length. Because research is an important aspect of anesthesia practice and because CRNAs strive to use the most current evidence based practice in our administration of anesthesia services, many CRNAs have continued on to receive PhD. degrees. However, there has also been a desire for the opportunity of a clinically-based doctoral degree for advanced practice nurses, like CRNAs. Therefore, like many other allied health programs, nurse anesthesia has

developed curriculum for a Doctorate of Nursing Practice, or DNP. This clinical doctorate does not lose the research and evidence based practice aspect of higher education, but enhances clinical knowledge as to its relationship with health systems, informatics, equipment, and the health and welfare of people. The DNP will eventually transition into the entry-level degree for all CRNAs.

At KUMC, in order to improve its nurse anesthesia education, the entire faculty is currently working on doctorate degrees with two working on PhDs while the rest are working on DNPs. Eventually, the SRNA education curriculum will transition to the DNP. Texas Wesleyan is already inviting its first DNP class.

So, I am sure you now recognize why we are so excited about our profession. It already is offering advanced, quality, and efficient anesthesia services. But as a profession we will continue to seek personal and professional experiences that will enrich our own lives and improve the care we provide our patients. We will continue to provide quality anesthesia care to all areas of Kansas, and even the underserved areas of rural Kansas.

"DUSTIN"

[Dustin Bozwell finishes with:]

We thought you might find it refreshing to see and hear from students eager to join a profession that will give us job satisfaction while providing essential anesthesia services to your constituents, the citizens of Kansas. This opportunity to meet with you and some of the other representatives we are meeting with today gives us great experience in advocacy for our profession and a learning experience we all appreciate. Also, as you now have become more aware of how important our profession is to the health and welfare of the people of Kansas we hope that each of you also becomes advocates for our profession. We hope you found our presentation informative and if you have any questions we would love to answer them at this time. Thank you.

Certified Registered Nurse Anesthetists (CRNA)

KU MEDICAL CENTER The University of Kansas

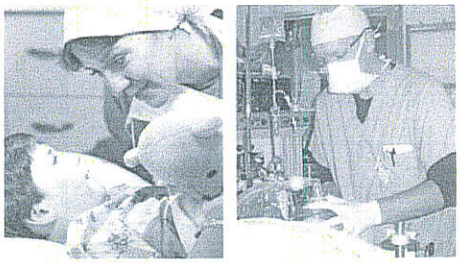
NEWMAN UNIVERSITY

TWU

- Nurses have been administering anesthesia for nearly 150 years (AANA)
- Approximately 65% of the over 26 million anesthetics given in the U.S. each are administered by CRNAs (AANA)
- In Kansas, CRNAs make up over 70% of the anesthesia providers (KANA)
- Over 80% of all hospitals in Kansas rely exclusively on CRNAs for anesthesia service (KANA)
- Anesthesia-related mortality rates:

1950s	1990s
1:1500	1:200,000 (FDA)

- Premium rates for malpractice insurance for CRNAs have dropped nearly 60% over last 10 years (KANA)
- Recent studies show that CRNAs have lower complication rates compared to other anesthesia providers
- Nurse anesthetists proudly serve their country in the military and are the principal providers of anesthesia both in wartime and peacetime (AANA)



Kansas Association of Nurse Anesthetists KANSAS

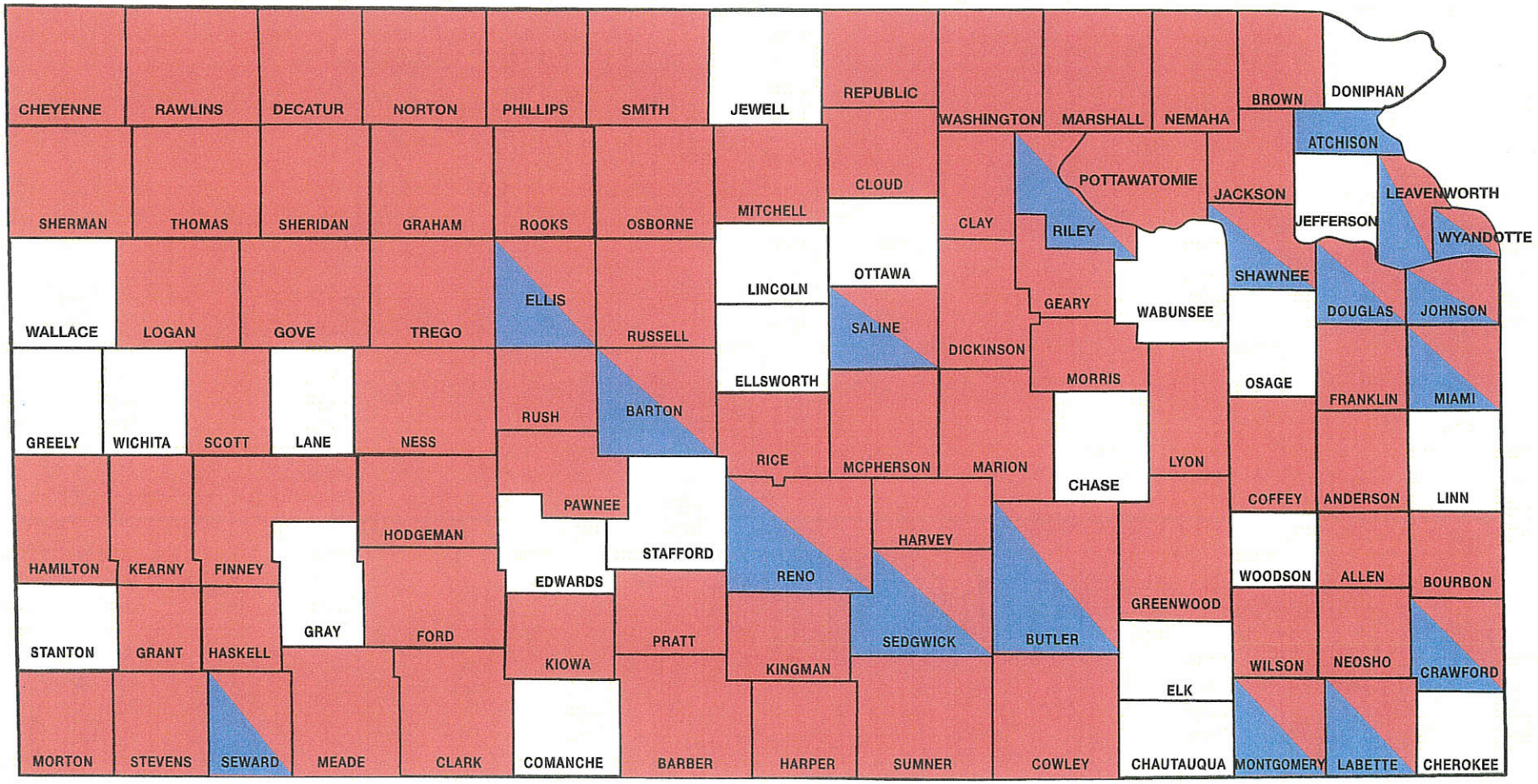
Proposed amendment to:

K.S.A.65-1158

(a) (2) develop a general plan of anesthesia care With the physician or dentist---- *"which includes ordering appropriate medications and diagnostic studies during the pre-operative, intra-operative, and post-operative period."*

KANSAS ANESTHESIA PROVIDERS

Coverage by Counties



Source: 2006 Stat Book, Kansas Hospital Association
BCBS of Kansas Provider Directory

CRNA only | Anesthesiologist only | Both | No Anesthesia Providers

Center of Innovation for Biomaterials in Orthopaedic Research (C.I.B.O.R.)

Paul H. Wooley, Ph.D.

Director, Orthopaedic Research Institute
Professor of Biology, WSU
Professor Of Orthopaedic Surgery, UKSM-Wichita
Research Specialist, Robert Dole VAMC
KBA Eminent Scholar

The Future of Orthopaedic Devices

THE JOURNAL OF BONE & JOINT SURGERY

JBJS

This is an enhanced PDF from The Journal of Bone and Joint Surgery

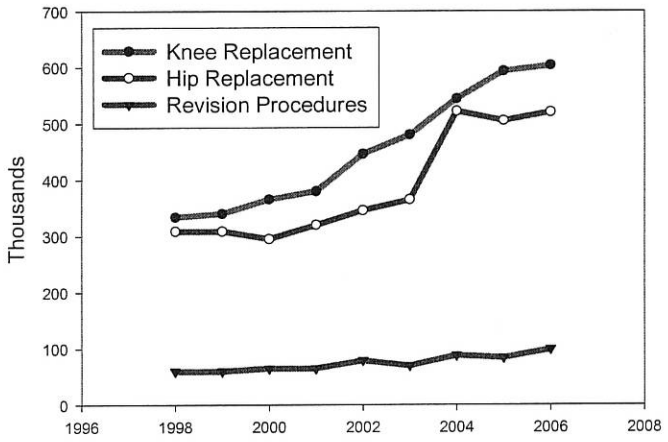
The PDF of the article you requested follows this cover page.

Orthopaedic Surgeon Workforce and Volume Assessment for Total Hip and Knee Replacement in the United States: Preparing for an Epidemic

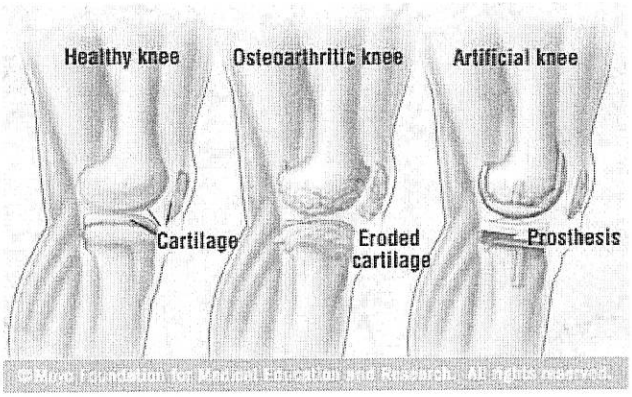
Richard Iorio, William J. Robb, William L. Healy, Daniel J. Berry, William J. Hozack, Richard F. Kyle, David G. Lewallen, Robert T. Trousdale, William A. Jiranek, Van P. Stamos and Brian S. Parsley

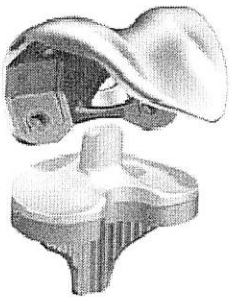
J Bone Joint Surg Am. 2008;90:1598-1605. doi:10.2106/JBJS.H.00067

Increasing Numbers of Joint Replacements



Total Knee Replacement

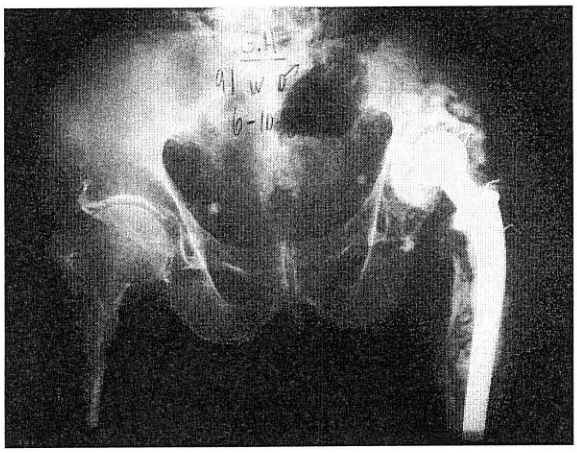




Outcome of Joint Replacements

- Excellent pain relief and restoration of function in >90% of patients at 7 years
- Implants can fail in less than 2 years due to material issues
- Patients are receiving implants at a younger age and require high performance materials
- In the younger patients, 30% of implants will require revision ~15 years after surgery*
  - * Keener et al, JBJS 2003

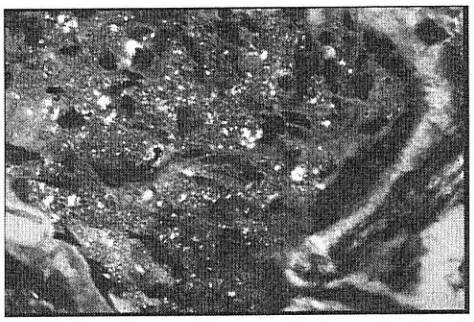
Failure of current implants
(1) Stress shielding



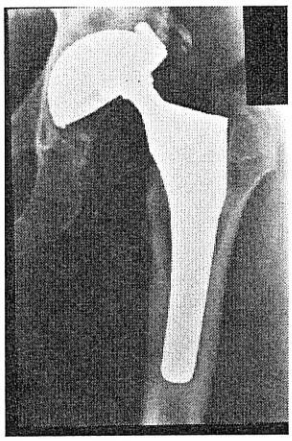
- Bone requires activity to be healthy; 'use it or lose it' properties.
- Metals shield bone from the benefits of stress.
- Using most current implants, bone loss will occur.

Via Christi Research | Orthopaedic Research Institute

Failure of current implants
(2) Material Wear Debris

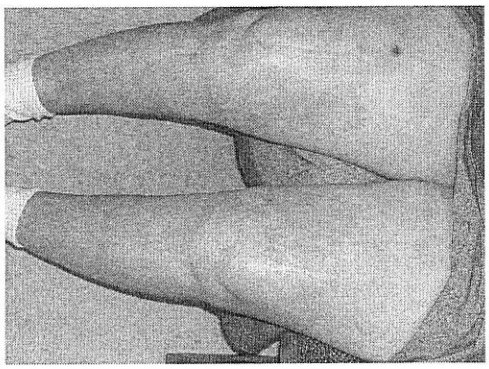


Particles from the metal and plastic cause inflammation leading to bone loss and failure of the implant



Via Christi Research | Orthopaedic Research Institute

Failure of current implants
(3) Material Sensitivity



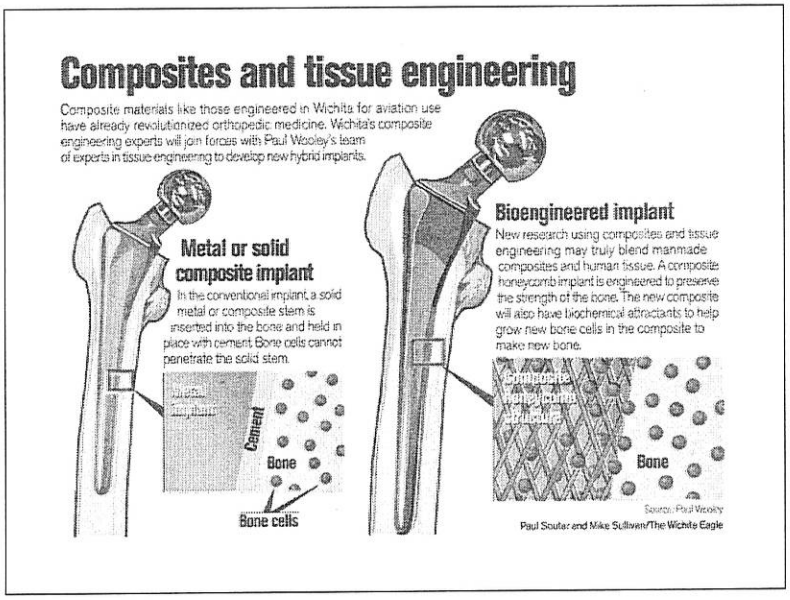
Allergic-like reactions to orthopaedic metals and plastics can lead to bone loss and failure of the implant

Revision Surgery:
Replacement of the original device

- The operative cost of revision surgical procedures are 41% higher than primary surgery
- Hospitals stays are 2 days longer, and rehabilitation is significantly slower
- The complication rate (particularly infections) is 32% higher than primary surgery
- Patient pain and suffering
  - Bosiz *et al*, JBJS 2005

Can we achieve the revision-free implant?

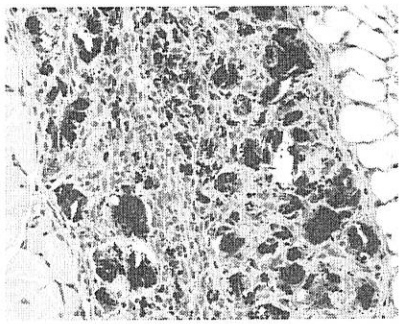
- Ideal bioengineering profile
- Ideal biocompatibility profile
- Complete osteointegration
- Wear-free bearing surface

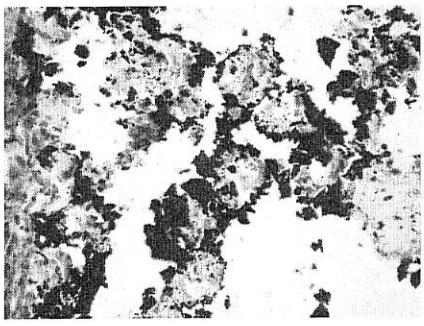


Initial Composite Selection

- A base composite material with properties 'close' to bone
- Amenable to physical and chemical modification
- Familiar to the aircraft industry

Composite Implantation

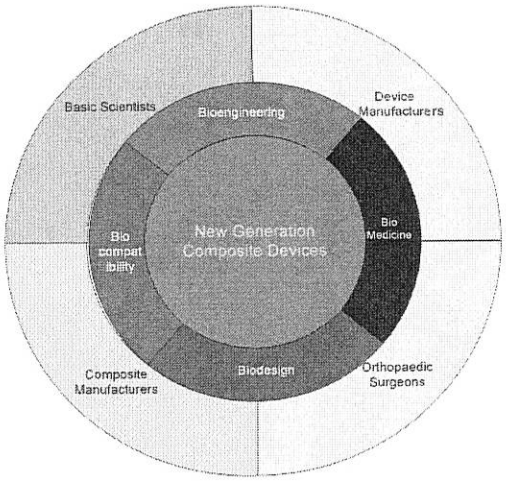




The CIBOR Concept

- Orthopaedic Device Manufacturers are not currently skilled in composites, and Composite Manufacturers are not fully familiar with orthopaedic devices.
- The entity that serves to unite these Industries stands to revolutionize the orthopaedic device world.
- The research skills required to unite composites and orthopaedics are available to multi-disciplined Universities.
- Skills required to <u>implement</u> such advances require Device Manufacturers in partnership with leading Research Medical Establishments.

CIBOR serves to unite two Industries with a common Goal



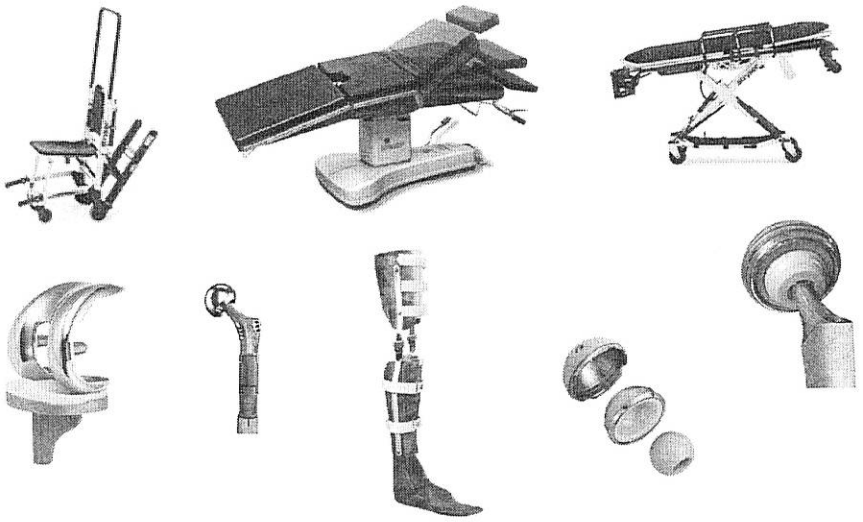
The CIBOR Mission

- Develop a new generation of orthopaedic devices utilizing composite technology
- Adapt NIAR styled relationships between Industry and Academic Institutions
- Provide 'common ground' to promote the interactions of participants from diverse fields
- Place the initial focus upon one class of materials (composites) over a range of devices in one clinical specialty

Industry Driven Translational Research

Orthopaedic Device Manufacturers Composite Manufacturers		
Low Risk Venture FDA Class I Device *Branding*	Medium Risk Venture Class II/Class III Devices *In House*	High Risk Venture FDA Class III Device *Start-Up*
External composite devices such as stretchers and operating room tables.	Rapid external fixation devices designed for military applications. Incremental material improvements to current devices.	Novel in-dwelling devices requiring advances in tissue engineering and nanotechnology.

Range of Devices in Orthopaedics



The Structure of CIBOR

- CIBOR should be a free-standing entity to emphasize 'common ground' and promote face-to-face interactions both with and among the Industry Partners
- In-house Core Laboratories, Instrumentation and Technical Expertise will be available to rapidly facilitate projects
- Laboratories will be available to house University and Industry visiting scientists on a project specific basis. Space will be flexible, emphasizing inter-disciplinary projects

CIBOR – Ideally suited for Wichita.

SPIRIT AEROSYSTEMS

Bombardier

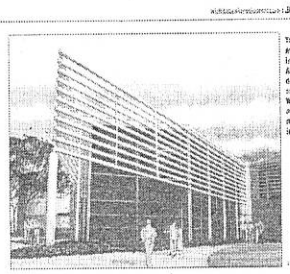
THE NORDAM GROUP

senior

FIBER DYNAMICS INCORPORATED

Cessna

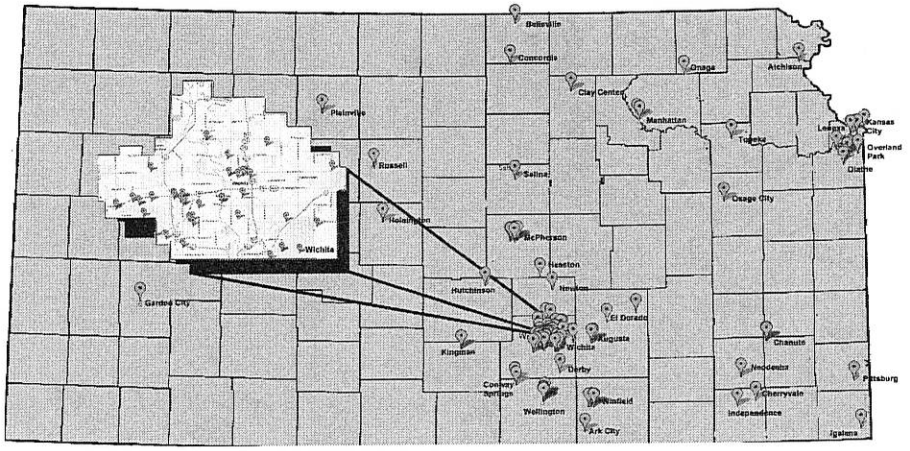
BOEING



The Center for aviation training at Jabara Airport is designed to support Wichita's aviation/ manufacturing industry.

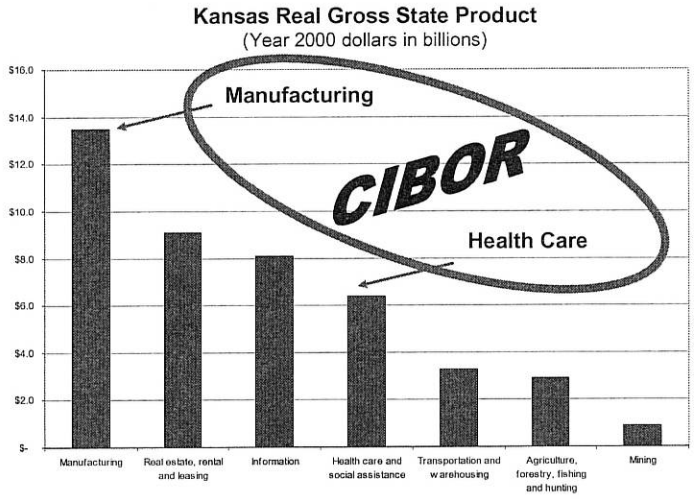
Training center contractor to be chosen soon; ground broken in March

Statewide Array of Composite Manufacturing Facilities

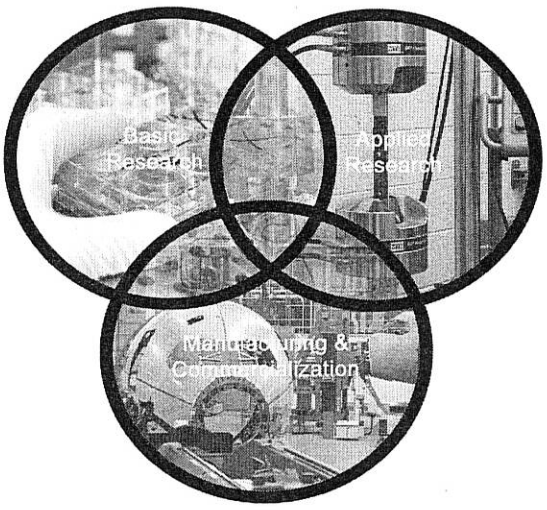


CIBOR Strategic Plan

Unite the Manufacturing and Health Care Industries that Currently Exist within Kansas



Creating Synergy Among the Various Cooperating Entities



Kansas State University researchers

Name	Department	Area of Expertise
Anderson	College of Veterinary Medicine	Bone and Joint Repair with Advanced Polymeric Composite Materials
Klabaunde	Chemistry	Polymer-Nanomaterial Composites, Environmentally-Friendly, Strong Polymers and Bio-Nanocomposites
Sun*	Grain Science	Bio-based Adhesives, Resins, & Plastics, Rheological & Texture Properties of Biomaterials

*Key person – *curriculum vitae* included in Appendix 6

Pittsburg State University researchers

Name	Department	Area of Expertise
Ionescu	Polymer Research Institute	Bio-based polymeric materials, especially polyols & polyurethanes based on vegetable oils
Javni	Polymer Research Institute	Polyurethanes & elastomers
Petrovic*	Polymer Research Institute	Polymer chemistry for plastics & foams
Xu	Polymer Research Institute	Biocompatible & biodegradable polymer materials & bio-nanocomposites

*Key person – *curriculum vitae* included in Appendix 6

ECONOMIC AND FISCAL IMPACT OF CIBOR

ECONOMIC IMPACT: Operations of CIBOR will provide direct earnings gains through wages and salaries of personnel. In estimating the economic impact, the added earnings of personnel are referred to as the "direct" effect, which in turn generates what are referred to as "indirect" and "induced" effects (multiplier impacts). Direct, indirect and induced effects sum to make the total economic effect. For the full report, see Appendix 8.

Payroll Impact: The direct economic impact from payroll earnings for CIBOR was estimated to be $49.3 million over the five-year analysis period 2009 to 2014. The average annual employment associated with CIBOR is 60 employees. Twenty-seven employees will be directly employed by CIBOR and an additional 33 private sector full time equivalent employees were estimated to be engaged in product development. Average annual earnings are estimated at $9.9 million. Indirect and induced economic effects resulted in an additional 49 regional jobs estimated to earn $27.3 million over the five-year analysis period or approximately $5.5 million in average annual earnings. The subtotal impact of jobs and payroll earnings for CIBOR's operations included 109 average annual jobs with average annual payroll totaling $15.3 million.

Construction Impact: The construction of CIBOR will provide additional direct earnings gains to the region through construction wages and salaries. Using construction costs provided by the architect, it estimated that 207 full time equivalent construction-related positions will be needed

to fulfill the construction requirements of the research facility. Construction salaries will provide a direct economic impact of $9 million over the construction period. Taking into account the multiplier impacts, an additional 190 jobs with an estimated payroll of $7 million will be supported during the construction phase. Summing the direct, indirect and induced impacts, the total impact of CIBOR's construction will generate 397 jobs with an estimated payroll of $16 million.

Visitor Impact: The economic impact of CIBOR will extend beyond payroll earnings. Additional spending occurs as a result of the many visitors who will come to the region for the research center.

TOTAL ECONOMIC IMPACTS OF CIBOR OPERATIONS 2009-2014	
Payroll Earnings (60 jobs)	$49,271,851
Indirect and Induced Payroll Earnings (49 jobs)	$27,262,116
Construction Earnings (207 full time equivalent construction-related positions)	$9,000,000
Indirect and Induced Construction Related Earnings (190 construction related jobs)	$6,983,100
Visitor expenditures subject to retail sales tax	$2,018,250
Visitor expenditures subject to transient guest tax	$526,500
Total Economic Impact	**$95,061,817**
Average Annual Economic Impact for the period of 2009 through 2014	**$19,012,363**

FISCAL IMPACT: Investments in research and development typically have a long-term payoff period that extends far beyond the five-year horizon of this analysis. The intellectual property, patents, and commercialization payoff for the Kansas Bioscience Centers of Innovation will provide economic, fiscal and social impacts for generations to come. Please note that the fiscal impacts for the five-year period provide an incomplete analysis of the overall impact of CIBOR.

SUMMARY STATEMENT

This proposal describes the economic potential for diversification of the composite manufacturing cluster in Kansas to include medical devices. To be included in this case for investment are the following salient features, which are already in place: 1) A high-performing and interested collection of manufacturers with the wherewithal to produce medical devices; 2) A capable and interested healthcare community with the ability, the highly-skilled personnel, and the professional connections to bring medical device manufacturing to Kansas; 3) A research university with a proven model for building partnerships with industry and for nurturing successful R&D interactions with the manufacturing cluster. The largest part of the economic potential of this proposed diversification lies in buffering this valuable cluster from the effects of a downturn in aircraft manufacturing or from its cyclic nature. What is needed at this point is investment to bring these available forces to bear on the task of achieving this diversification.

In closing, one more economic study can be called upon to speak to the potential of this plan for effectiveness. A study by Attila Varga, entitled "Local Academic Knowledge Transfers and the Concentration of Economic Activity," provides several relevant concepts that support the CIBOR business plan. An analysis of economic growth in the U.S. and the U.K. due to high tech industries revealed that the agglomeration ("critical mass") of companies and employees in a metropolitan area is the most important factor in locating economic growth in a state or region. The study's formal analysis showed, for the first time, that spatial concentration is the quintessential element to "local academic knowledge transfers," leading to a "spillover effect" that economically benefits the broader region. These results suggest that "strengthening universities in order to advance local economies may be a good option in relatively well-developed areas, but that same funding strategy will likely founder in less-developed metropolitan areas.

In that study, Wichita is the top-ranked cluster in Kansas – surpassing metropolitan Kansas City. What makes the CIBOR smart as an economic revitalization strategy is its linkage to WSU's skills and resources with pertinent companies and employees that are already concentrated as geographic neighbors. When combined with Via Christi Health Systems, that proximity positions CIBOR to achieve the full economic impact of both university and business R & D, which, according to the study, is quadruple the impact university from university R & D alone. By building its business around those existing industries and their interest in diversification, CIBOR raises the likelihood of knowledge transfer from Kansas' various universities to strengthen existing businesses and attract new manufacturing industries here.