

What is AKIN?



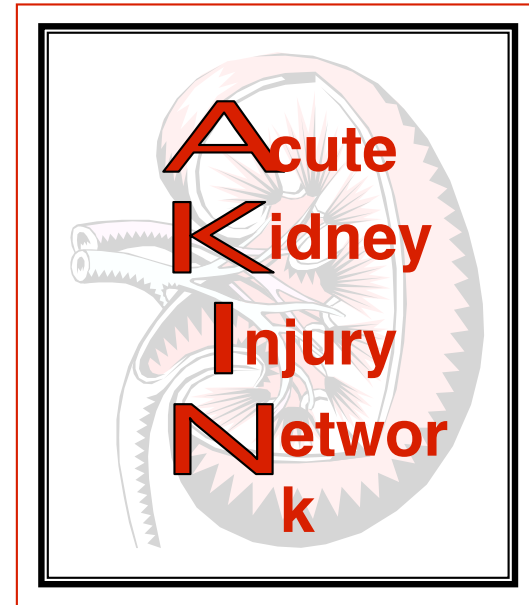
- **AKIN is primarily an international network of researchers with a focus on improving outcomes from Acute Kidney Injury.**



Why AKIN?

- **AKI is emerging worldwide as an important disorder with significant effects on patient outcomes**
- **While individual efforts have informed our current knowledge of the pathophysiology, natural history and outcomes from AKI; progress in diagnosis, prevention and therapy for AKI has been limited.**
- **We believe that a concerted, world wide, interdisciplinary collaborative approach is required to improve our understanding of AKI and develop strategies to manage this disorder.**

AKIN: Mission



The mission of AKIN is to develop and facilitate international and interdisciplinary research initiatives in the diagnosis, prevention and treatment of acute kidney injury (AKI).

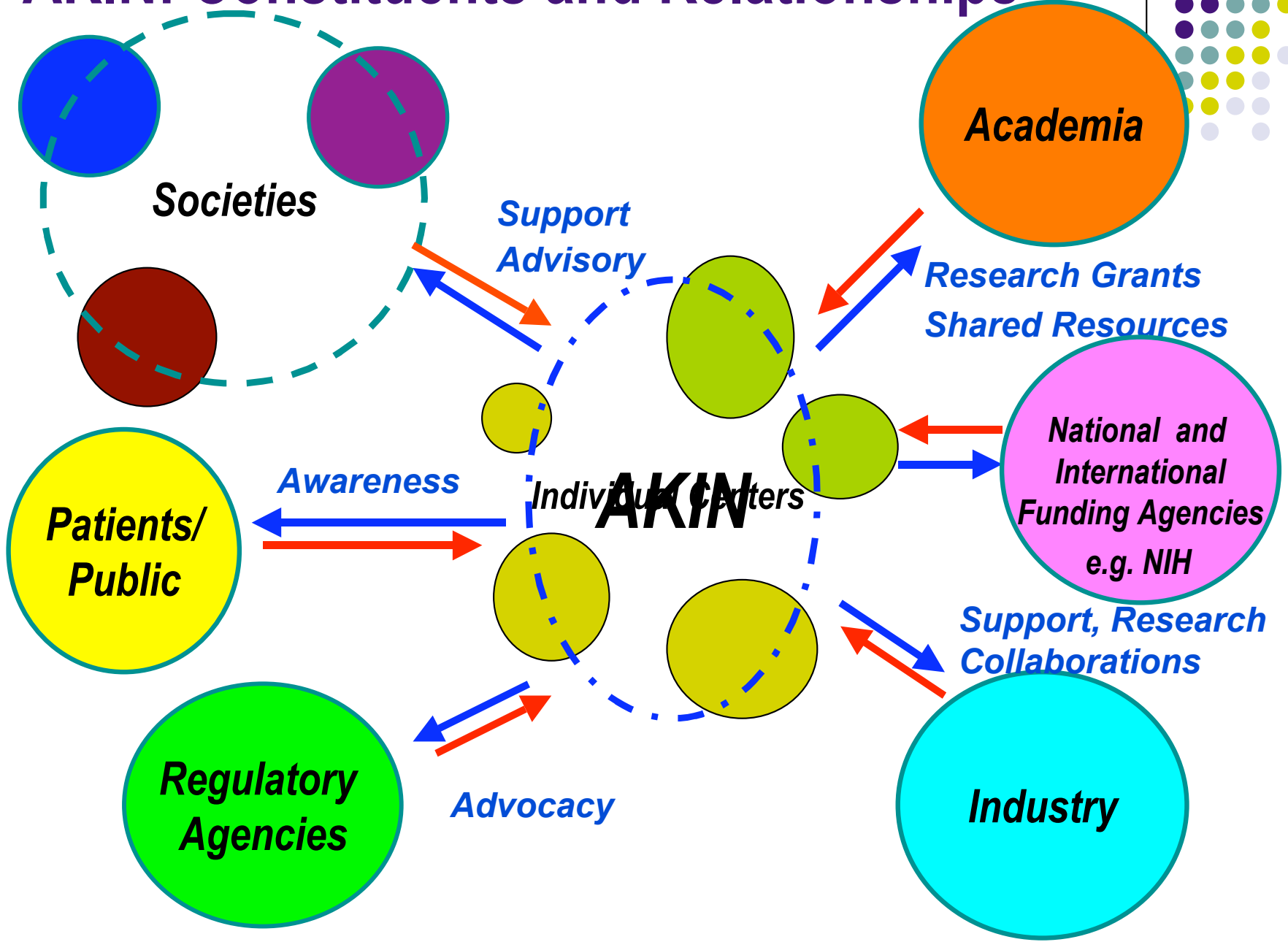
The ultimate objective is to improve patient outcomes from AKI.

AKIN: Objectives

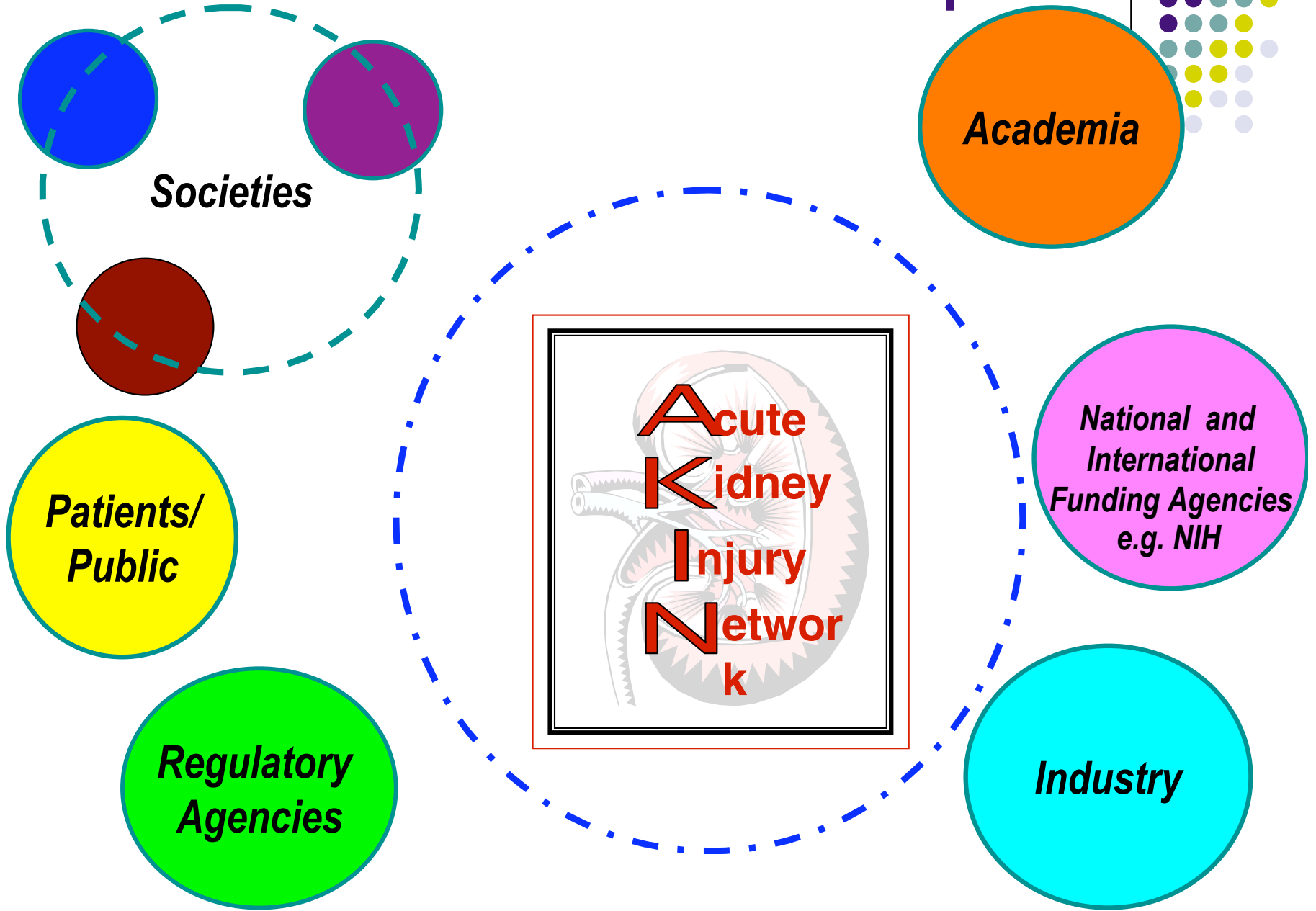


- Develop and facilitate research initiatives related to AKI
- Provide a forum for discussion and a mechanism for collaboration between all parties interested in AKI
- Facilitate improvements in standardization of clinical practice in the diagnosis, prevention and treatment of AKI.

AKIN: Constituents and Relationships



AKIN: Constituents and Relationships



AKIN Organizational Structure



- **Advisory Committee**

- Advise the Executive Leadership on the following:

- Relationships with Societies
- Relationships with medical industry and integration of such partners into this research collaborative,
- Scope of Services
- Communication

- **Model**

- Chair
- Members nominated by Member Societies
- Experts

AKIN Organizational Structure



- **Executive Committee**
 - Responsible for defining overall objectives for AKIN
 - Establish Policies and Procedures to achieve objectives
 - Obtain and maintain adequate funding to support Network activities
 - Model
 - Executive Chair
 - Members

AKIN Organizational Structure



- **Operations Secretariat**

- Responsible for running and coordinating AKIN activities
 - Website (portal, content)
 - Database services
 - Conferences
 - Publications
 - Liaison
- Supported through AKIN budget
- Office Space and infrastructure

AKIN: Key Activities



- Repository of information (about researchers, research activities etc.)
- Collaboration/ information transfer between researchers internationally
- Communication with a unified voice for advocacy and other activities (eg FDA acceptance of various biomarkers as clinical trial endpoints, etc)
- Consultation (for industry/ societies and researchers)

AKIN: Potential Resources To Be Provided



- Collaborative network members willing to participate in research in AKI
- Repository of information (Web Portal)
 - What research needed
 - Who can do it
 - Who can fund
- Provide a forum for focused attention on AKI
 - Research Meeting
 - Consensus statements
 - Newsletter

AKIN Web Portal: <http://www.akinet.org>



Acute Kidney Injury Network

About Us Upcoming Events Industry Links Contact Us Search

Moving the clinical, research and educational aspects of AKI forward

Welcome to the

ACUTE KIDNEY INJURY NETWORK

AKIN (Acute Kidney Injury Network) represents an international interdisciplinary group of adult and pediatric nephrologists and critical care physicians, and others interested in Acute Kidney Injury (AKI).

The intended products are joint agenda from the groups that will move the clinical, research and educational aspects of this field forward. We anticipate that in this collaborative effort interested groups and experts worldwide will facilitate the advancement of knowledge that will ultimately result in evidence based practice recommendations that can be used to improve the care of patients with AKI.

[Join AKIN](#)

IN REVIEW

**Acute Kidney Injury: Emerging Concepts
WCN Satellite Symposium**
April 26-28, 2007, Salvador, Bahia (Brazil)

The program covered the most important advances in the pathophysiology and clinical aspects of AKI, as well as recent developments in renal replacement therapy. In addition, topics such as Acute Lung Injury, Mechanical Ventilation, Hemodynamic Monitoring and New Strategies on Sepsis Management were addressed.

[more info](#)

Invitation to Participate

Do you have a study which is designed to answer key questions in AKI?

Do you wish to participate in ongoing studies?

Would you like to monitor studies currently being developed to measure the incidence, prevalence, risk factors, treatment and outcome of AKI?

Centers around the world are being invited to participate in this multinational study group so participation at any level is encouraged.

[more info](#)

id
pw
 [Need Help?](#)

Join AKIN

AKIN Studies

Protocols

Member Forum

Publications

Newsletter

Member Societies

Home

AKIN: Funding



- **Infrastructure Support**
 - Society Grants
 - Foundation grants
 - Industry grants
- **Operations**
 - Project Specific
 - Research studies
 - Industry
 - Other granting agencies
- **AKIN Activities**
 - Annual Research Meeting

AKIN: Advantages



- Focused attention on AKI
- International collaboration
- Open to all
- Leverage strengths of participating societies
 - Credibility
 - Interdisciplinary approach to patient care and research
 - Dissemination of information
 - Adoption of recommendations

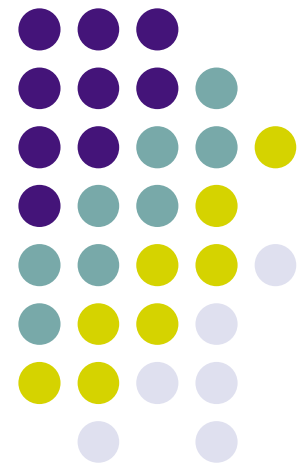
AKIN: Measures of Success



- Research for new knowledge that can be applied to clinical care
- Worldwide collaboration and involvement
- Adoption of recommendations in clinical practice
- Standardization of clinical care
- Faster trajectory for implementation of findings than current standards
- **Improved outcomes of patients with AKI**

AKIN: Update on Activities

A Levin MD FRCPC
University of British Columbia
Vancouver Canada



Acute Kidney Injury Network



- Networks of researchers
 - Interdisciplinary
 - Multi-national
- Publications re: AKI over last 2 years
 - Extensive and varied
- Conferences/ Meetings AKIN last 2 yrs
 - Amsterdam, Vancouver
 - ASN @ San Diego, San Francisco

Who and What



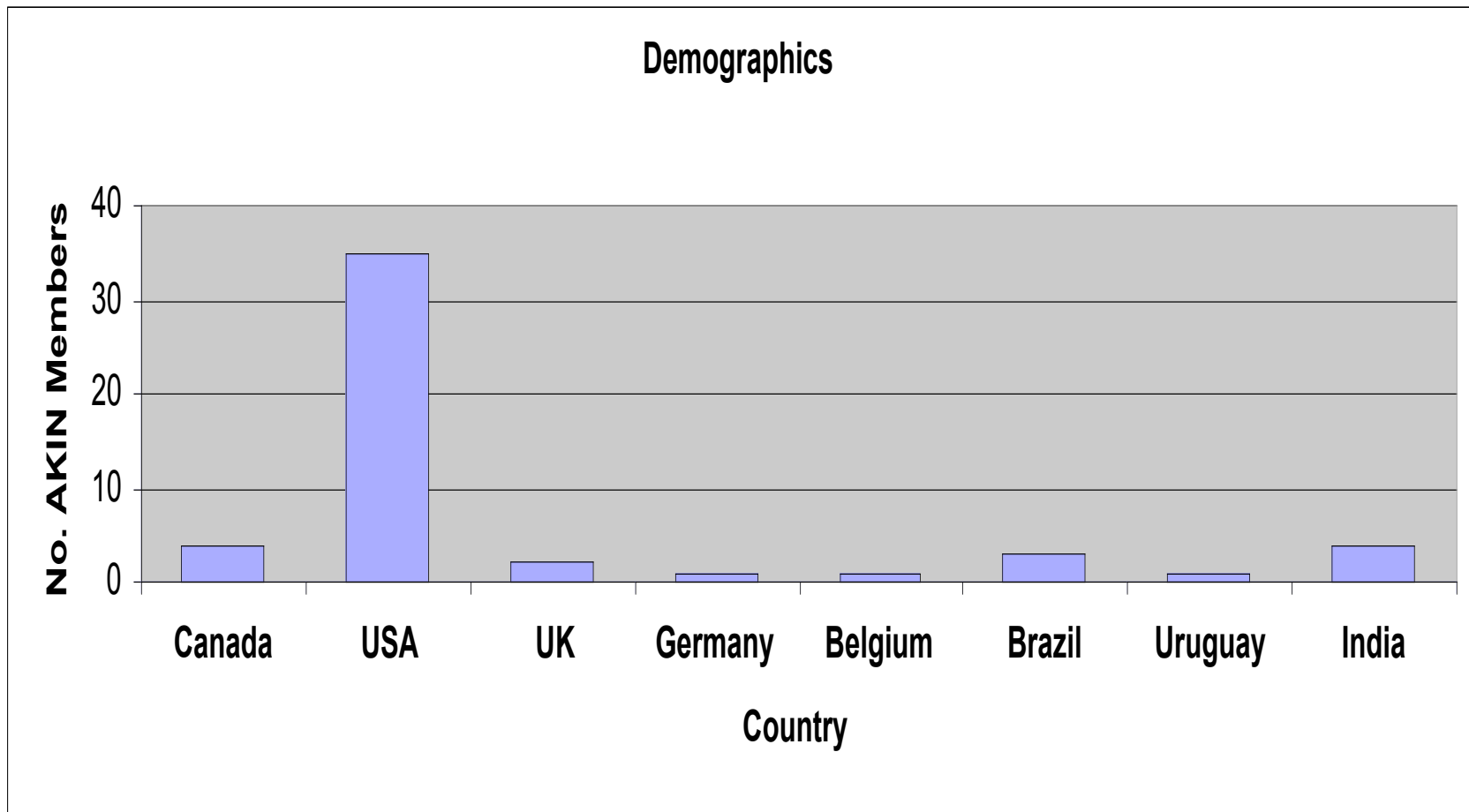
Results of survey to delineate human and research resources available through AKI Network.

Survey Results

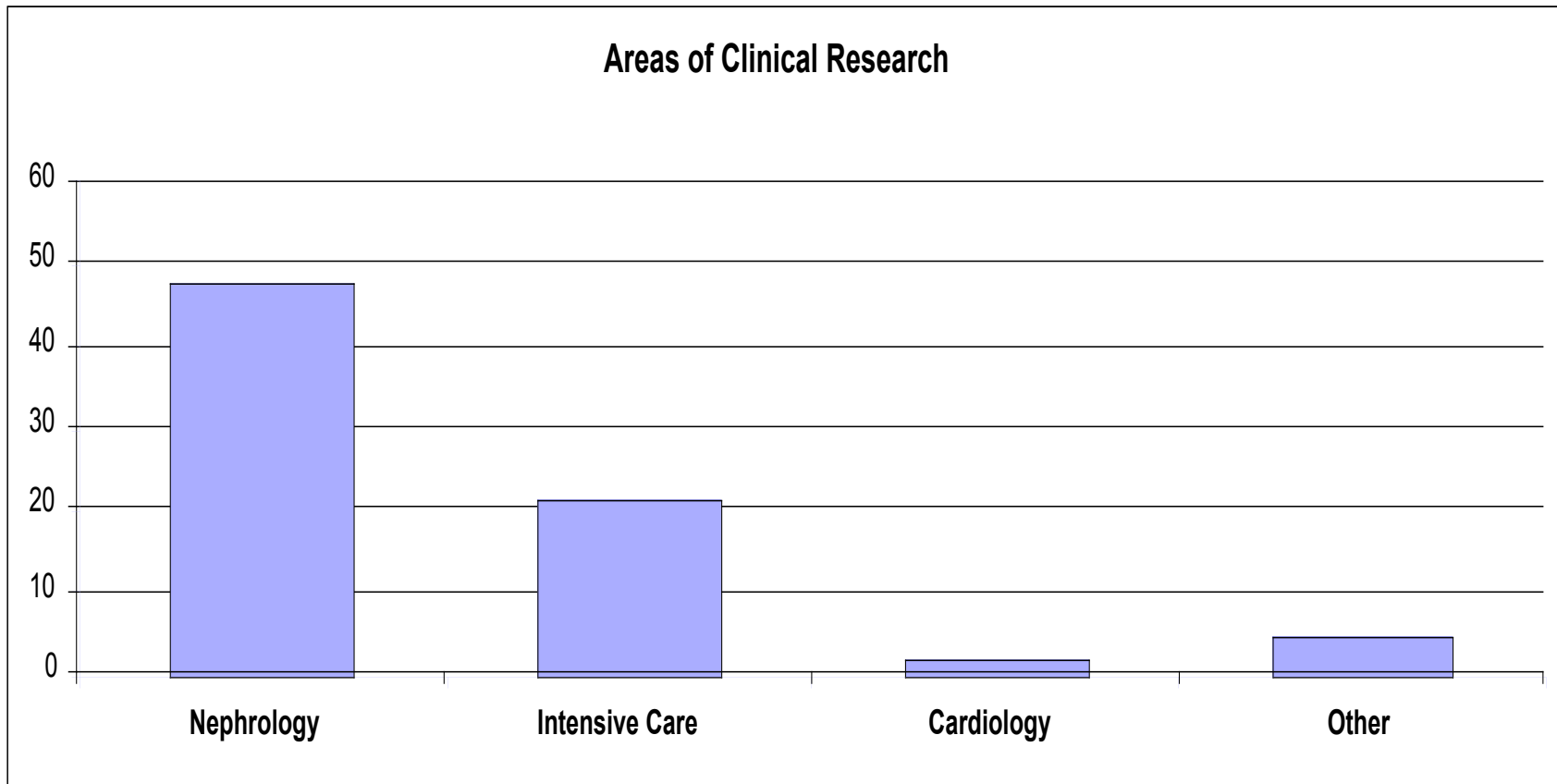


- Sent to 75 individuals
- 69% response rate (52/75) after 1 week

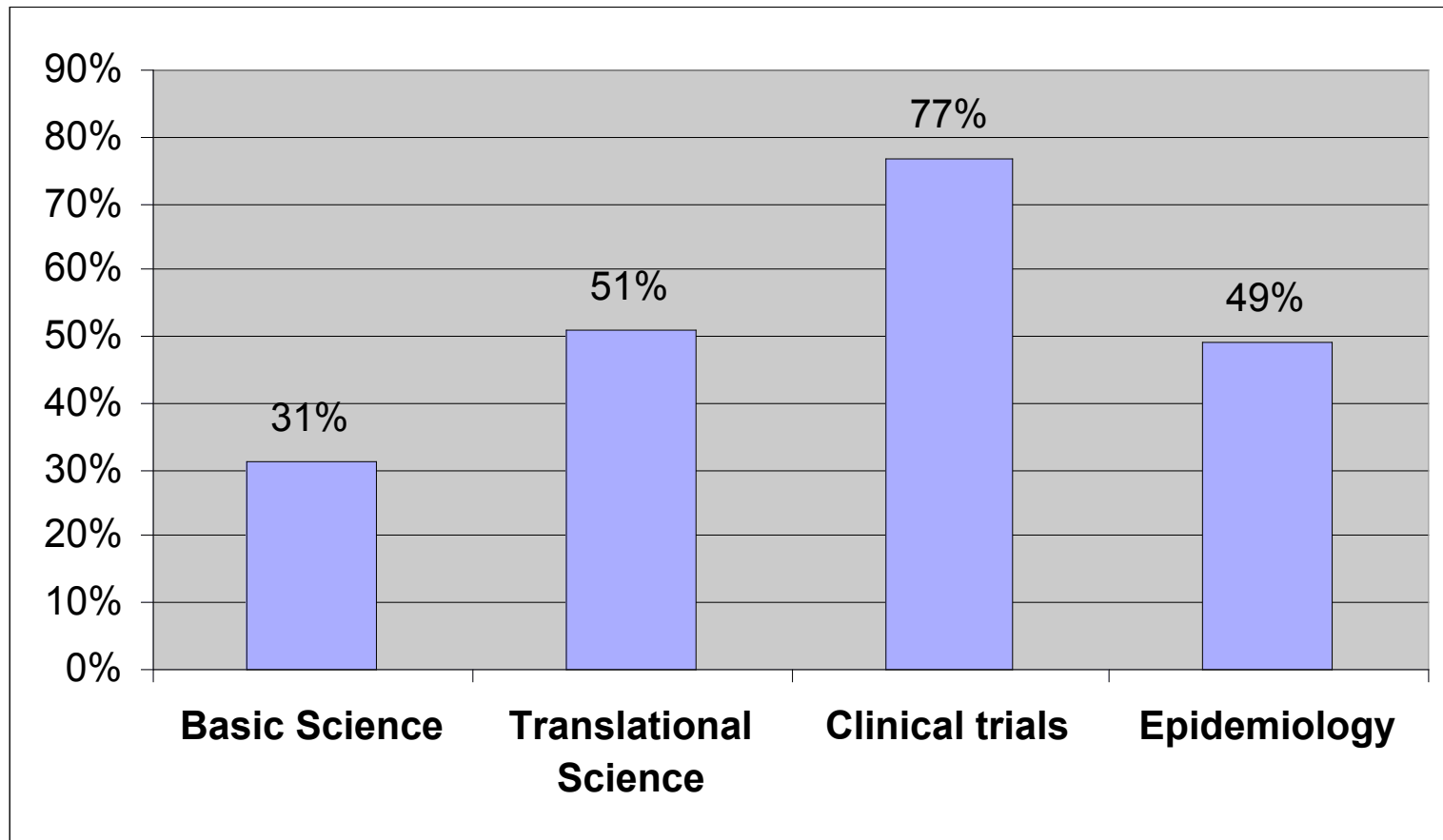
Location of AKIN Members



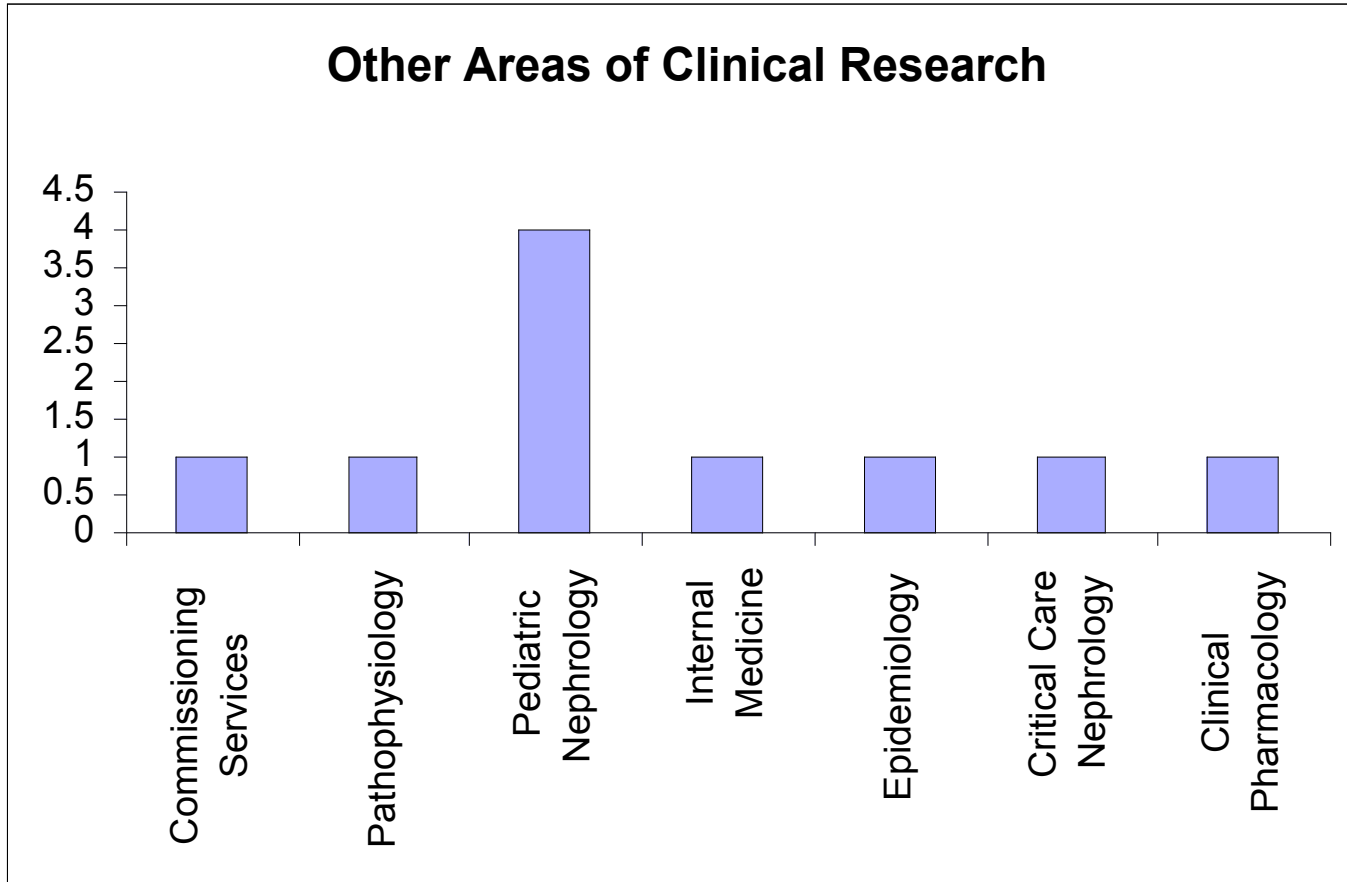
Areas of Clinical Research



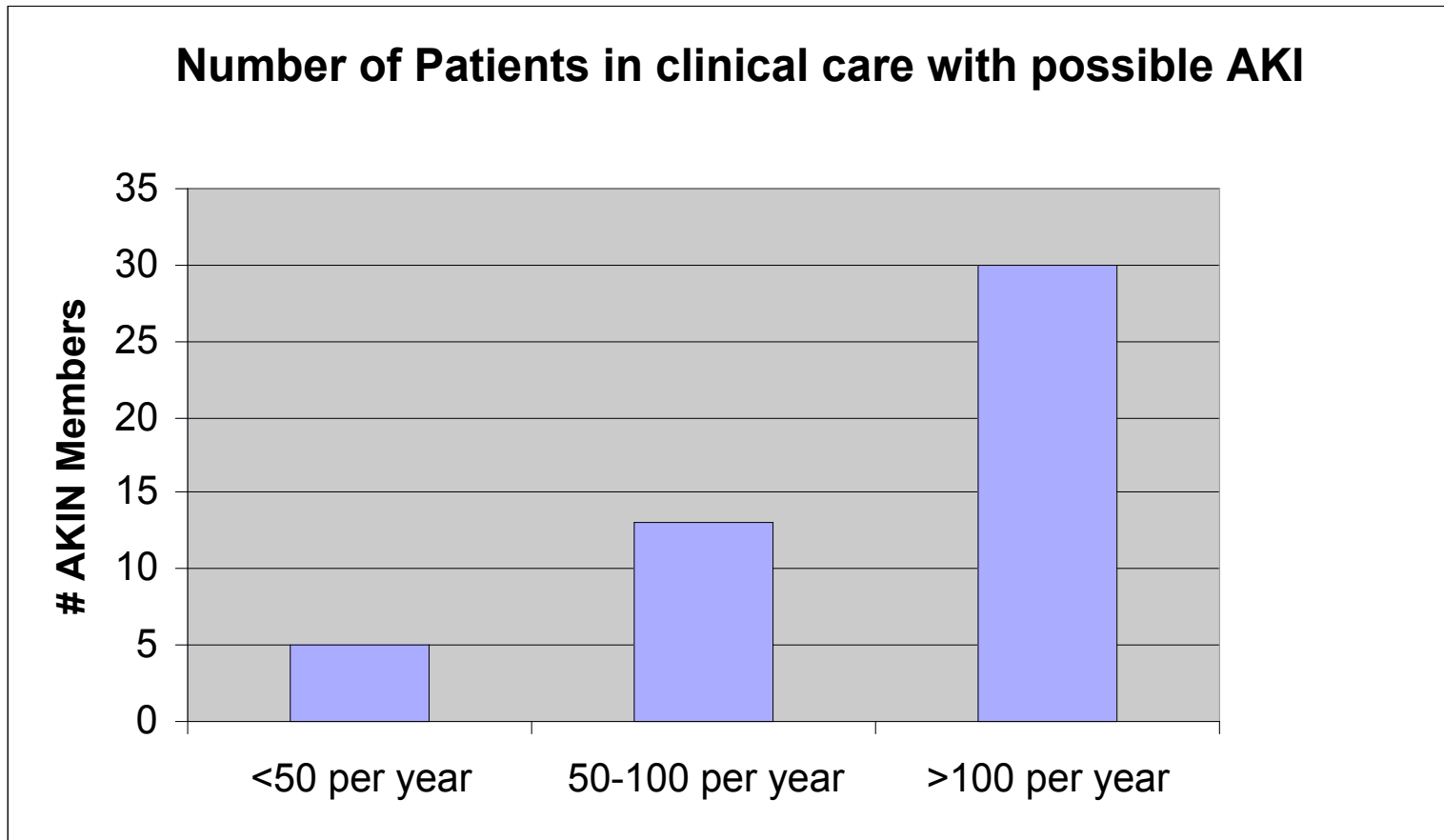
Areas of Research Interest



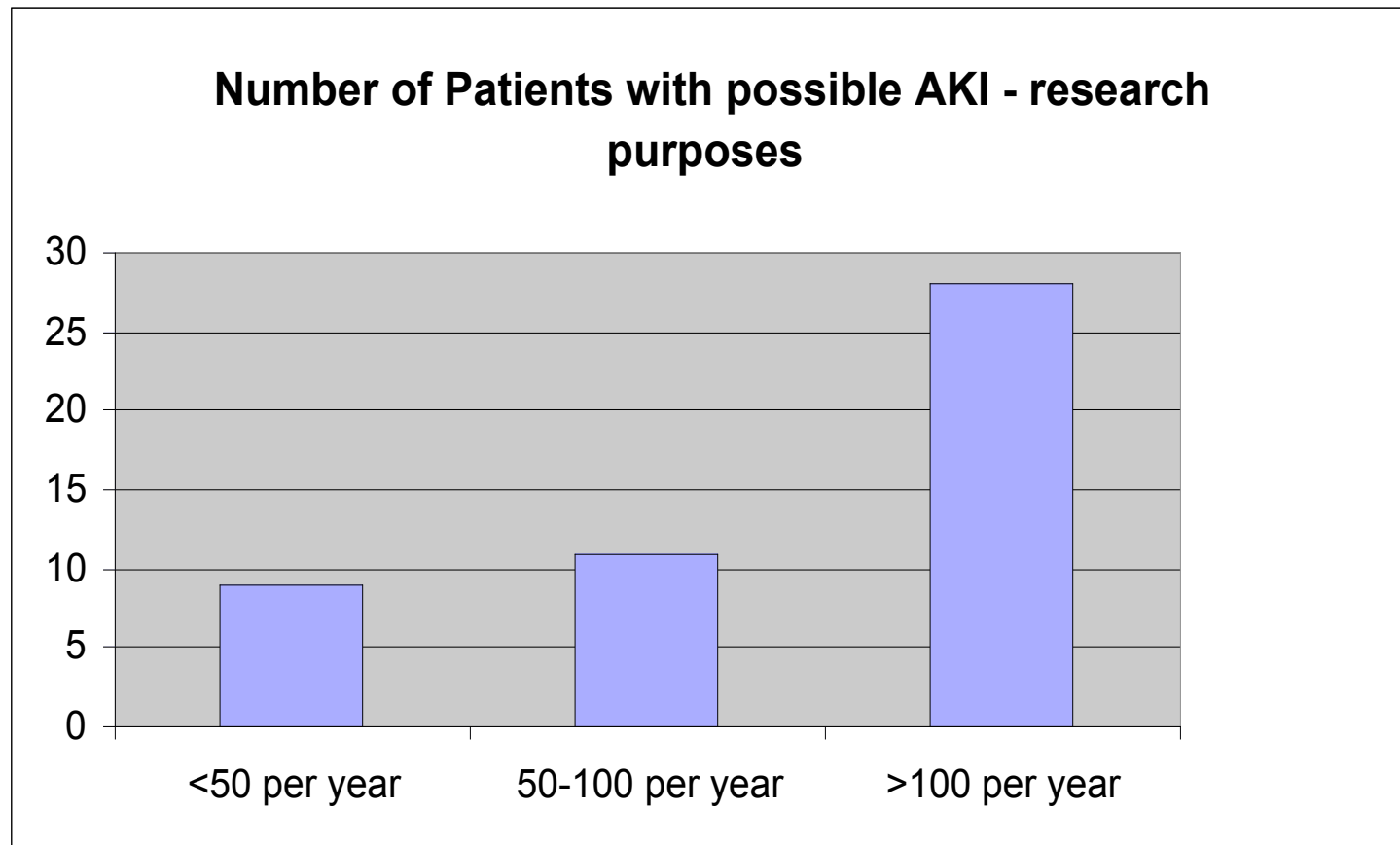
Other Interests in Clinical Research



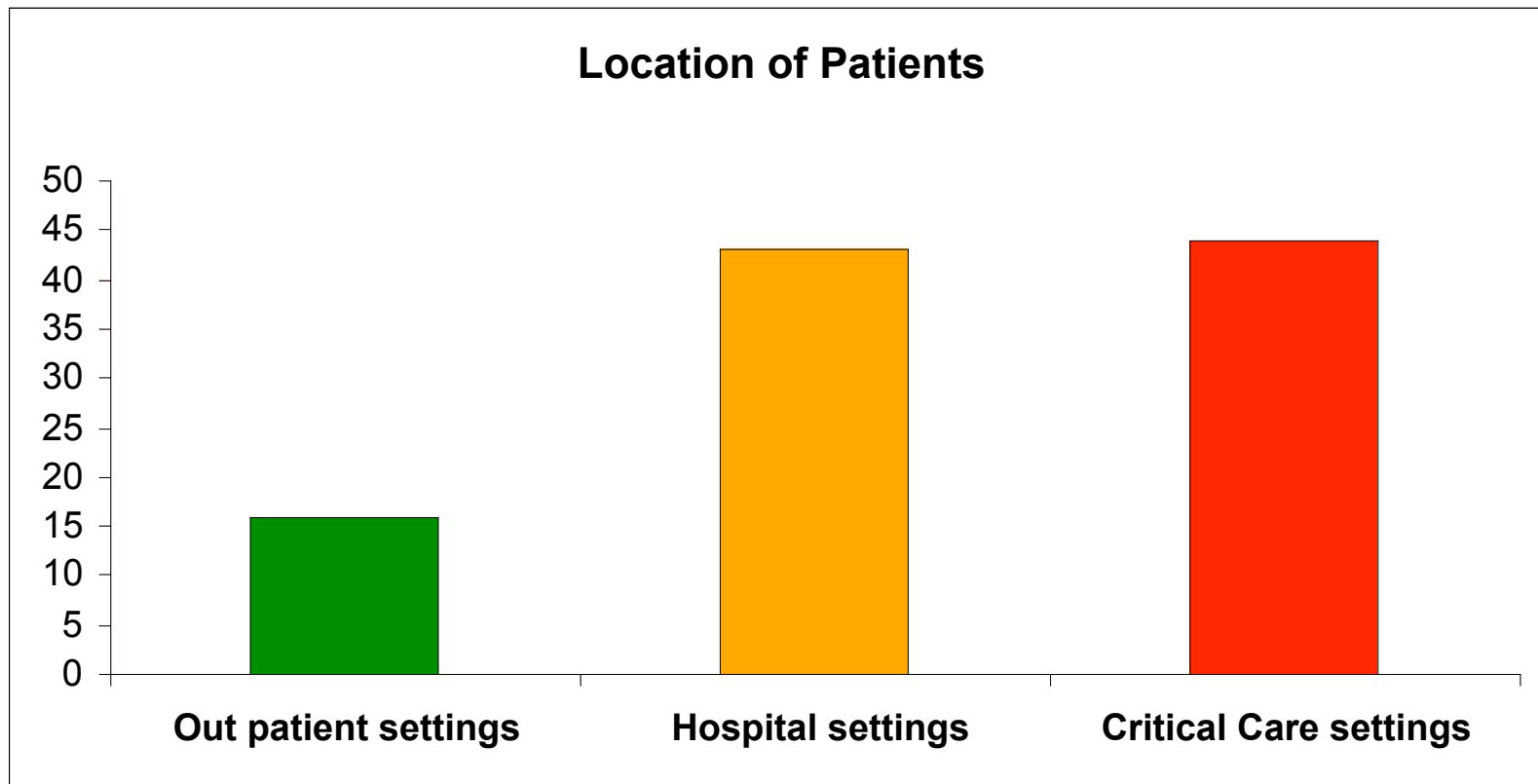
Access to Patients - Clinical



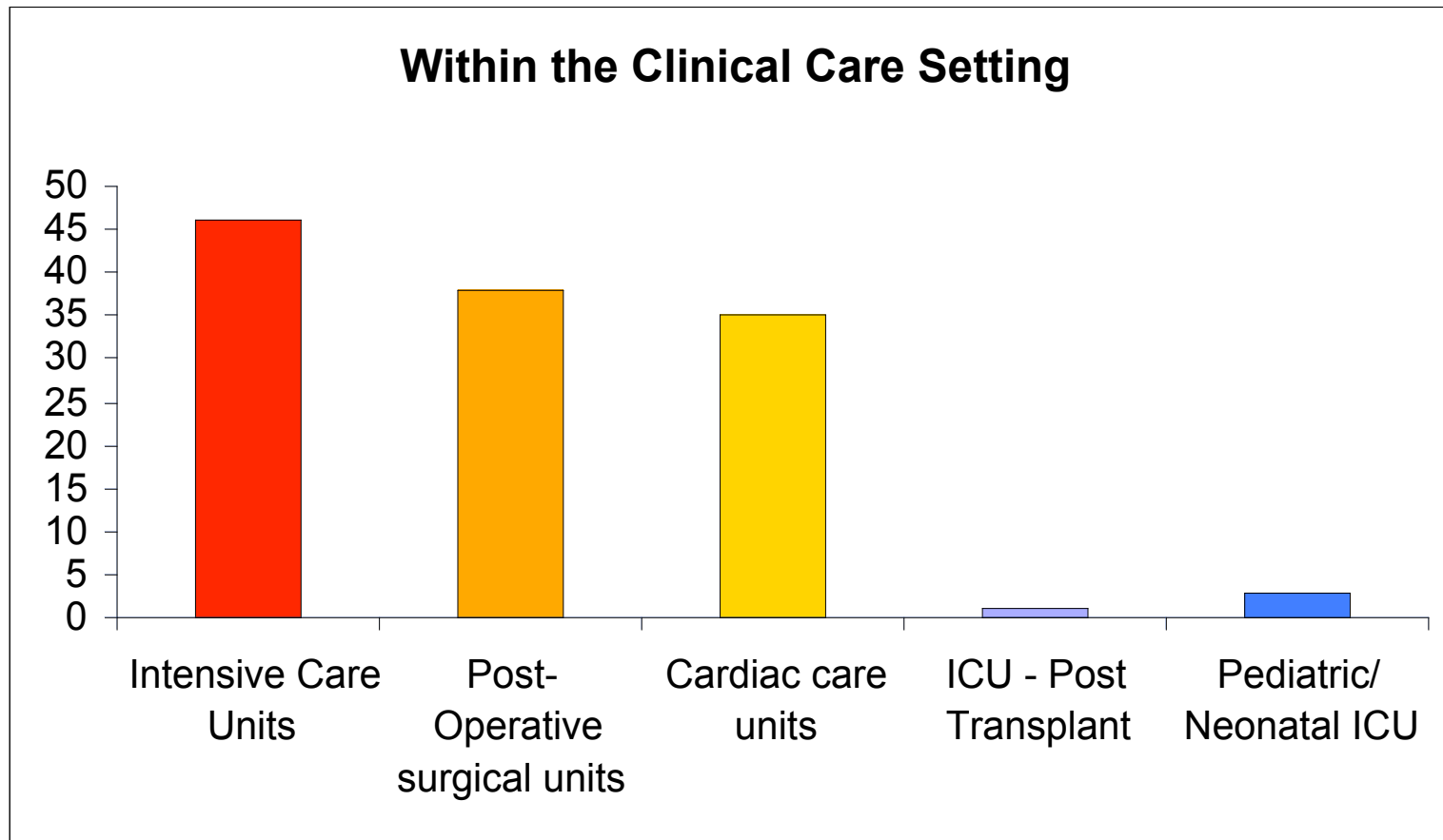
Access to Patients - Research



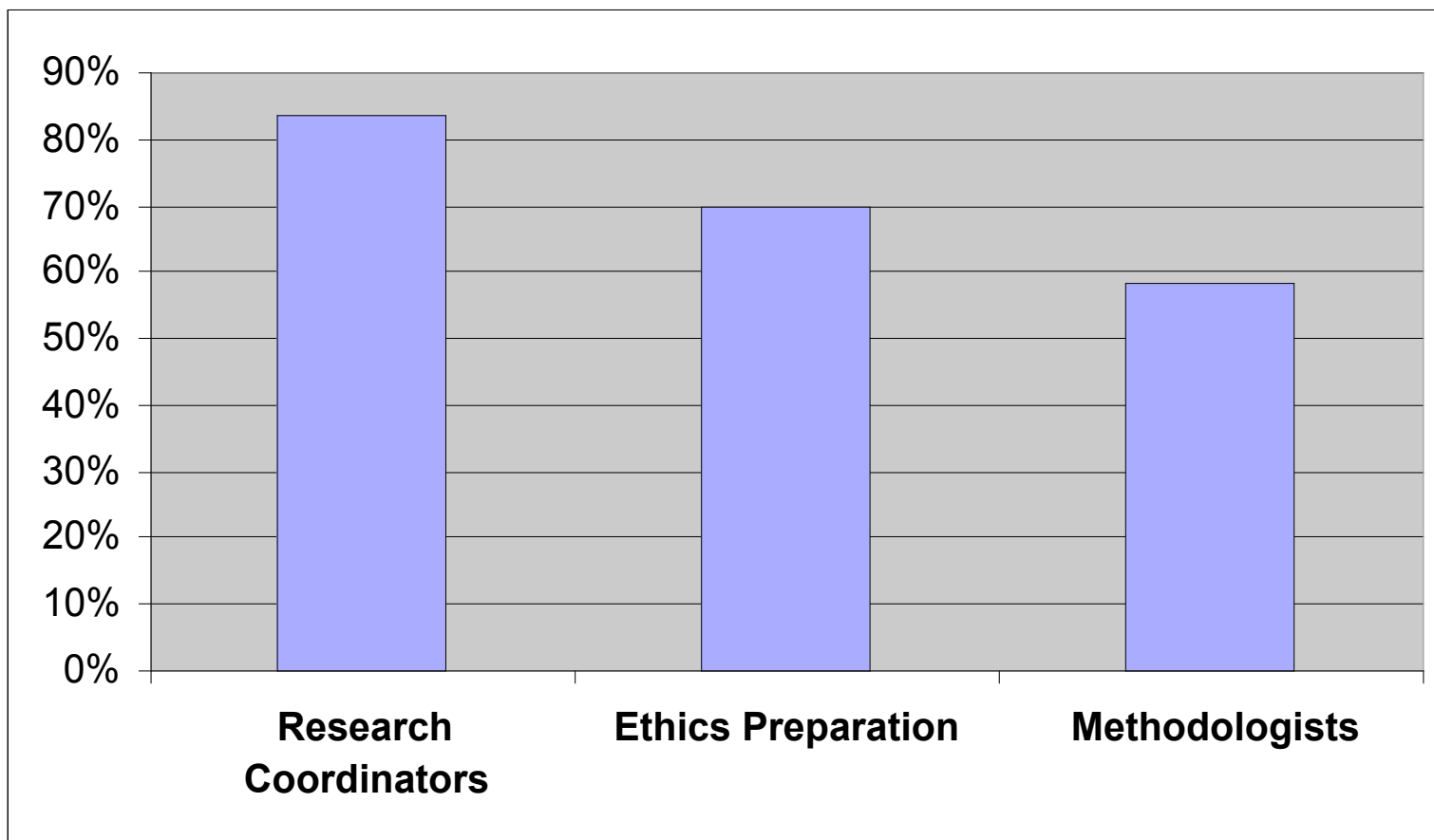
Location of Patients



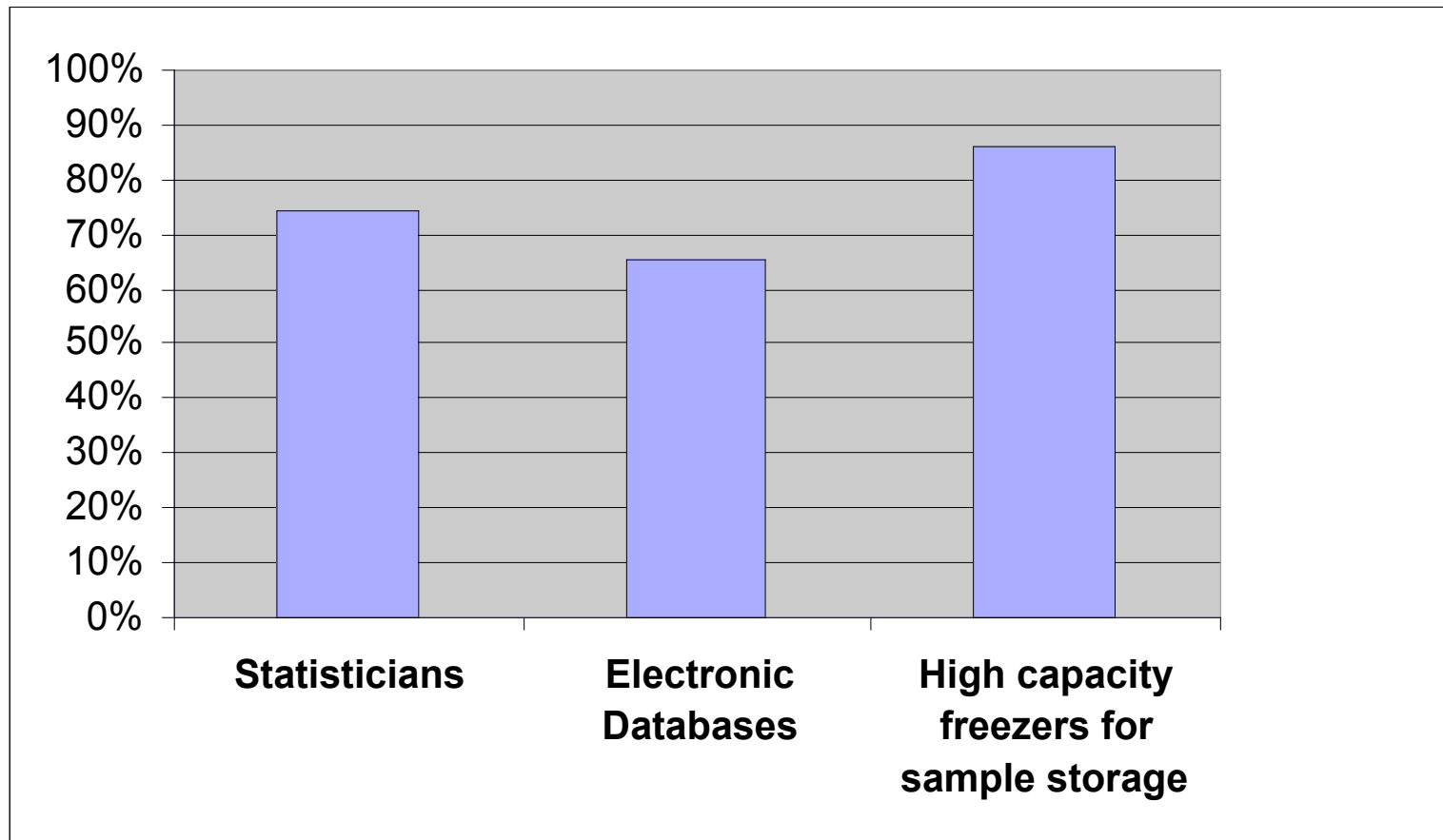
Location of Patients – within Clinical Care Setting



Research Resources Available



Research Resources – Cont'd

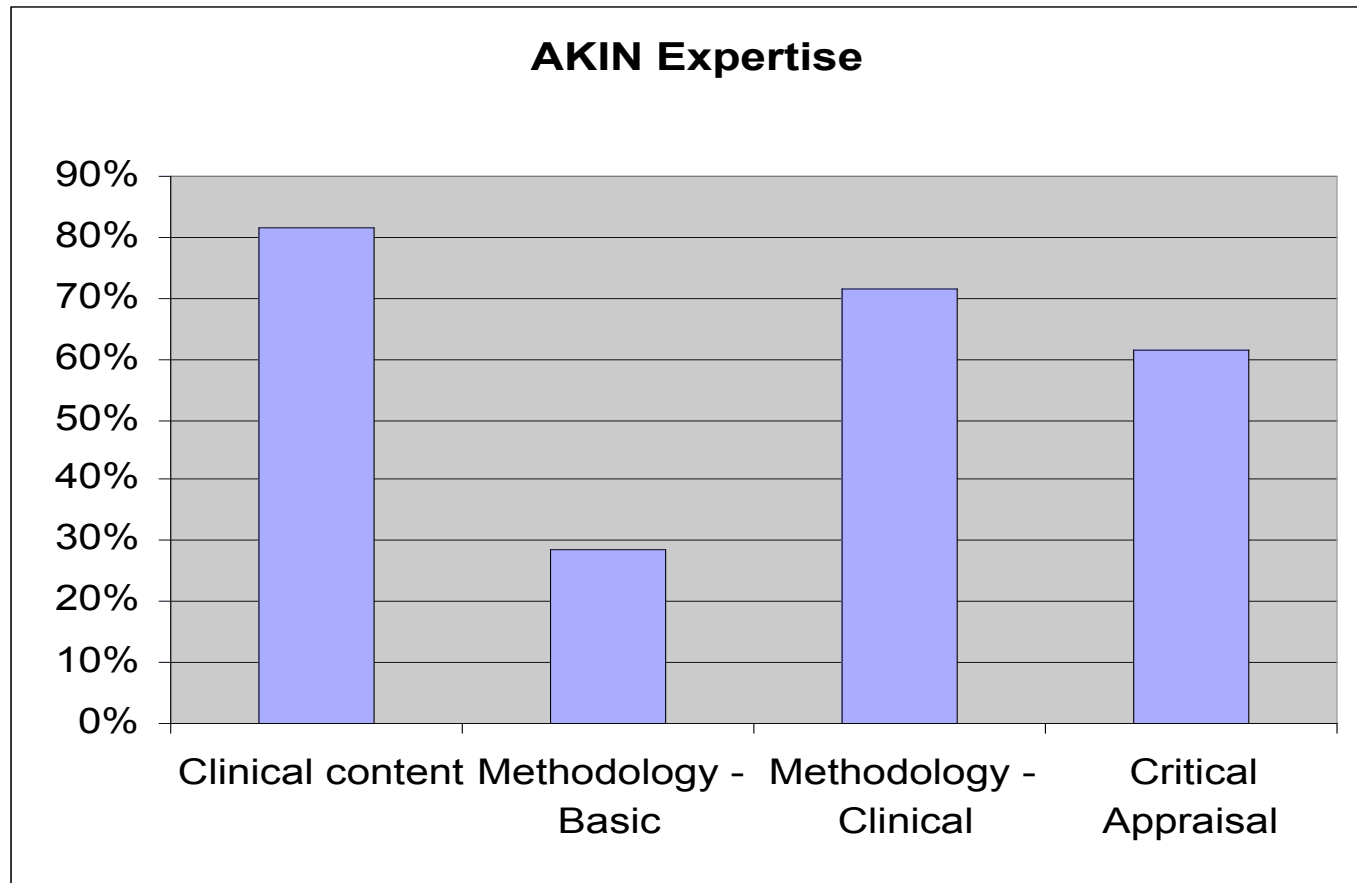


Other Research Resources

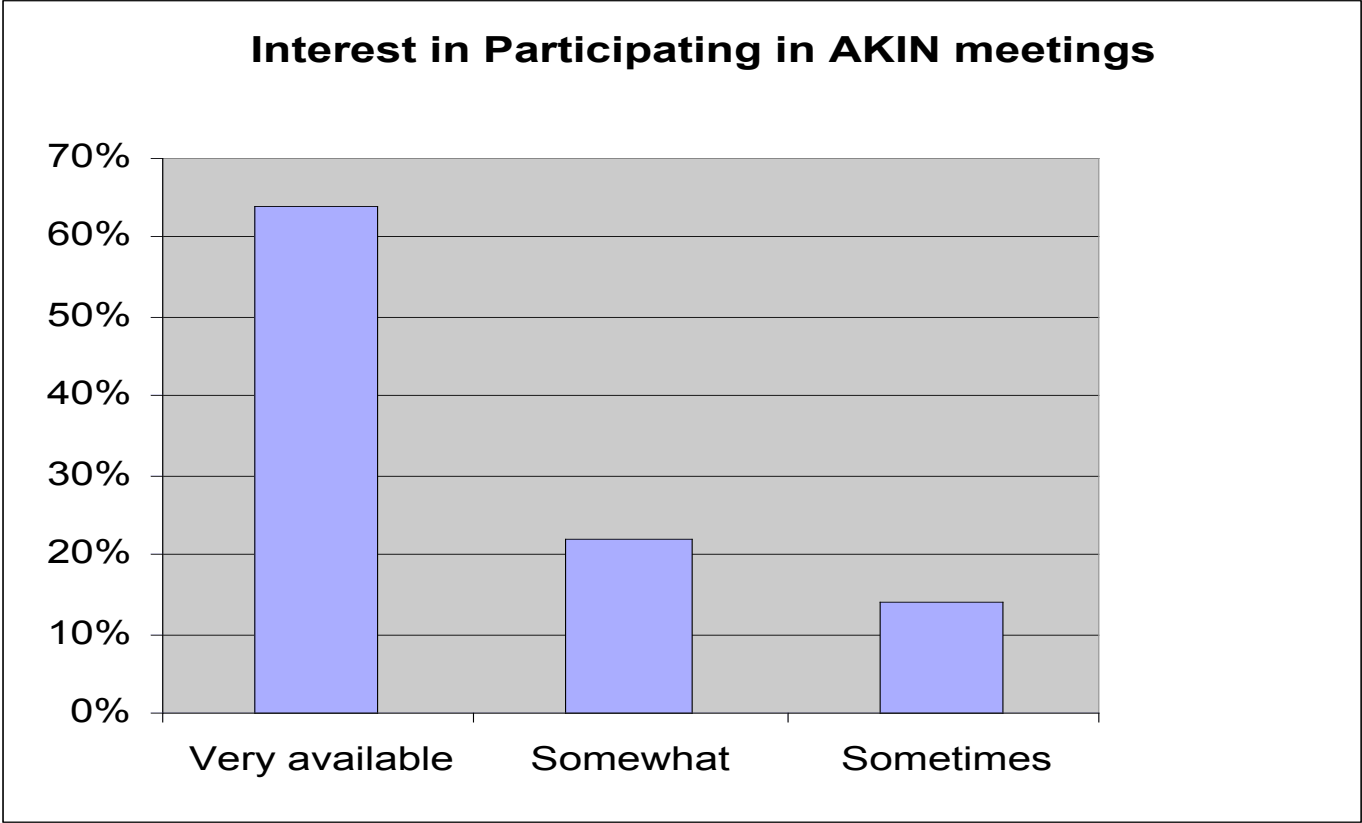


- Basic Science Labs
- Biomarker Profiling Lab Techniques
- Research Nurse

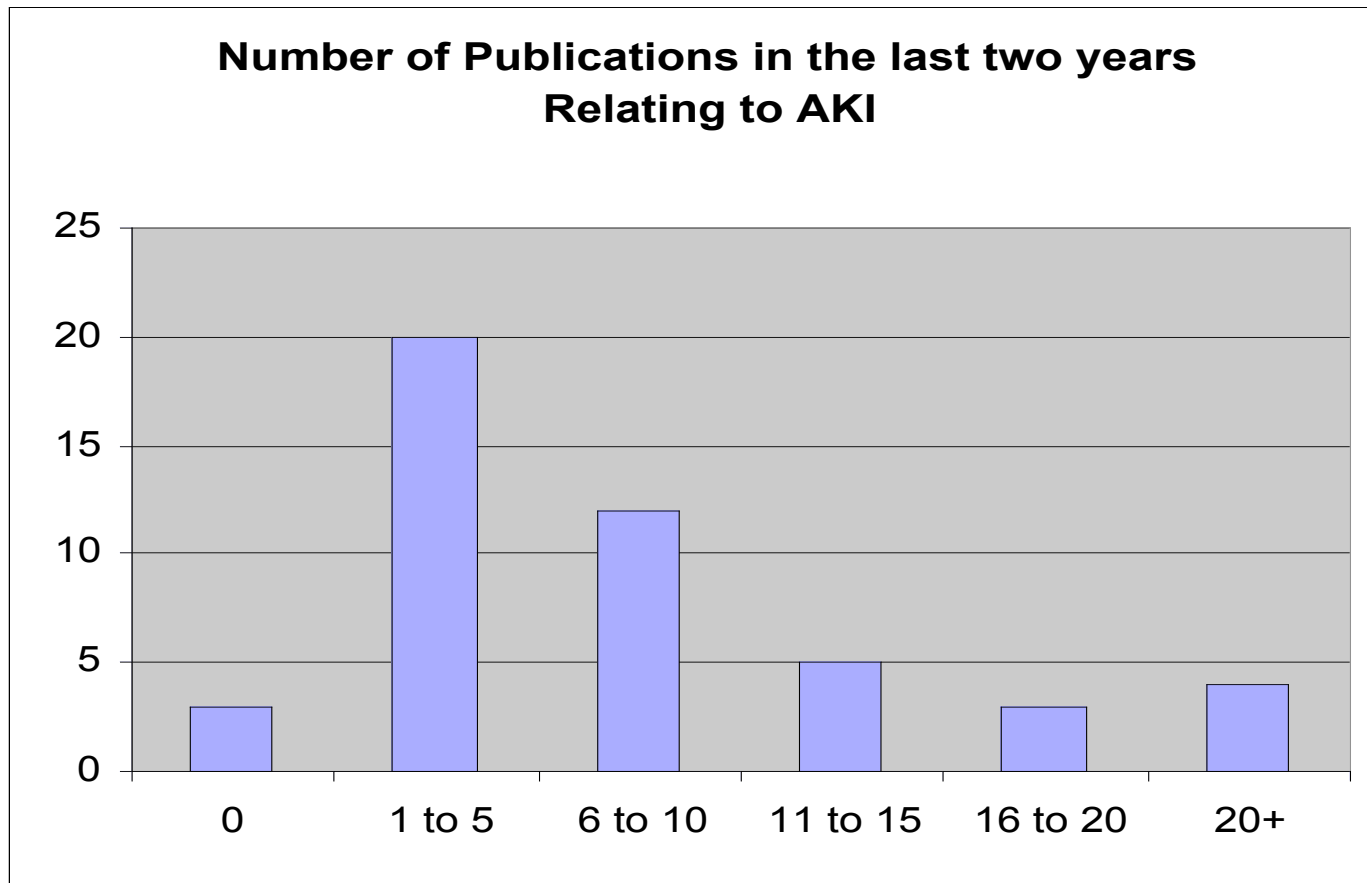
Expertise



Interest in Participating in Meetings



AKIN Members' Publications



Acute Kidney Injury Network Specific Publications



Mehta R, Kellum J, Shah S, Molitoris B, Ronco C, Warnock D, Levin A, for the AKINetwork_Acute Kidney Injury Network: Report of an initiative to improve outcomes in acute kidney injury Critical Care 2007, 11:R31

Editorials/ Reports in other journals

- Paediatric Nephrology
- Nature Clin Pract Neph (KI) + Accompanying editorial
- JASN
- AJKD
- Int J Artif Organs
- Translations/ Publications
 - Chinese

Acute Kidney Injury Network* Pending Publications, submitted



Cerda et al	Epidemiology of AKI
Davenport et al	Delivery of Renal Replacement Therapy
Gibney et al	Timing of Initiation of Dialysis therapy
Himmelfarb et al	Evaluation and Initial Management of AKI
Kellum et al	AKIN Delphi Process: Research Agenda Development
Murray et al	Criteria for AKI Diagnosis and evaluation

* Output of Vancouver Meeting 2006

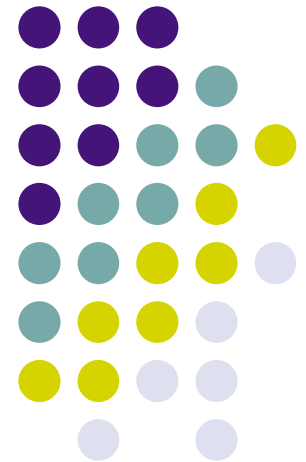
Acute Kidney Injury Network



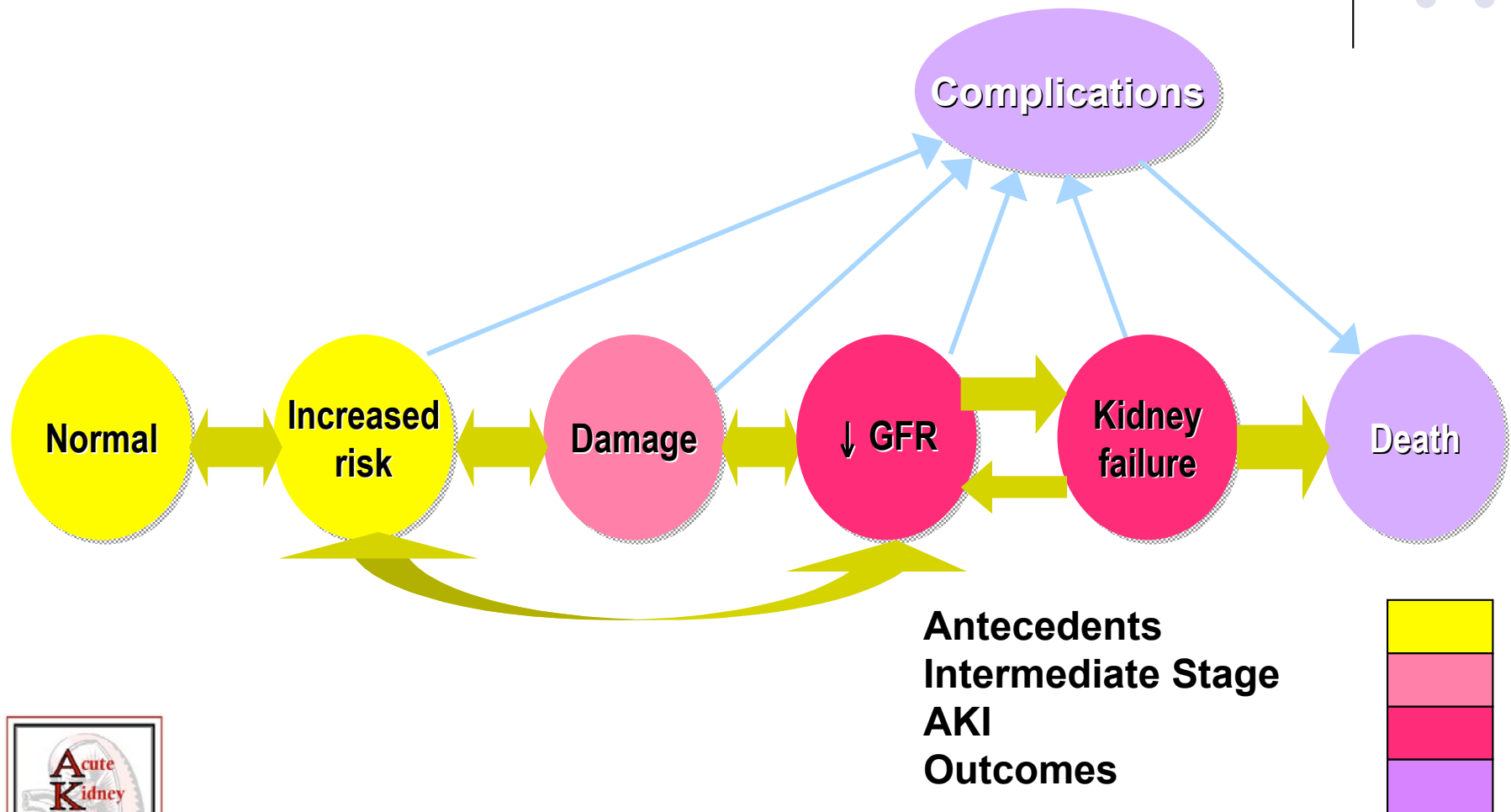
- Clinical and basic researchers
- Diverse interests and resources
- International and interdisciplinary
- Different environments and focus
- Opportunities for leveraging, collaborations and comparative studies

AKIN: Update on Research Agenda

John Kellum MD
University of Pittsburgh



Conceptual Model for AKI



Research Questions in AKI



Epidemiology

What is the incidence of AKI?

Does AKI lead to CKD?

Does severity of AKI predict renal and non-renal clinical outcomes?

What is the economic cost of AKI?

Diagnosis and non-dialytic management of AKI

Are there biomarkers that predict severity and recovery in AKI?

What are the markers of kidney damage that predict the development and severity of AKI, as defined by low GFR with or without oliguria?

What is the best measure to assess whether AKI is volume responsive?

What is the best measure to assess the optimal volume status in AKI patients?

Do other GFR markers predict clinical outcomes better than serum creatinine?

Is there a difference in prognosis between volume response and volume non-responsive AKI?

Does oliguria add to creatinine elevation to predict clinical outcomes (renal and non-renal)?

Can the presence or absence of biomarkers or imaging diagnose the prerenal component (prospective vs retrospective)?

Are there differences in outcome between similar patients: with prerenal component AKI, with AKI without prerenal component, and without AKI?

Renal Replacement Therapy

When should RRT be initiated and does timing affect outcome?

Does the timing of discontinuation of RRT in AKI influence renal recovery and patient outcomes?

What is "dose" of RRT?

When should RRT be withheld?

Does modality of RRT affect outcome?



Top Research Questions

1. When should RRT be initiated and does it affect outcome?
2. Do other GFR markers predict renal and nonrenal clinical outcomes better than serum creatinine?
3. Does AKI lead to CKD?
4. Do the development and severity of AKI predict renal and non-renal clinical outcomes?
5. What is incidence of AKI?
6. Are there biomarkers that predict severity and recovery of AKI?

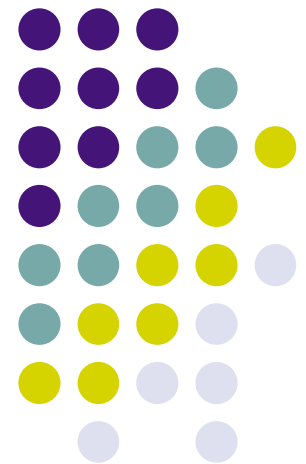
AKI: Ongoing Projects



- AKIN Members
 - International registry for AKI Sponsor: Biosite (Status: IRB and Contract pending)

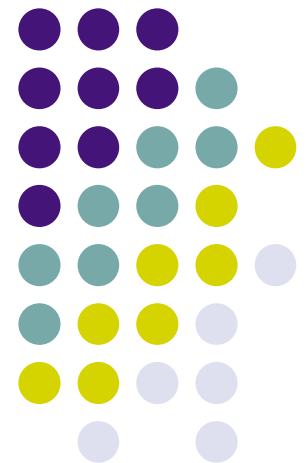
AKIN: Critical Path Institute Initiative for Biomarkers

David Gerhold PhD
Merck Inc



AKIN: NIH RFA for AKI

Paul Eggers PhD
NIH-NIDDK



NIH RFA for Natural History of AKI



- Paul W. Eggers, PhD
 - NIDDK

**Acute Kidney Injury Network
Research Initiatives in AKI
Saturday November 3rd, 2007**



Primary Studies in the Natural History of Acute Kidney Injury (U01)



- **Application Receipt Date:** December 20, 2007

Peer Review Date(s): March-April 2008

Earliest Anticipated Start Date: July 1, 2008

**ESTABLISH AN ACUTE KIDNEY INJURY NATURAL
History Consortium comprised of 3-5
participating clinical centers (PCC) and
one Data Coordinating Center (DCC). The
goals of the Consortium are as follows:**



- Sequential determination of renal function (as measured by urine and serum creatinine or other valid biomarker) for up to 4 years of patients with Acute Kidney Injury and appropriate matched controls.
- Determine whether Acute Kidney Injury predicts and/or accelerates the long-term development of chronic kidney disease.
- Identify and/or validate biomarkers or other risk assessment tools for patients who will develop or have worsening chronic kidney disease or other

Application Requirements and Restrictions:



- Each PCC will be expected to follow 200-600 patients with Acute Kidney Injury and a similar number of control subjects for up to 4 years for the development or worsening of chronic kidney disease and selected cardiovascular complications.
- The PCCs must consist of ancillary studies to ongoing clinical studies or trials of Acute Kidney injury or related topics.
- The ongoing clinical studies or trials do NOT need to be funded by the NIH.
- The PI of the proposed ancillary study may be, but does not need to be the PI of the parent

Application Requirements and Restrictions (cont):



- All PIs MUST provide documentation of permission from the parent study to use the patient cohorts, data, and biological materials of the parent study.
- NIDDK expects that baseline and outcome data from the parent study will be transferred to the AKI Natural History Consortium DCC in a timely fashion.
- The PCCs must submit the samples and data to the NIDDK Central Biosample, Genetic and Data Repositories via the DCC.
- All samples and data transferred to the repositories will be under the custodianship of the

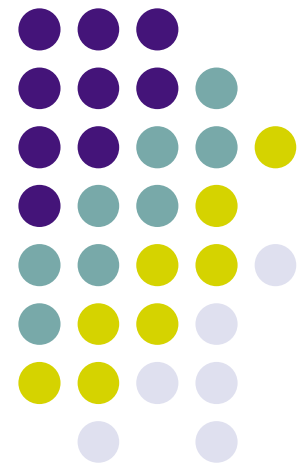
Project organization and budget:



- The Acute Kidney Injury Natural History Consortium is governed by a Steering Committee (SC) comprised of PCC and DCC Principal Investigators PIs, a SC Chair (to be appointed by NIDDK) and the NIDDK Project Scientist.
- NIDDK will establish a Scientific Advisory Committee (SAC) the SAC members will be selected by NIDDK and will report to the Director, KUH.
- Maximum allowable costs for the DCC are limited to a direct cost of \$500,000. For the PCCs, direct costs may not exceed \$300,000 per year for each of 5 years.

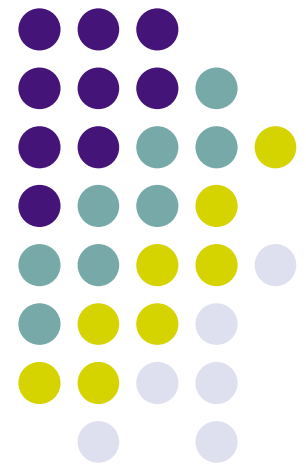
AKIN: Industry Sponsored AKI Research

Sudhir Shah MD
University of Arkansas



AKIN: International Research Initiatives

Claudio Ronco MD
St Bortolo Hospital, Vicenza, Italy

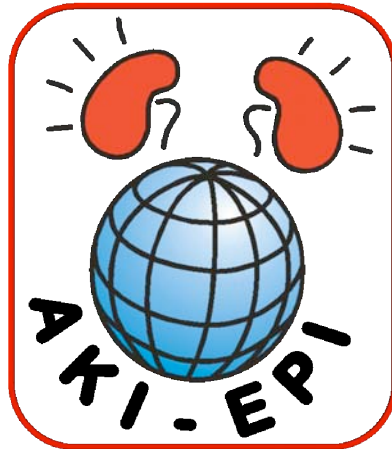


AKI: Ongoing International Studies



- ENFORCE
- DoREMI

Invitation to participate



Acute

Kidney

Injury

Epidemiologic

Prospective

Investigation



Worldwide Prospective Observational Multicenter Trial

Objective:

**To evaluate the incidence
of AKI in ICU patients**

Interested?

Please visit the website: www.AKINet.org

AKI-Epi Study



- **Background:**

- The RIFLE classification for AKI is accepted around the world
- However, data on the epidemiology of AKI are still lacking
- Evaluation of recent proposals by AKIN are needed
- Information on diagnostic evaluation and early management of AKI is lacking

- **Aims of the study:**

- Evaluate the epidemiology and early management of AKI according to the RIFLE classification in ICU patients

- **Patients:**

- All patients, ≥ 18 yr, admitted to the ICU during a 1-week period

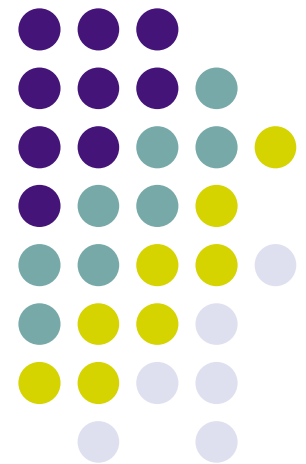
- **Exclusions:**

- patients on chronic RRT
- patients admitted after recent (< 3 months) kidney transplant.
- discharge ≤ 24 h and alive

AKIN 3 Conference: A preview

David Warnock MD

University of Alabama



Third International AKIN Conference

DRAFT



- June 12-14, 2008
- Location: Washington DC/Chicago
- **Conference Structure**
 - Short lectures with time for panel discussions over 1.5-2 days (start Thursday afternoon and conclude Saturday morning)
 - Possible Poster Session for Investigators particularly fellows to present research in AKI
 - Opportunity to Network

Third International AKIN Conference

Goals



- Promote Research Studies in AKI
 - Further research agenda (developed at Vancouver meeting)
 - Provide a structured forum for AKIN members to meet and interact and present research in AKI
 - Highlight and showcase ongoing research in AKI including studies validating AKIN diagnostic and Staging criteria
 - Identify partnerships (industry) or funding sources (foundations, NIH, societies?) for AKI studies
 - Match AKI projects with funding to AKIN members
 - Introduce AKIN scope of services for research in AKI

Third International AKIN Conference

Goals



- Increase awareness of AKI and visibility for AKIN
 - Increase society/industry/funding agency awareness of AKI/AKIN and help develop educational programs/materials utilizing AKIN web site as a portal with links to other sites
 - Continue AKIN development and collaborations for AKI studies and expand research base to investigators from other disciplines and societies (e.g. cardiology, radiology, hepatology, oncology)

Third International AKIN Conference

Goals



- Establish Collaborations for Specific projects to be leveraged through AKIN/Society Interactions
 - Identify specific areas of interest for various societies/stake holders that can be leveraged through AKIN e.g. AKD and ICD coding project for NKF/RPA
 - Identify and facilitate partnership for Clinical Practice Guidelines development

AKIN: Feedback and Discussion

