Association for Academic Surgery

Creating and Managing a Database – And Why You Should

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Disclosures

- No Disclosures

The Power of a Database

AAS
Association for Academic Surgery

- Answer a question, any question
  - Sample Size
  - Quality Improvement
  - Longitudinal Assessment
  - Epidemiologic Studies
- Rare Diseases/Surgeries
- Low/No Cost

Benefits over Administrative Databases

Institutional	Administrative
Increased granularity	Less detail/Coding errors
New Data	More Data
Smaller Sample Size	Larger Sample Size
More Accurate?	Less Accurate?
Fluid Updates	Static
Less Generalizable	More Generalizable
More difficult	Easier to access/use/abuse
Collaboration	No Collaboration

JAMA Network™

From: **Changing Trends in Surgical Research: An Analysis of 30 Years of Collaborative Practices**

JAMA Surg. 2014;149(8):873-874. doi:10.1001/jamasurg.2014.97

Figure Legend:

Proportion of Articles Written by Remote Collaborators in Surgery Journals, 1984-2012

Date of download: 10/24/2019

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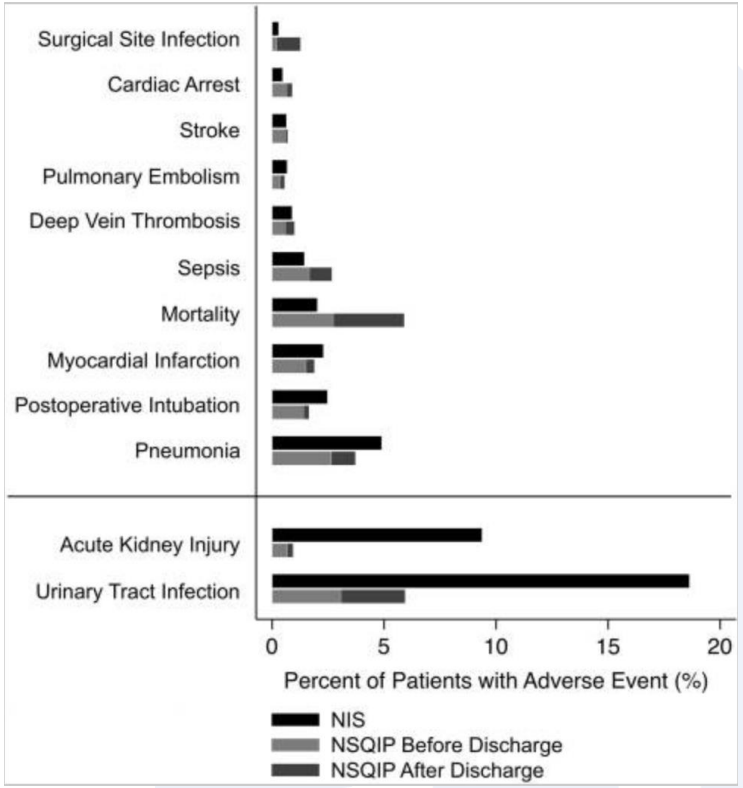
Benefits over Admin/National Databases



Bohl et al. Nationwide Inpatient Sample and National Surgical Quality Improvement Program Give Different Results in Hip Fracture Studies. Clin Orthop Relat Res. 2014.

Getting Started

Building a Database

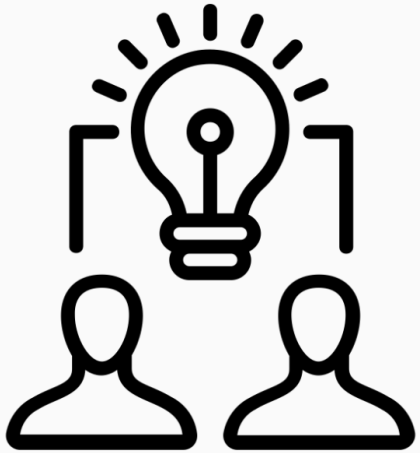
- Hypothesis
  - Choose a well-defined disease state **or** surgical episode of interest
  - The first ask is the easiest
- Know the field

Building a Database

- Define Fields
  - Standard Measures
    - NSQIP, NIS, Medicare etc.
  - Categorical, Continuous, Boolean
  - ”New” Fields
  - **Avoid Free Texting**
- Engage Biostatistician
- Write Protocol for IRB

Building a Database

- Build a draft of your database – excel, redcap, access
- Test and ensure feasibility within own institution
- Choose your collaborators
  - Experience, diversity
  - Avoid the “double” selection bias
  - Add additional fields



Building a Database

- Choose a name
- Open call for Questions
  - Fair, equal
- Formulate Master Question List
- Build the final product and distribute to group
- Set Deadlines
- Send regular reminders

Combining/Finalizing the Database

- Obtain final files from each institution
- Ensure all data is complete to the best of their ability
- Clean the data…
- Send out final product

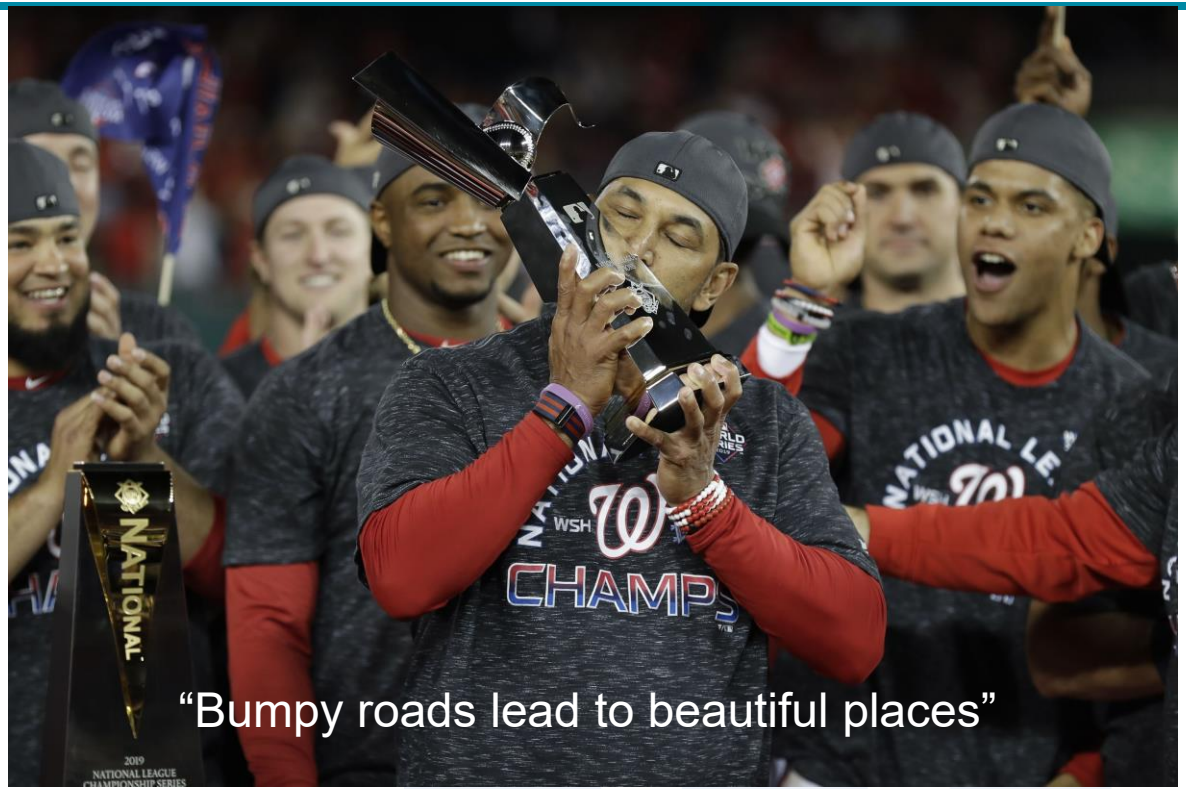
Managing the Database

- Check-in with collaborators
- Keep log of studies to be done, in progress, completed
- Set dates for updates

Conclusion

- Be smart and prepare
- Do not re-invent the wheel
- Make deadlines and keep them

Thank You!



"Bumpy roads lead to beautiful places"

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