

Measuring Academic Productivity: Implementation of an aRVU Model

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Creation of an aRVU Model for the Dept. of Neurology SUNY Downstate Medical Center

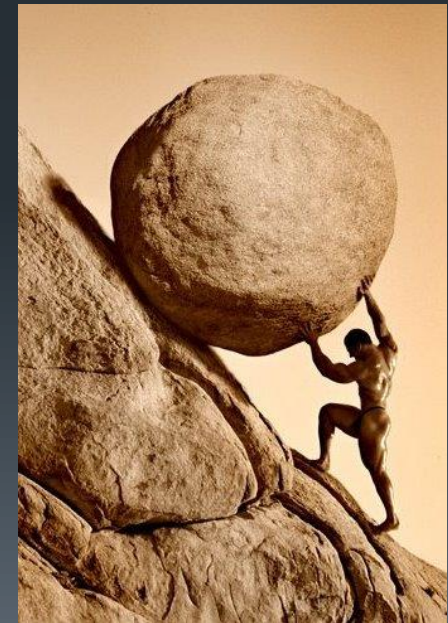
- ✧ Inspired by a review of our department by John Kessler MD, Professor of Neurology, Northwestern University
- ✧ and based on an academic RVU system developed in the Department of Diagnostic Radiology, University of Maryland.

Mezrich R, Nagy PG. The Academic RVU: A System for Measuring Academic Productivity. J Am Coll Radiol 2007;4:471-478.

The relative value unit (RVU), developed by Medicare to guide reimbursements, assigns a value to each clinical activity.

We sought to develop an academic RVU (aRVU) system to assign a value to all non-clinical activities performed by faculty, i.e. research, teaching, administration, university service.

Goal: Provide individual faculty, Division Chiefs and Chair a transparent and quantitative measure of total productivity, i.e. wRVU + aRVU



aRVU Pros:

- ✧ Faculty receive recognition for all academic activities.
- ✧ Division Chiefs and Chair can adjust teaching & clinical responsibilities based on reliable and quantitative data.
- ✧ Provide quantitative data to Dean, administrators on faculty productivity beyond clinical wRVU.

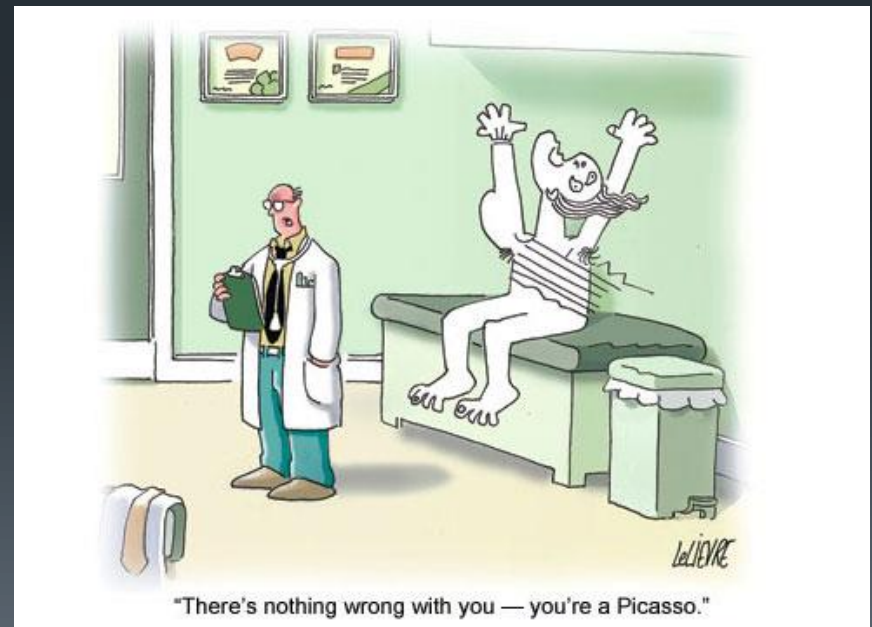
aRVU – Cons:

- ✧ “Now we are lawyers”
- ✧ Effort to track all activities



Process

- ✦ Establish an aRVU for every activity, from writing a letter of recommendation to obtaining NIH funding.
- ✦ Faculty committee representing clinicians, researchers, educators.
- ✦ Delphi process – 3 rounds



Assumptions

- ✧ aRVU should have the same “units” as wRVU so they can simply be added to a total RVU (tRVU).
- ✧ One FTE = 4,500 tRVU per year
- ✧ One hour of academic work should equal between 2 and 3 aRVU. *The sorts of things neurologists do in the clinical world are in the range of 2 - 3 wRVU per hour.*
- ✧ The more creative the activity the higher the aRVU per hour. *Hypothesis-driven research should count more than giving the same lecture to residents year after year.*

Assumptions

- ✧ Major teaching responsibilities should receive credit for the considerable time spent on these activities. *The ACGME has a formula for %FTE for Neurology residency directors that we used to assign aRVU for this position.*
- ✧ Publications should be valued based on journal impact factor, type of publication, and position in the author order.
- ✧ Grants should be valued based on direct costs and % FTE supported by the grant.

Result



■ Vice-Chair	450
■ EEG / EMU lab director	450
■ Resident mentoring / per resident per year	50
■ Committee membership - SUNY	20
■ Grand rounds presentation	10
■ Student examinations per session	5
■ Letter of recommendation	4
■ Supervising attending at journal club	3

Result - Publications

- **Data publication**

- Single author 290
- 1st author 230
- 2nd author 85
- 3rd author 40
- ≥ 4th author 25
- Senior author 140

- **Case Report**

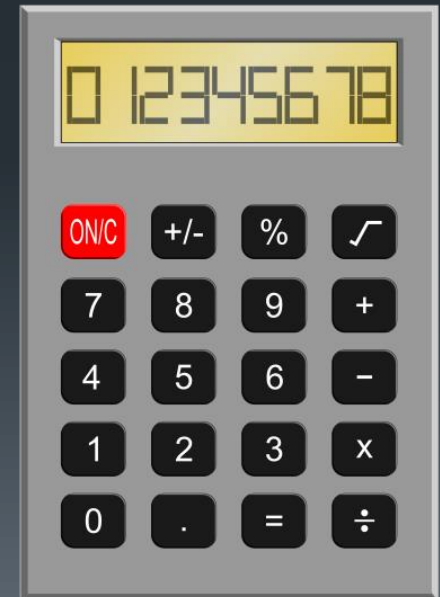
- Single author 100
- 1st author 80
- 2nd author 50
- 3rd author 30
- ≥ 4th author 20
- senior author 65



Multiply value by $\sqrt{I.F}$

Result - Publications

- Since the range of impact factor (IF) is quite large, we adjusted by using the square root. For example, Annals of Neurology IF = 9.6 so our multiplier is 3.1.
- Data publication - 1st author $230 * \sqrt{IF}$
- 1st author Annals of Neurology
= 713 aRVU

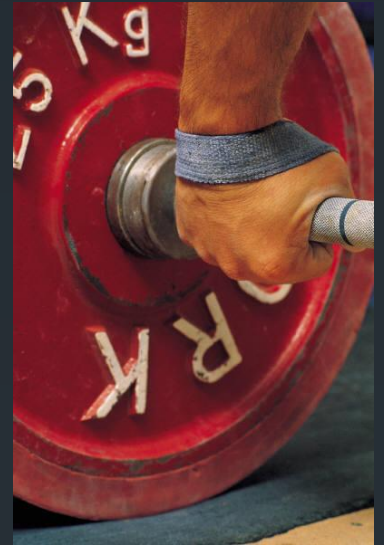


Result - Grants

- NIH grants:
% effort supported by the grant + ($\sqrt{\text{direct costs}}$) / 2.
- Example
Grant supports 20% FTE with \$1M direct per year
$$aRVU = (4,500 / \text{year} * 20\%) + (\sqrt{1,000,000})/2 =$$
$$900 + 500 = 1,400 \text{ aRVU}$$
- Credit given for submitted grant proposals that were not funded. *To acknowledge time invested and encourage faculty to write grants.*

Outcome – IT WORKED!

Productive faculty delighted to see their academic efforts recognized.



Unproductive faculty not so happy.

Looking back after 3 years

Publications and grants probably valued too high:

Maximum tRVU for clinician-educators ~ 4,500 while for researchers ~ 10,000

Looking back after 3 years

- ✧ Lump versus Split
 - ✧ Are all Vice-Chair duties equivalent?
 - ✧ Are all Division Chief duties equivalent?
 - ✧ Are all committees equal?
- ✧ Activities not included on original list - needs to be dynamic
- ✧ Regression towards mean of 2.5 aRVU / hour for all activities

Looking back after 3 years



wRVU does not include teaching time: Clinical work is faster without associated teaching

Looking back after 3 years

- Not immune to manipulation
- Outright dishonesty: *e.g. claiming aRVU for a research publication when in fact it was a letter to the editor.*
- Cutting corners: *e.g. a fellowship director changes mid-year and both faculty take full aRVU credit for being director. Or, taking claiming credit for being committee chair and a member of the same committee.*
- Is that really possible?: *e.g. 20 committees? Or 8 hours to prepare a routine lecture given to residents every year?*

Conclusions

- ❖ aRVU system should be developed by diverse group of faculty with input from all stakeholders
- ❖ Must be dynamic and revised to accommodate new responsibilities and respond to identified weaknesses
- ❖ aRVU is an effective, fair, and quantitative method to measure academic work and productivity
- ❖ Useful to Division Chiefs and Chair to fairly distribute teaching / clinical activities
- ❖ Useful to Chair as transparent mechanism to determine bonus
- ❖ Can provide justification to administrators for components of salary support

The struggle itself toward the heights
is enough to fill a man's heart.
One must imagine Sisyphus happy.
---Albert Camus

