Nephrology as Leader: The Young Nephrologist's Perspective

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FISTULAFIRST
National Vascular Access Improvement Initiative

Success of Fistula First Initiative So Far:

2003: 32.4% AV fistula use.

September 2009: 53.9% AV fistula use.

New goal for AV fistula utilization rate: 66%.

Kidney International (2002) **61**, 305–316; doi:10.1046/j.1523-1755.2002.00117.x

Vascular access use in Europe and the United States: Results from the DOPPS

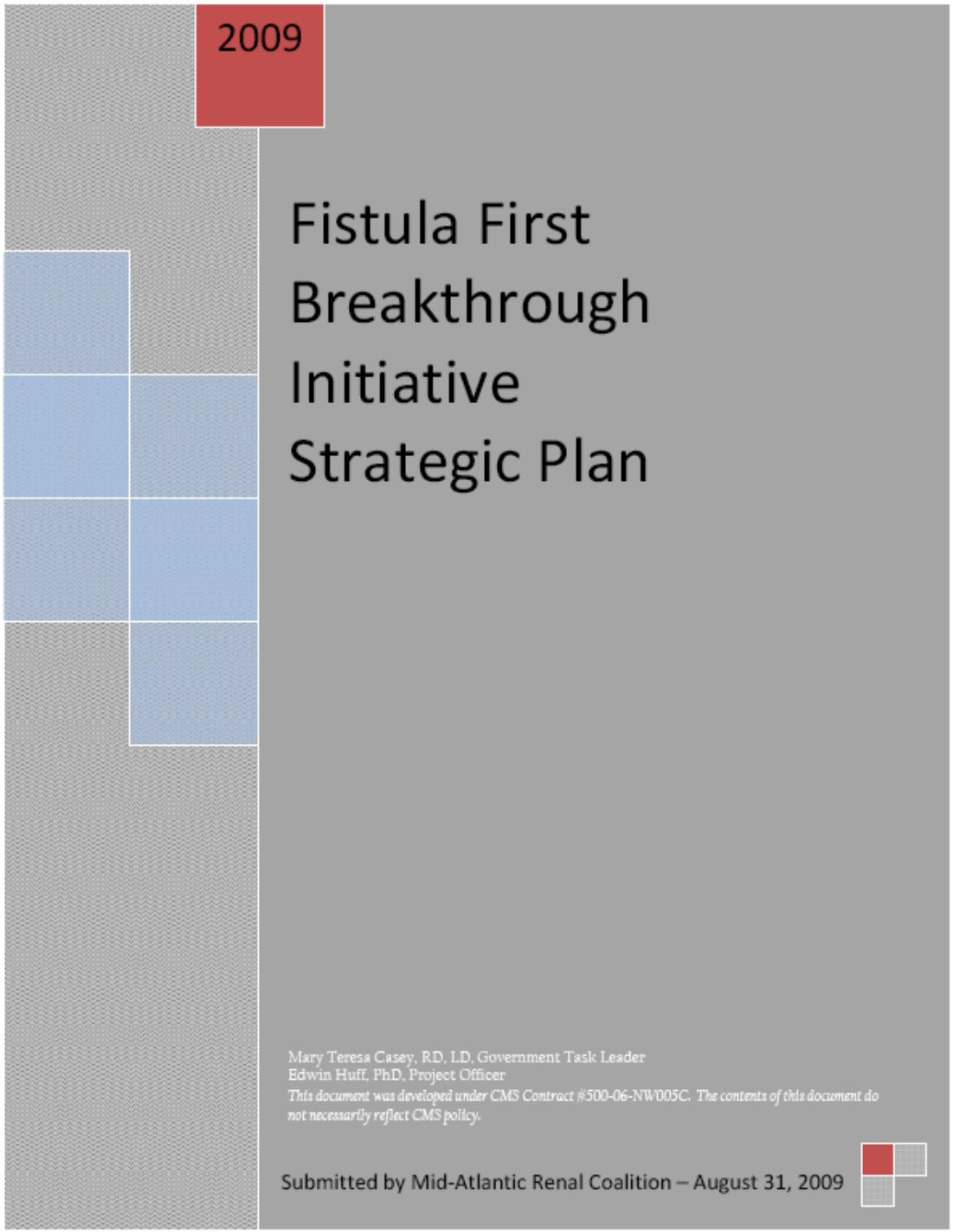
Ronald L Pisoni, Eric W Young, Dawn M Dykstra, Roger N Greenwood, Erwin Hecking, Brenda Gillespie, Robert A Wolfe, David A Goodkin and Philip J Held

Table 2. Anteriovenous fistula (AVF), graft, and catheter use among prevalent and incident hemodialysis (HD) patients in Europe (EUR) and the United States (US)

Previous table | Figure and tables index | Next table

	Access use for prevalent HD patients			Access use for incident HD patients		
	AVF	Grafts	Catheters	AVF	Grafts	Catheters
US	24	58	17	15	24	60
EUR	80	10	8	66	2	31
France	77	15	6	62	2	36
Germany	84	12	4	83	1	15
Italy	90	4	5	60	0	38
Spain	82	12	7	71	5	24
UK	67	9	22	47	2	50
	US (*N*=3813), EUR (*N*=2455)			US (*N*=2179), EUR (*N*=875)		

The distribution of AVF, grafts, and catheters is shown separately for prevalent and incident HD patients in the US, EUR, and the countries comprising EUR. Catheters include both tunneled and untunneled central vein catheters. Values for EUR, if weighted by the proportion of HD patients in each country, were found to be very similar to the unweighted values shown in the table below. Access use by incident patients is at the time of initiating HD. AVF were placed in the lower arm for 74% of US prevalent patients and 79% of EUR prevalent patients. For incident patients, tunneled catheters comprised 25% of catheters in EUR and 52% of catheters in the US. For prevalent patients, tunneled catheters comprised 69% of catheters in EUR and 59% of catheters in the US.



7 Identified Strategies:

1. Nephrologist as Leader

How can we encourage nephrologists to take on this additional responsibility?

2. Leveraging Partnerships
3. Hospital Systems
4. Patient Self-Management
5. Addressing Access Problems
6. Practitioner Training and Credentialing
7. FFBI Change Concepts

The Nephrologist Workforce

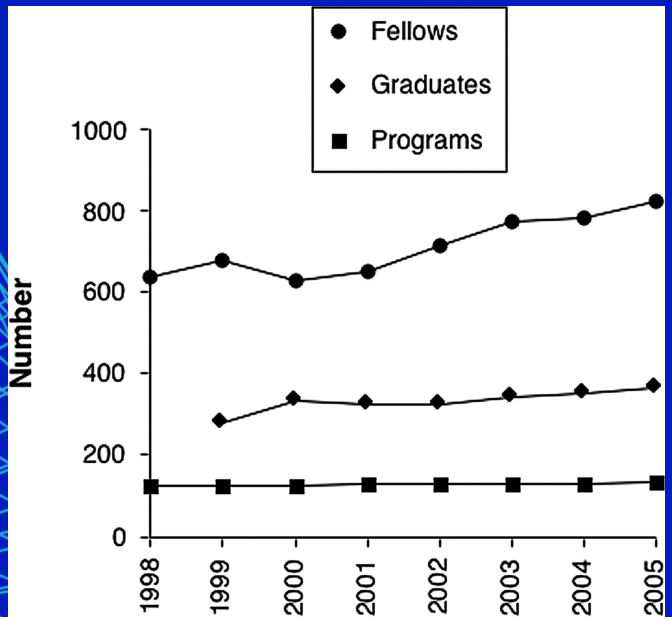
-6891 actively-practicing nephrologists in the U.S. (http://www.aamc.org)
-over 30% of nephrologists were over 55 years of age.
-do we need more nephrologists?

The Ad Hoc Committee Report on Estimating the Future Workforce and Training Requirements for Nephrology

ERIC G. NEILSON, M.D., ALAN R. HULL, M.D., JAY B. WISH, M.D., JOHN F. NEYLAN, M.D., DANIEL SHERMAN, PH.D., WADI N. SUKI, M.D., and THE AD HOC COMMITTEE ON NEPHROLOGY MANPOWER NEEDS*

Nielson et al,
J Am Soc Nephrol (JASN), 1997

-recommended increasing the number of nephrology fellowship trainees to match a projected need for nephrologists.



Take home message:
The nephrologist workforce is getting younger.

Rosenburg, J Am Soc Nephrol 18: 1027-1033, 2007.

Spotlight on: the Nephrology Fellow

Table 1. Demographics of adult nephrology training in the United States, 2005 (7)[a]

Category	Value
Total fellows	822
First-year fellows	372
Women (%)	30.3
USMG (%)	52.7
IMG (%)	41

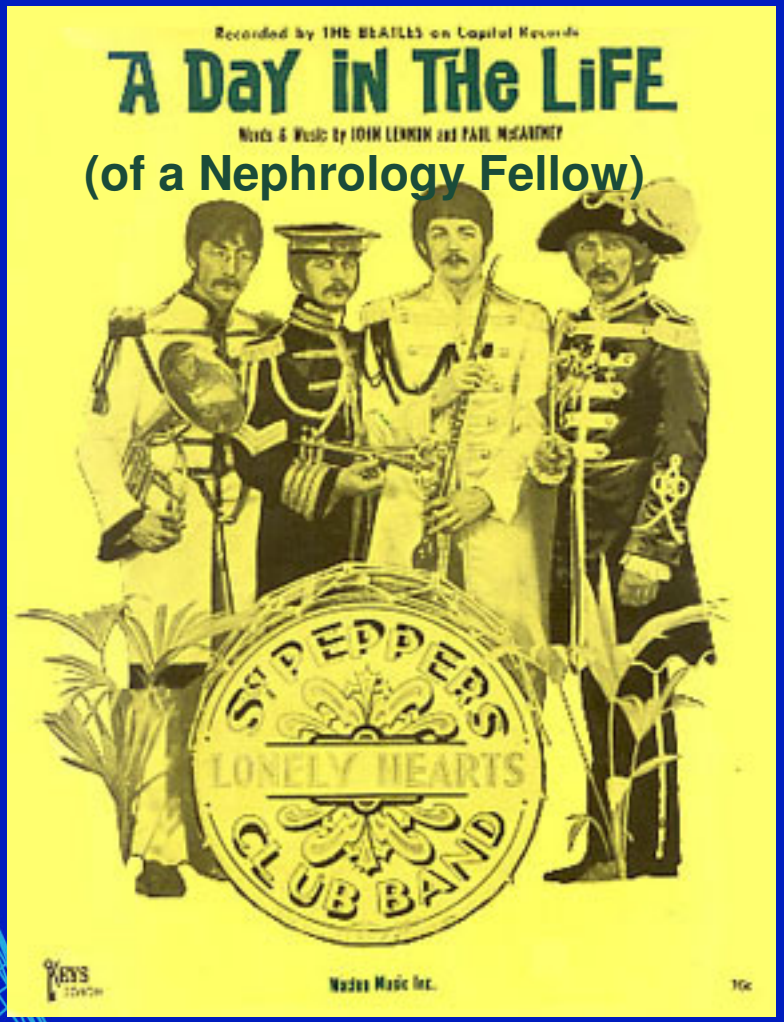
[a] IMG, international medical graduates; USMG, US medical graduates.

Rosenburg, J Am Soc Nephrol 18: 1027-1033, 2007.

-Nephrology fellowships last for anywhere between 2-4 years in the U.S.

-Nephrology trainees are a very ethnically and culturally diverse population.

-The training period for nephrologists is an ideal time to begin teaching leadership skills and vascular access skills necessary for the Fistula First campaign to succeed.



Example: Tuesdays at my hospital.

6:30am: arrive in dialysis unit ready to go.

6:30am - 8:00am: dialysis rounds, shift 1.

8am - 9:30am: present at conference.

9:30am - 12 noon: evaluate new consults, visit existing inpatients.

12 noon-1pm: dialysis rounds, shift 2.

1pm - 5pm: Nephrology outpatient clinic.

5pm - whenever finished: evaluate more consults, place dialysis catheters if needed; hope pager doesn't go off in the middle of the night.

Take-home message: Nephrologists & nephrology fellows are busy, so any message targeting nephrologists must be done quickly and efficiently.

Using new media forms to spread the word of Fistula First (and other future initiatives).

-Blogs.

-Organizational websites.

-Social Networking Tools.

-Podcasts.

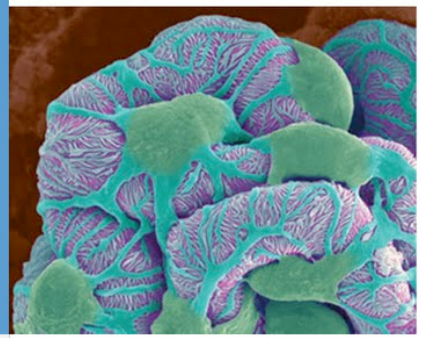
-Web-based educational tools.

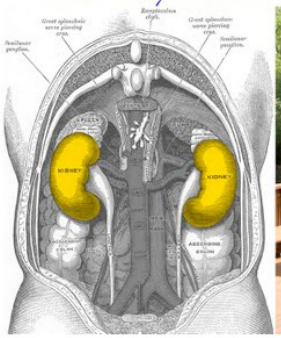
http://www.renalfellow.blogspot.com

Follow Share Report Abuse Next Blog» nathanhellman@yahoo.com New Post Customize Sign Out

the Renal Fellow Network:

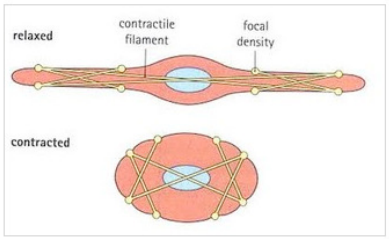
a website written for renal fellows, by renal fellows, featuring a new nephrology-related teaching point on a near-daily basis.





Tuesday, November 24, 2009

A role for polycystins as blood pressure sensors?



One of the hallmarks of autosomal dominant polycystic kidney disease (ADPKD) is hypertension. True, most patients with advanced kidney disease get hypertension anyways--but often the degree of hypertension in ADPKD patients seems to be especially high. Is there something about the function of the polycystin proteins which explains the high blood pressure?

A recent article by Sharif-Naeini et al in this month's issue of Cell claims a pressure-sensing role for the polycystins. ADPKD is caused by mutations in two genes, PKD1 and PKD2, which encode for membrane proteins termed TRPP1 and TRPP2, respectively. It appears these genes function via regulating local calcium fluxes in and out of the cell. Although most efforts to understand TRPP1 and TRPP2 function have focused on renal tubular epithelial cells (since that's where cysts come from), a variety of extra-renal phenotypes are also observed. In this paper, the authors generated mice deficient in TRPP1 or TRPP2 ONLY in smooth muscle cells. Importantly, they found that the balance of TRPP1 and TRPP2 levels was critical for the ability of arterial smooth muscle to maintain appropriate blood pressure. These results imply that function of the polycystins may be different depending on cell type, and suggest a possible mechanism by which ADPKD patients may be especially prone to the development of abnormalities in blood pressure regulation.

Posted by nathanhellman at 1:33 AM 0 comments

Labels: hypertension, molecular biology, polycystic kidney disease

Nephrology Oral History Project

VoiceExpeditions

Nephrology Oral History Project

Very cool project: The Nephrology Oral History Project. On their homepage you can access interviews with 14 different nephrologists who practiced during the early days of dialysis, as early as the 1950s and 1960s. It's well-organized in that each interview is broken down into labeled snippets, so you can only listen to the topics that interest you the most.

One of the more fascinating topics in these interviews is reading about how much tinkering and troubleshooting was necessary during the early days of dialysis. Access was a major issue; early on, one would cut down to find an artery and a vein in order to perform dialysis; at the end of the dialysis procedure, the vessels were ligated off and therefore those vessels could not be used again. Needless to say, there are only a limited number of arteries available to suppor dialysis, so other techniques were essential. One nephrologist describes making "home-made" catheters simply by cutting the appropriate length of polyethylene tubing and tapering off the end by holding it over a Bunsen burner. Because they couldn't afford real stainless-steel guidewires, they used guitar strings coated in silicone, which were much cheaper.

So: the next time you grab a catheter kit off the shelf and plug in the ultrasound machine, think about all the additional hassle involved in placing a dialysis catheter our nephrology fellow predecessors had to endure!

The 8-hour, $2000 a pop ABIM Nephrology Subspecialty Boards took place recently. If you have taken this exam before, how would you characterize it?

The perfect blend of clinical & textbook knowledge; don't change a thing.	0 (0%)
Overall a fair test, but still room for improvement.	13 (43%)
Less than ideal; too many poorly-worded questions, emphasis on the wrong topics.	11 (36%)
I expect a better and more fair test for my $2000!	6 (20%)

Change your vote

Votes so far: 30
Days left to vote: 2

▼ 2009 (279)
▼ November (21)
A role for polycystins as blood pressure sensors?
Nephrology Oral History Project
Kidney Clips
Analgesic Nephropathy
Poll Results & Post-Boards Weariness
ASTRAL Trial
kappa versus lambda light chains in paraproteinemi...
Leptospirosis-induced Renal Failure
Diagnosing Reset Osmostat
Aminoglycoside Toxicity
Metformin-induced Lactic Acidosis
General Support for Kidney Allocation Score

Goals for Renal Fellow Network:

1. Education:
   - -Nephrology fellows are eager to learn.
   - -Busy work schedules may interfere with educational experiences.
   - -Brevity is key!

2. Creation of an online community of nephrology fellows:
   - -Many nephrology fellowship programs only have a few fellows.
   - -Creation of a forum for fellows across the nation/world to interact.

Example of Typical Blog Post

Wednesday, August 26, 2009

Bundling

It's a hot topic amongst dialysis centers around the country: bundling. Here's my attempt to explain it in a brief manner. If anybody has corrections or comments about this explanation, feel free to make them known.

With the Social Security Act of 1973, all U.S. ESRD patients were given the right to free dialysis--and since that time, the ESRD Program has comprised a very significant portion of the overall Medicare Budget. The Centers for Medicare and Medicaid Services (CMS), a division of the Department of Health and Human Services (HHS), is in charge of administering the ESRD Program and setting the reimbursement prices for dialysis centers.

Currently, CMS divides the ESRD budget into two distinct services. First, there is a "bundled" payment which takes into account all the nursing, dialysis equipment, and many of the routine lab tests; essentially, one lump sum per patient per dialysis treatment is given which does not vary. Second, there is a category of "separately billable" items which includes the injected medications administered during dialysis and a few of the more recent lab tests. According to the current plan, each "separately billable" item is reimbursed at a rate 6% above the manufacturers' average sales price (ASP). Dialysis centers can make a profit from this policy, and accordingly, the more "separately billable" items are ordered, the greater the ability to generate profit. This has been especially welcomed by dialysis units, as the bundled payment has not been adjusted for inflation and the units rely more and more heavily on "separately billable" items to cover the increasing costs of running a center.

There is now a strong push by CMS to change the ESRD policy such that the entire dialysis process--both the dialysis treatment itself as well as any injectable medications or labs--become a single "bundled payment." According to this report by the Government Accountability Office (GAO), a single bundled dialysis care payment would "increase efficiency and clinical flexibility."

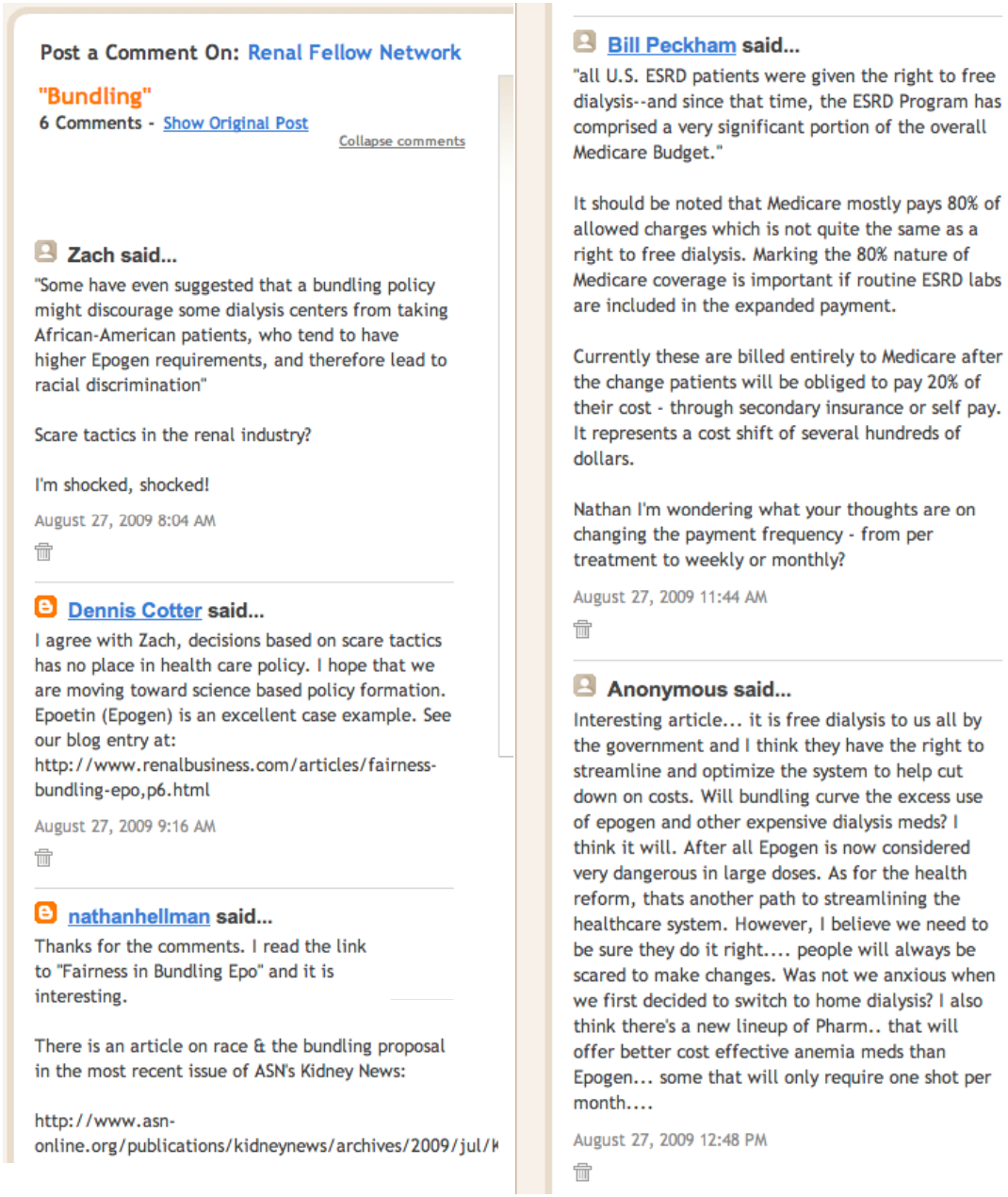
The medication Epogen is central to understanding the current move towards a bundled payment. Epogen was by far the most pricey "separately billable item" within the ESRD budget, accounting for about $2 billion annually. In the report, the fact that Amgen (the company which makes Epogen) has no competition on the market is cited as a reason for these staggering costs. The report goes on to suggest that placing Epogen within a bundled payment would force physicians to use the drug more judiciously and allow them to adapt strategies that could minimize Epogen doses--for example, subcutaneous rather than intravenous dosing.

The proposal of bundled dialysis payments is, understandably, still a controversial one. Will dialysis units be fairly compensated in a bundled system? We don't have the proposed numbers yet to judge. Will patients still have access to important drugs and breakthroughs? Some have even suggested that a bundling policy might discourage some dialysis centers from taking African-American patients, who tend to have higher Epogen requirements, and therefore lead to racial discrimination; medically complex patients might also fall into the category of an "undesirable dialysis patient" from a cost perspective. The one thing that is for sure is that whatever the policy turns out to be, it will undoubtedly have major effects on nearly every nephrologist practicing with the U.S.

Posted by nathanhellman at 9:58 PM 6 comments

Labels: dialysis, end-stage renal disease, erythropoietin

Comments allow for discussion on important Nephrology topics.



Post a Comment On: Renal Fellow Network

"Bundling"

6 Comments - Show Original Post

Collapse comments

Zach said...

"Some have even suggested that a bundling policy might discourage some dialysis centers from taking African-American patients, who tend to have higher Epogen requirements, and therefore lead to racial discrimination"

Scare tactics in the renal industry?

I'm shocked, shocked!

August 27, 2009 8:04 AM

Dennis Cotter said...

I agree with Zach, decisions based on scare tactics has no place in health care policy. I hope that we are moving toward science based policy formation. Epoetin (Epogen) is an excellent case example. See our blog entry at: http://www.renalbusiness.com/articles/fairness-bundling-epo,p6.html

August 27, 2009 9:16 AM

nathanhellman said...

Thanks for the comments. I read the link to "Fairness in Bundling Epo" and it is interesting.

There is an article on race & the bundling proposal in the most recent issue of ASN's Kidney News:

http://www.asn-online.org/publications/kidneynews/archives/2009/jul/k

Bill Peckham said...

"all U.S. ESRD patients were given the right to free dialysis--and since that time, the ESRD Program has comprised a very significant portion of the overall Medicare Budget."

It should be noted that Medicare mostly pays 80% of allowed charges which is not quite the same as a right to free dialysis. Marking the 80% nature of Medicare coverage is important if routine ESRD labs are included in the expanded payment.

Currently these are billed entirely to Medicare after the change patients will be obliged to pay 20% of their cost - through secondary insurance or self pay. It represents a cost shift of several hundreds of dollars.

Nathan I'm wondering what your thoughts are on changing the payment frequency - from per treatment to weekly or monthly?

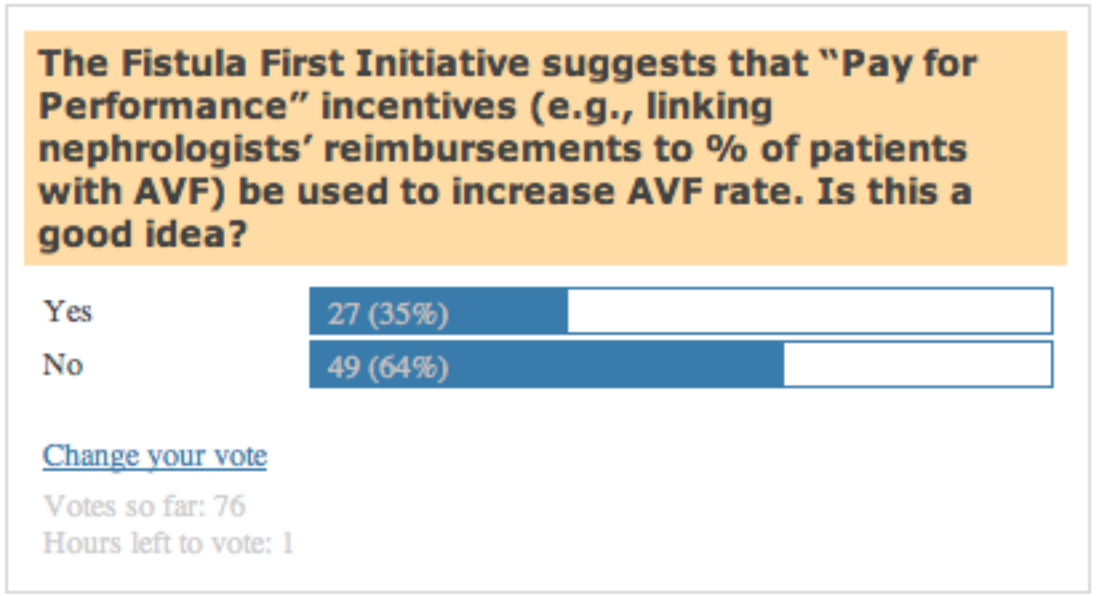
August 27, 2009 11:44 AM

Anonymous said...

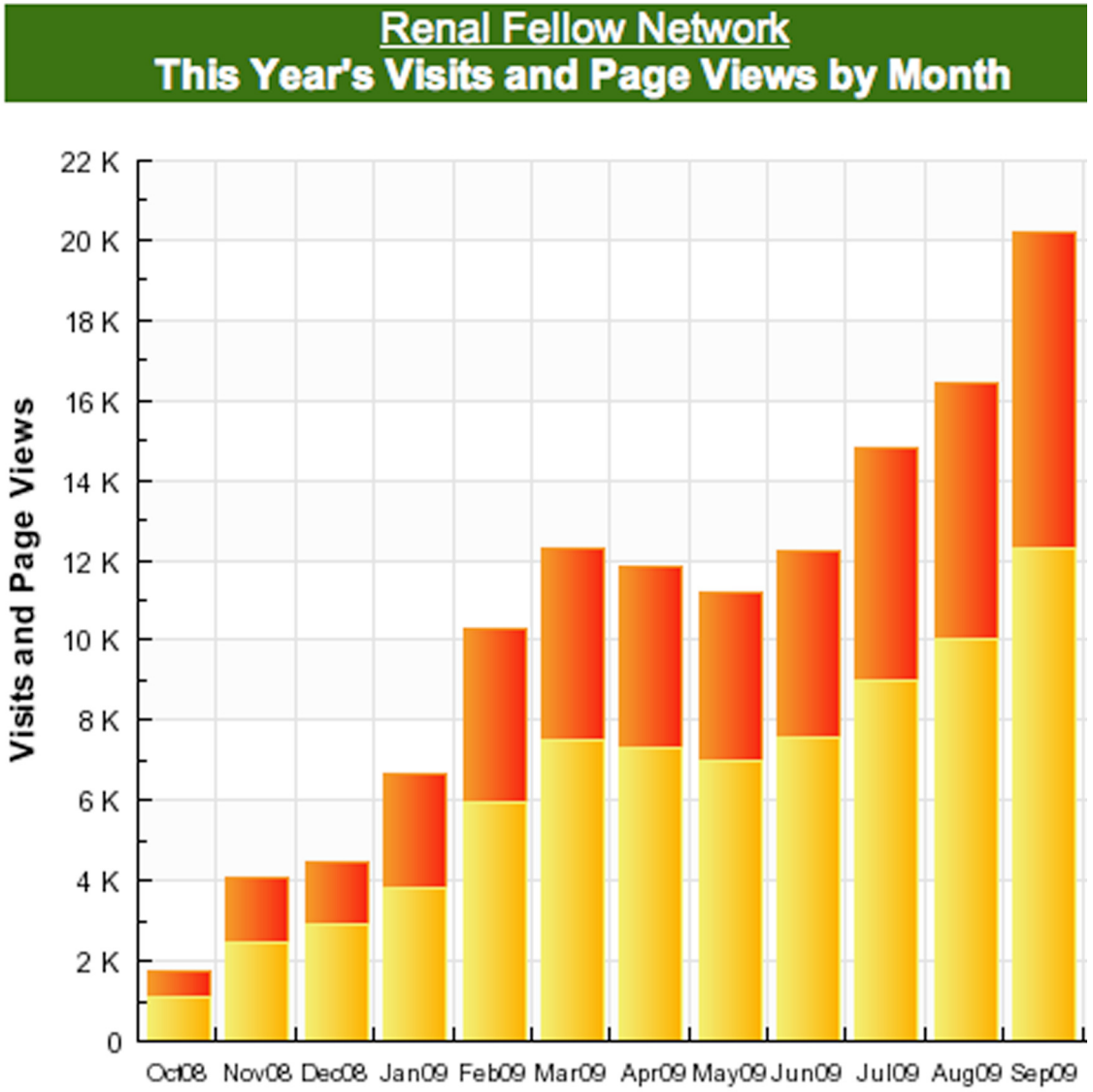
Interesting article... it is free dialysis to us all by the government and I think they have the right to streamline and optimize the system to help cut down on costs. Will bundling curve the excess use of epogen and other expensive dialysis meds? I think it will. After all Epogen is now considered very dangerous in large doses. As for the health reform, thats another path to streamlining the healthcare system. However, I believe we need to be sure they do it right.... people will always be scared to make changes. Was not we anxious when we first decided to switch to home dialysis? I also think there's a new lineup of Pharm.. that will offer better cost effective anemia meds than Epogen... some that will only require one shot per month....

August 27, 2009 12:48 PM

Weekly Polls on Nephrology-themed topics encourage interactivity



Renal Fellow Network Blog: Readership Statistics



Other Good Nephrology-Related Web Resources:

Other Nephrology Blogs

Fistula First Website

Organization Websites

Social Networking Sites: Twitter

Tweet the Week

Download free twitter applications on your BlackBerry or iPhone–or access twitter via the web–and join *ASN Kidney News* Editor-in-Chief Pascale Lane, MD, as she "tweets the week." All Renal Week participants are encouraged to join the conversation.

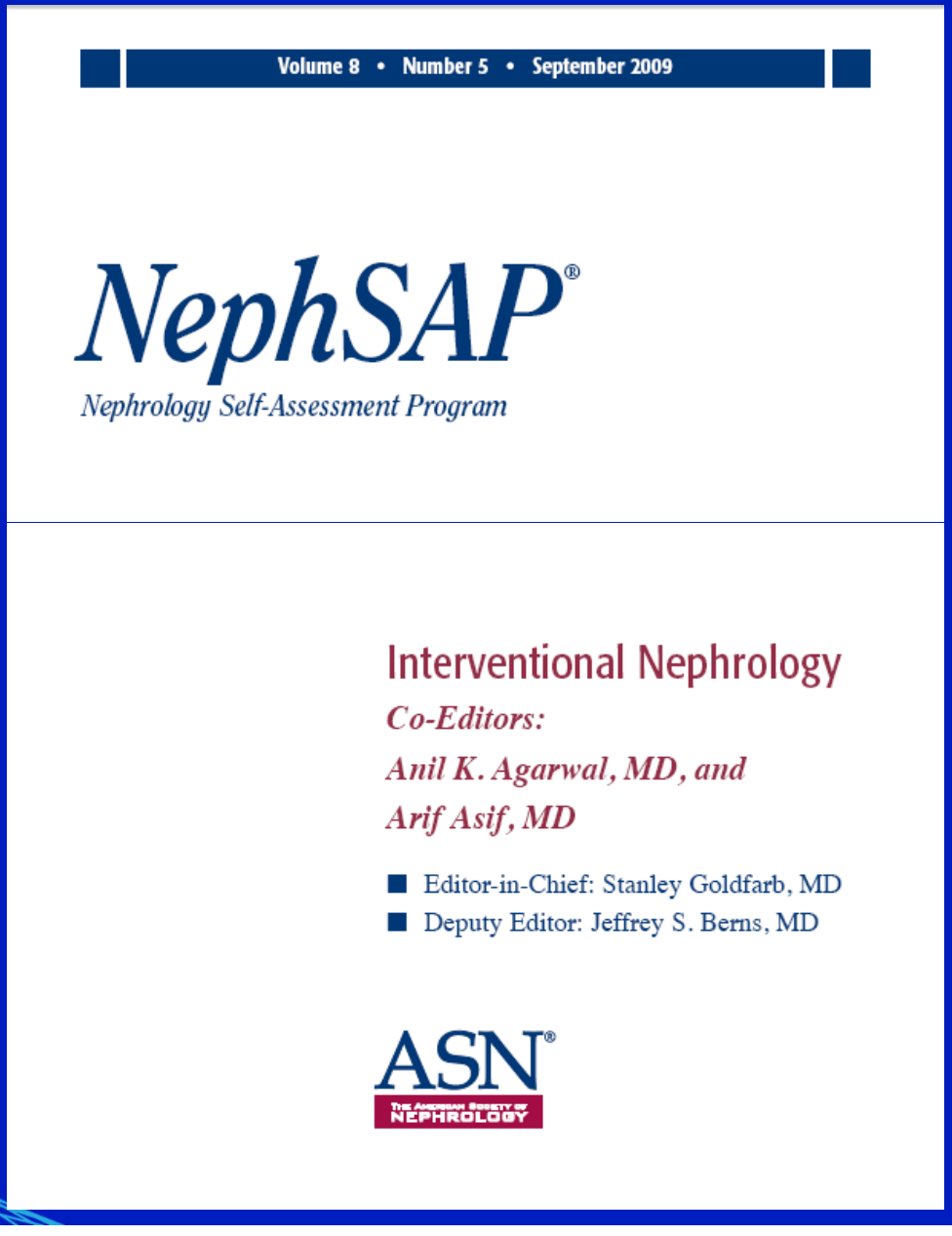
Learn more by reading the "Tweet the Week" article on page 42.

twitter

http://twitter.com/RenalWeek

Other Ways of Getting the Message Out: ASN Kidney News Podcast Series

Evidence of Increasing Educational Focus on Vascular Access: September 2009 NephSAP



Another Strategy for Increasing Awareness of Fistula First: Targeting the Nephrology Fellowship Educational System.

A few suggestions…

1. Increase fellow exposure to newer field of "interventional nephrology".

2. Offer better training in techniques such as ultrasound.

3. Shift some focus away from inpatient nephrology and towards outpatient nephrology.

1. Increase fellow exposure to the new field of "Interventional Nephrology."

-the dialysis access is the patient's "life line": without it, they cannot be dialyzed.

-although AV fistulas are the best kind of dialysis access, they are subject to a variety of technical complications, such as clotting.

-when this happens, rapidly correcting the problem with a procedure such as a fistulogram with angioplasty is key in order to preserve fistula function.

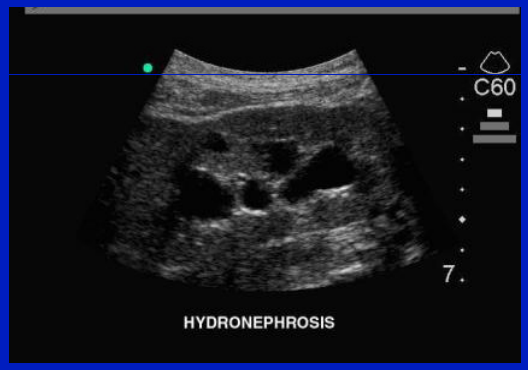
-traditionally this service has been provided by INTERVENTIONAL RADIOLOGISTS, but more recently, there are INTERVENTIONAL NEPHROLOGISTS who are being trained in these techniques.

-increasing fellow exposure to the career option of "interventional nephrologist" may help with improving AV fistula function.

2. Offer improved training in techniques such as ultrasound.

Ultrasound training could be really useful for nephrologists:

Guiding kidney biopsies



Diagnosing kidney disease

Evaluating AV Fistulas!

Performance of Procedures by Nephrologists and Nephrology Fellows at U.S. Nephrology Training Programs

Jeffrey S. Berns*, and W. Charles O'Neill†

CJASN Clin J Am Soc Nephrol 3: 941-947, 2008

Table 2. Responding programs indicating that procedures are currently performed by nephrology fellows and faculty or planned within the next year (responses to questions 1 and 6)

Procedure	Currently[a]	Planned[b]
Temporary HD catheter: IJ vein	73 (79)	1 (1)
Temporary HD catheter: femoral vein	91 (98)	0
Tunneled HD catheter: inpatient	13 (14)	7 (8)
Tunneled HD catheter: outpatient	19 (20)	9 (10)
Peritoneal dialysis catheter	13 (14)	5 (5)
Percutaneous native kidney biopsy	91 (99)	2 (2)
Percutaneous transplant kidney biopsy	90 (98)	2 (2)
US guidance: native kidney biopsy[c]	39 (42)	7 (8)
US guidance: transplant kidney biopsy[c]	46 (51)	7 (8)
Diagnostic native kidney US[c]	7 (8)	8 (9)
Diagnostic transplant kidney US[c]	10 (11)	7 (8)
Plasmapheresis	37 (40)	3 (3)
Thrombectomy of HD access: inpatient	13 (14)	6 (7)
Thrombectomy of HD access: outpatient	19 (21)	9 (10)
Angioplasty of HD access: inpatient	12 (13)	6 (7)
Angioplasty of HD access: outpatient	18 (19)	9 (10)
Stenting of HD access: inpatient	12 (13)	4 (4)
Stenting of HD access: outpatient	15 (16)	6 (7)
Continuous renal replacement therapy	92 (99)	2 (2)

HD, hemodialysis; IJ, internal jugular; US, ultrasound.

3. Shift some focus away from inpatient nephrology and towards outpatient nephrology

-Nephrology fellowship trainees spend >90% of time taking care of inpatients.

-Many patients are critically ill and inappropriate for AV fistula placement, requiring dialysis catheter placement instead.

-Fellows witness only the problems associated with AV fistulas, rather than their benefit.

-Requiring increased outpatient dialysis exposure early on could help encourage young nephrologists to place AV fistulas early.

Final Thoughts:

-the strategy of “Nephrologist as Leader” is a sound one for helping the Fistula First Initiative achieve its goal.

-reaching out to young nephrologists and nephrologists-in-training is a logical starting point.

-new media forms such as internet blogging, social media sites, podcasts, etc. can be effectively used to disseminate critical information regarding Fistula First and other initiatives.

-providing nephrologists with the tools for evaluating and managing AV fistulas (e.g., ultrasound, familiarity with interventional procedures) will be essential for the success of the Fistula First campaign.

-perhaps financial incentives will be necessary to encourage nephrologists to help meet the desired goals of obtaining functional AV fistula access in as many patients as possible.

Thanks!