PRACTICAL POINTERS

FOR

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FEBRUARY 2010

TREATMENT OF URINARY TRACT INFECTIONS IN PRIMARY CARE [2-1]

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JAMA, NEJM, BMJ, LANCET ARCHIVES INTERNAL MEDICINE ANNALS INTERNAL MEDICINE www.practicalpointers.org A free public-service publication. PUBLISHED BY PRACTICAL POINTERS, INC. EDITED BY RICHARD T. JAMES JR. MD 400 AVINGER LANE, SUITE 203 DAVIDSON NC 28036 USA To request monthly issues go to Rjames6556@aol.com This document is divided into two parts

1) The HIGHLIGHTS AND EDITORIAL COMMENTS SECTION

HIGHLIGHTS condenses the contents of studies, and allows a quick review of pertinent points of each article.

EDITORIAL COMMENTS are the editor's assessments of the clinical practicality of articles based on his long-term review of the current literature and his 20-year publication of Practical Pointers.

2) The main **ABSTRACTS** section is designed as a reference. It presents structured summaries of the contents of articles in much more detail.

I hope you will find *Practical Pointers* interesting and helpful. The complete content of all issues for the past 6 years can be accessed at www.practicalpointers.org

Richard T. James Jr. M.D. Editor/Publisher.

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HIGHLIGHTS AND EDITORIAL COMMENTS FEBRUARY 2010

"Highlights the Tension between Maximizing the Benefit For Individuals and Minimizing Antibiotic Resistance"

2-1 URINARY TRACT INFECTION IN PRIMARY CARE

(This editorial comments on a study presented in this issue of BMJ. I added comment from 4 shorter articles in the same issue. Please read the full abstract. RTJ)

On the face of it, urinary tract infections (**UTI**) seem to be a straight forward clinical presentation, with an equally straightforward treatment response. Bacterial infection is more likely to be present than not, and empirical treatment is effective.

The problem with empirical treatment of UTI is that 10% of the healthy adult female population would receive antibiotics each year. This has implications for antibiotic resistance.

Research in this area focuses on strategies to reduce use of antibiotics. "This highlights the tension between maximizing the benefit for individuals and minimizing antibiotic resistance at a population level."

In studies of UTI, diagnosis, treatment and cure were traditionally defined in bacteriological, rather than in symptomatic terms, on the assumption that people with detectable infection would benefit, whereas people without infection would not. However, evidence indicates that many women with bacteriological UTI will recover without antibiotics. In addition, about one third of women who present with clinically identical symptoms of UTI do not have detectable bacteriological infection, but do have a symptomatic response to empirical antibiotics.

An open, parallel, randomized controlled trial presented in this issue of BMJ computed five treatment permutations for uncomplicated UTI:

1) Empirical immediate antibiotics.

- 2) Empirical delayed antibiotic. (Prescription to use after a delay of 48 hours if necessary,)
- Treatment based on a clinical test algorithm. (Two or more of cloudy urine, smelly urine, nocturia, dysuria).
- 4) Treatment based on a dipstick test algorithm. (Nitrites, leucocytes, and blood).
- 5) Treatment based on urine culture results.

[3), 4), and 5) also provided delayed prescriptions]

There were no statistically significant differences in duration or severity of symptoms with any of the approaches. Women had 3.5 days of moderately-bad or worse symptoms even if they took antibiotics immediately.

Duration of symptoms was shorter when the doctor was perceived to be positive about diagnosis and prognosis.

There were differences in use of antibiotics (range 77% for dipstick to 97% for immediate prescription). But this was offset by an increase in symptom duration when antibiotics were delayed by 48 hours, particularly in the urine culture arm. Patients who waited at least 48 hours to start antibiotics reconsulted less, but on average had symptoms for 37% longer than those taking immediate antibiotics.

The proportion of symptomatic women with no identifiable bacteriological infection (36%) was similar to that found in previous studies

"Women with signs/symptoms of urinary tract infection prefer to avoid taking antibiotics." They valued the opportunity to avoid unwanted side-effects associated with antibiotics.

But most women presenting with UTI in primary care are prescribed an antibiotic. Overall, in this cohort, only 9% took no antibiotics.

The patient's situation and preference determine which approach will probably be the most helpful.

Delayed empirical prescription or dipstick guided delayed options will reduce the likelihood of taking antibiotics. But delaying antibiotics by 2 or more days increases the risk that more severe symptoms will be prolonged.

In an age of protocols and targets, the way a doctor provides care can enhance the effectiveness of treatment. Preoccupation with diagnosis and therapeutic goals obscure the wider aspects of therapeutic influence.

The clinician needs to address the particular worries that women might have and explain the rationale for not using antibiotics immediately.

I enjoyed abstracting these studies in detail. They present an extremely common complaint in primary care, and the difficult decisions to make, both for the clinician and the patient.

I believe they do provide some guidance. A reasonable approach would be to do a quick dipstick: If negative, the patient may be more inclined to delay antibiotics and receive symptomatic therapy. If positive, a discussion may follow with treatment based on the patient's perception of the severity of pain and willingness to delay antibiotics for a day or two, or to avoid them completely.

As usual, personal informed decision-making takes precedence, including past history and severity of symptoms.

Note that about 90% of the women in these studies eventually received an antibiotic.

Low And High HbA1c Values Were Associated With Increased Mortality And Cardiac Events. 2-2 SURVIVAL AS A FUNCTION OF HbA1c IN PEOPLE WITH TYPE 2 DIABETES

This retrospective cohort study assessed the association between all-cause mortality and HbA1c

levels in patients with type-2 diabetes (DM-2) in a primary care setting.

Identified 2 cohorts of elderly patients who had a diagnosis of DM-2, whose treatment included oral drugs and insulin. All had their treatment intensified before baseline:

- 1) Over 27 000 patients whose treatment had been intensified from oral mono-therapy to combinations of oral drugs. (metformin + sulfonylureas)
- 2) Over 20 000 who had changed regimens to include insulin.

Primary outcome = all-cause mortality. Mean follow-up = 5 years.

Cohort 2 $(n > 20\ 000; insulin intensified)$

	1	2	3	4	5	6	7	8	9	10
HbA1c*	6.38	6.95	7.28	7.55	7.83	8.11	8.45	8.87	9.42	10.56
HR**	1.79	1.45	1.35	1.00	0.98	1.15	1.21	1.21	1.46	1.80

(* Mean HbA1c divided into deciles. Decile 4 = referent **Hazard ratio of all-cause death..)

HR fell between decile 1 and decile 4; then rose between decile 4 and decile 10 in a "U" shaped manner. Consistent with all-cause mortality, insulin treatment was associated with an increased

likelihood of progression to a first large-vessel disease event.

Cohort 1 (oral drug intensification with metformin + sulfonylurea) followed same "U" shaped path, but with lower mortality rates than cohort 2. The lowest mortality was at HbA1c of 7.5%. The U shape was much flatter, with only deciles 1, 9, and 10 varying much from referent.

"We have shown that an HbA1c of approximately 7.5% was associated with the lowest all-cause mortality and lowest progression to large-vessel disease."

Decreased survival in patients achieving low mean HbA1c might be related to hypoglycemia, a common complication of intensive control. In this study, mortality was 3 times higher in patients who had severe hypoglycemia.

Lower survival reported in the group given insulin could suggest that insulin might heighten mortality risk.

"These data imply, for oral combination therapy, that a wide HbA1c range is safe with respect to all-cause mortality and large vessel events, but for insulin therapy a more narrow range might be desirable."

This does not mean that there is no value in achievement of present glycemic targets for *micro*-vascular disease.

Conclusion: Low and high HbA1c values were associated with increased all-cause mortality and cardiac events.

This applies to a subset of patients with type-2 diabetes--the elderly and those who have established CVD or who are at high risk. We should treat these patients conservatively. For younger patients, more aggressive A1C lowering may be reasonable

Does elevated blood glucose per se lead to increasing development of atherosclerosis? Ie, if the patient had no dyslipidemia, had a normal BP and BMI, did not smoke, exercised regularly, and had no family history of CVD or other risk factors, would continuing hyperglycemia lead to atherosclerosis? I believe so. It might take longer.

Control of glycemia at a younger age would then create a legacy effect, lowering the risk of atherosclerosis as the years progress.

Would the new insulin sensitizers, which lower A1C without risk of hypoglycemia, offer any advantage? There is little to gain by strict glucose control later in life.

"Prognosis Associated With A Given Level Of eGFR Varies Substantially Based On The Presence And Severity Of Proteinuria."

2-3 RELATION BETWEEN KIDNEY FUNCTION. PROTEINURIA AND ADVERSE OUTCOMES

This study determined the association between reduced estimated glomerular filtration rate (**eGFR**), proteinuria, and adverse clinical outcomes. The researchers postulated that patients with both reduced eGFR and proteinuria would be at higher risk of adverse outcomes.

Community-based outpatient cohort identified patients ($n = over 920\ 00$) with laboratory reports of both proteinuria and eGFR between 2002-2007. All had at least one outpatient measurement. None required renal replacement at baseline.

Estimated the GFR for each patient using the 4-variable Modification of Diet in Renal Disease (MDRD) Study equation.

Categorized GFR as mL/min /1.73m²: 1) 60 or greater, 2) 45-59.9, 3) 30 to 44.9, 4) 15 to 29.9

Protein was determined by random dipstick measurements: 1) normal (negative), 2) mild (trace or 1+), 3) heavy (2+ or greater).

Followed for a mean of 35 months. Main outcomes: all-cause mortality, myocardial infarction, and progression to kidney failure.

Three % died over the study period; 0.6% hospitalized for myocardial infarction; 0.08% initiated renal replacement therapy. 0.04% experienced a doubling of serum creatinine. The adjusted rates of these outcomes were all increased at lower levels of eGFR and at heavier proteinuria.

Adjusted likelihood of clinical outcomes by level of eGFR and proteinuria.

All cause mortality per 1000 person-years:

Proteinuria	Normal	Mild	Heavy
eGFR 60 or greater	2.7	5.8	7.2
45-59	2.9	5.2	7.2
30-44	4.0	5.8	7.5
15-29	6.7	9.1	10.4

(Within each stratum of eGFR, there was substantial variability in risk. Participants who had heavier proteinuria had markedly increased rates of all-cause mortality.)Similar relative increases were evident in myocardial infarction and end-stage renal disease.

The adjusted mortality risk was more than 2-fold higher among individuals with heavy proteinuria and a eGFR of 60 or greater as compared with those with eGFR of 45-59.9 and normal protein excretion.

"We demonstrated that prognosis associated with a given level of eGFR varies substantially based on the presence and severity of proteinuria."

Heavy proteinuria without overtly abnormal eGFR appeared to have worse outcomes than those with moderately reduced eGFR but without proteinuria.

These findings suggest that risk stratification performed in terms of eGFR alone is relatively insensitive to clinically relevant gradients in risk.

Conclusion: The risks of death, myocardial infarction and progression to kidney failure at a given level of eGFR were independently increased in individuals with higher levels of proteinuria.

I enjoy abstracting advances in primary care medicine that provide prognostic and therapeutic benefits at little cost. And that may actually reduce costs. Among these are: low-dose aspirin, the prognostic value of proteinuria, vitamin D (hopefully; maybe), and the Ottawa ankle rule.

"There Is No Safe Dose Of Tobacco Smoke"

2-4 TOBACCO SMOKE BY ANY OTHER NAME IS STILL AS DEADLY [Editorial]

Data show that, although cigarette consumption has declined substantially, consumption and sales of other tobacco products, most notably cigars, has increased.

"We are still trying to convince the public that these products are not safe alternatives to cigarettes."

A study in this issue of *Annals* reports that smokers of pipes and cigars have substantial nicotine absorption as well as measurable lung damage. The results are especially important

because the tobacco industry is actively promoting product substitution and use as an alternative to complete cessation.

Some believe that smoke from these products is not inhaled at all, contributing to misguided perceptions of reduced harm. In fact, pipe and cigar smokers do inhale, especially former cigarette smokers.

The study showed that smokers of these products are exposed to sufficient levels to affect their pulmonary health. The measured reduction in pulmonary function clarifies the substantial harm. Self-reported current pipe and cigar smokers had elevated cotinine levels compared with never-smokers. Pipe-years were associated with decrements in FEV1. Cigar-years were associated with decrements in FEV1/FVC ratio. Both groups had increased odds of airflow obstruction. Whether or not they had smoked cigarettes (odds ratio = 3.4) or not (odds ratio = 2.3) compared with participants with no smoking history.

Other studies have reported that cigar and pipe smokers, compared with non-smokers, have higher risk of cardiovascular disease (RR = 1.22), COPD (RR = 1.45), lung cancer (RR = 2,14), and overall mortality (RR = 1.44).

Life-years lost have been estimated at 5 years compared with cigarette smokers 7 years.

As changes in public health policy have made cigarettes less socially acceptable, a distinct set of characteristics are associated with cigar and pipe use: sophistication, affluence, education, and celebration. These images, largely fostered by the tobacco industry, perpetuate the idea that these products play a suitable role in our society.

"A Disconnect With the Existing Evidence Of Their Effectiveness."

2-5 HOSPITAL CHARACTERISTICS ASSOCIATED WITH FEEDING TUBE PLACEMENT IN NURSING HOME RESIDENTS WITH ADVANCED COGNITIVE IMPAIRMENT

The decision to place a feeding tube (**FT**) in a patient with advanced dementia is one of the sentinel decisions that family members and health care professionals grapple with, in the nursing home (**NH**) environment.

Many patients with advanced cognitive impairment have a FT inserted during an acute-care hospitalization (usually for an infection).

Two widely cited literature reviews conclude that use of FT does not improve survival, prevent aspiration pneumonia, prevent decubitus ulcers, or improve other clinical outcomes.

The objective of this study was to show the variation and to identify the characteristics of acute care hospitals associated with rates of FT insertion. It included over 163 000 NH patients with advanced

cognitive impairment admitted to a hospital between 2000 and 2007. None had FT in place on admission; all were over age 65 and severely functionally impaired. A total of 19 847 FT insertions occurred in the hospital (94% by percutaneous gastrostomy).

The rate of FT insertions varied between 0 and 40 per 100 admissions (mean per 100 admissions = 8).

A higher rate of FT insertions was independently associated with for-profit hospitals vs hospitals owned by state or local governments (absolute difference = 3 insertions per 100 admissions); hospitals with a greater number of beds and ICU use; and among blacks, a 2-fold increase compared with whites.

"Feeding tube insertion in persons with advanced cognitive impairment demonstrates a disconnect with the existing evidence of their effectiveness."

Written advanced directions, do not resuscitate orders, and orders to forego artificial hydration and nutrition were associated with *lower* use of FT. But, prevalence of advanced directions in nursing home residents is low. Improving advanced care planning is essential to ensure that FT insertion is based on informed patient preferences.

Conclusion: Among nursing home residents with advanced cognitive impairment, those admitted to larger hospitals, and hospitals with for-profit ownership and greater ICU use were associated with increased rates of FT insertion.

The article stated that the rate of FT placement declined over the years. We may be making progress. The decision about care (including FT insertion) of severely demented patients should be made long before any hospitalization occurs.

Do you wish your demented loved-one to be admitted to the hospital for any reason? If there were no admission, some problems would be solved.

Superficial Venous Thrombosis Is Not Benign

2-6 SUPERFICIAL VENOUS THROMBOSIS AND VENOUS THROMBOEMBOLISM

This study enrolled patients 844 patients (mean age = 61; 21% over age 75; women 65%) with symptomatic SVT of the lower extremity, defined as a subcutaneous non-compressible hypoechoic area in the course of an identified superficial vein (appearing circular in cross-sectional view, and rectangular in longitudinal view) more than 5 cm in length on compression ultrasonography.

Determined the prevalence of DVT or symptomatic pulmonary embolism (**PE**) in patients with a diagnosis of SVT at presentation.

Followed patients with SVT-alone (without DVT or PE at presentation) for 3 months to assess TE complications. All received a second ultrasound of both lower limbs within 2 weeks, and an

assessment of symptomatic events at 3 months.

Of the 844:

a. 210 (25%) had DVT or symptomatic pulmonary embolism (4%) at inclusion.

b. 634 had SVT-alone. Of these, the study followed 586 for 3 months.

Of the 586 with SVT alone: (without DVT or PE at inclusion) 58 developed thromboembolic complications by 3 months:

Symptomatic	Number				
Pulmonary embolism	3 (one probable death)				
DVT	15				
Extension of SVT	18 (despite almost all receiving anticoagulants)				
Recurrence of SVT	10				
Asymptomatic	12				

Almost all received anticoagulation. Other treatment: compression stockings (98%); topical and oral NSAIDs (55%); venous surgery (stripping or ligation 10%)

"In our large observational study, we found that venous thromboembolism accompanied symptomatic SVT in nearly 25% of patients."

In patients with isolated SVT at inclusion, 8% developed at least one thromboembolic event

at 3 months:	%
Symptomatic DVT	3
Pulmonary embolism	0.5
Symptomatic extension of SVT	3
Symptomatic recurrence of SVT	2

Conclusion:

Symptomatic SVT of the lower extremities is *not* benign. Many patients have complications at presentation. Others are at risk of complications within 3 months.

Compression ultrasonography might be considered for patients with symptomatic SVT at presentation. Close follow-up of patients with isolated SVT might be advisable.

SVT is not an innocuous disease. At a 25% rate of DVT and 4% PE at presentation, it approaches a medical emergency. Primary care clinicians should consider early anticoagulation.

Patients presenting with varicose veins also deserve urgent care. Not only for cosmetic reasons. Early referral for surgery may be warranted.

*"People With A History Of Depression Are More Likely To Get CFS, And Vice-Versa"*2-7 CHRONIC FATIGUE SYNDROME [Editorial]

This brief editorial suggests that depression and CFS are linked. The chief risk of CFS is suicide. These patients should be screened and treated for depression.

Clinical experience indicates that in patients with severe CFS, such programs may need to be adapted and prolonged, but that they can be the trigger for improvement and sometimes dramatic recovery. The alternative is no-treatment, which can be disastrous.

The editorialist does not suggest a proven causal relationship. I believe many patients with CFS are depressed.

Please read the full abstract.

ABSTRACTS FEBRUARY 2010

"Highlights the Tension between Maximizing the Benefit For Individuals and Minimizing Antibiotic Resistance"

2-1 URINARY TRACT INFECTION IN PRIMARY CARE

On the face of it, urinary tract infections (**UTI**) seem to be a straight forward clinical presentation, with an equally straightforward treatment response. Bacterial infection is more likely to be present than not, and empirical treatment is effective.

The problem with empirical treatment of UTI is that 10% of the healthy adult female population would receive antibiotics each year. This has implications for antibiotic resistance.

Research in this area focuses on strategies to reduce use of antibiotics. "This highlights the tension between maximizing the benefit for individuals and minimizing antibiotic resistance at a population level."

In studies of UTI, diagnosis, treatment and cure were traditionally defined in bacteriological, rather than in symptomatic terms, on the assumption that people with detectable infection would benefit; whereas people without infection would not. However, evidence indicates that many women with bacteriological UTI will recover without antibiotics. In addition, about one third of women who present with clinically identical symptoms of UTI do not have detectable bacteriological infection, but do have a symptomatic response to empirical antibiotics.

Four studies ^{1,2,3,4} in this issue of BMJ look beyond the microbiological definitions of diagnosis and cure to tease out both the natural course of the illness and the value of different therapeutic approaches in terms of what matters to patients--their symptoms.

A randomized controlled trial¹ computed five treatment permutations for uncomplicated UTI:

- 1) Empirical immediate antibiotics.
- 2) Empirical delayed antibiotic. (Prescription to use after a delay of 48 hours if necessary,)
- Treatment based on a clinical test algorithm. (Two or more of cloudy urine, smelly urine, nocturia, dysuria).
- 4) Treatment based on a dipstick test algorithm. (Nitrites, leucocytes, and blood).
- 5) Treatment based on urine culture results.

[3), 4), and 5) also provided delayed prescriptions]

There were no significant differences in duration or severity of symptoms with any of the approaches. Women had 3.5 days of moderately-bad or worse symptoms even if they took antibiotics immediately.

There were differences in use of antibiotics (range 77% for dipstick to 97% for immediate prescription). But this was offset by an increase in symptom duration when antibiotics were delayed by 48 hours or more, particularly in the urine culture arm. "This is important--any potential population benefits from reducing antibiotic use must be balanced, not only against the distress caused by prolongation of symptoms for the individual, but also in lost production, which is a substantial cost."

This confirms previous findings that in vitro resistance is associated with an increase in symptom duration, at times severe. Women with previous cystitis and more severe initial symptoms had a longer illness.

The proportion of symptomatic women with no identifiable bacteriological infection (36%) was similar to that found in previous studies

Overall, only 9% took no antibiotics. Antibiotics targeted by dipstick test results, with a delayed prescription as a backup, might help reduce antibiotic use.

What should clinicians do on the basis of these findings?

- 1) Sending midstream urine samples for testing is clearly unhelpful and expensive.
- 2) Beyond that, the approach is not clear.
- 3) Empirical immediate prescription, delayed empirical prescription, and prescription based on dipstick results with back-up delayed prescription, are rational options.
- 4) The patient's situation and preference determine which approach will probably be the most helpful. Delayed empirical prescription or dipstick-guided delayed options will reduce the likelihood of taking antibiotics. But delaying antibiotics by 2 or more days increases the risk that more severe symptoms will be prolonged. Women can be warned that, if their initial symptoms are severe, or if they have had cystitis before, they are likely to have severe symptoms for at least 3 days.
- 5) In an age of protocols and targets, the way a doctor provides care can enhance the effectiveness of treatment. Preoccupation with diagnosis and therapeutic goals obscure the wider aspects of therapeutic influence. This influence is above and beyond that created by the perception of being given treatment--the traditional notion of the placebo effect.

We need to identify which patients are most likely to benefit from treatments and, more importantly, those who will *not* benefit.

It is not just what is done that matters, but how care is provided. "How doctors deliver care is as influential as the treatment itself."

BMJ February 20, 2010; 373-74 BMJ 2010;340:c657 doi: 10.1136/bmj.c657 Editorial by Dee Mangin, Christchurch School of Medicine, Christchurch, New Zealand

1 EFFECTIVENESS OF FIVE DIFFERENT APPROACHES IN MANAGEMENT OF

URINARY TRACT INFECTION BMJ 2010;340:c199 First author P Little, University of Southampton School of Medicine, Southington, UK

This open, parallel, randomized, controlled trial assigned 309 women with uncomplicated UTI to one of the five treatment approaches noted in the editorial.

There were no statistically significant differences in duration or severity of symptoms with any of the approaches.

Women had 3.5 days of moderately-bad or worse symptoms even if they took antibiotics immediately.

There were differences in use of antibiotics (range 77% for dipstick to 97% for immediate prescription).

Patients who waited at least 48 hours to start antibiotics reconsulted less, but on average had symptoms for 37% longer than those taking immediate antibiotics.

Antibiotics targeted by dipstick test results, with a delayed prescription as a backup, or empirical delayed prescription might help reduce antibiotic use.

The authors believe these results are generalisable to primary care.

2 COST EFFECTIVENESS OF MANAGEMENT STRATEGIES FOR URINARY TRACT INFECTIONS

BMJ 2010;340:c346 First author David Turner, University of Southampton, Southampton, UK

This randomized, controlled trial was based on the same cohort of 309 women with uncomplicated UTI in primary care.

All management strategies for UTI had similar resource implications. Duration of symptoms was similar between groups, with the dipstick strategy being associated with the shortest duration of symptoms.

	Days of moderate/severe symptoms
Dipstick	3.14
Immediate antibiotic	3.63
Symptom score	3.92
Delayed antibiotic	3.92
Midstream analysis	4.17

Dipstick strategy (compared with the other 4 strategies) with targeted antibiotics is likely to be cost effective if saving moderately bad symptoms for a day. But, what value should be placed on saving a day of moderate to severe symptoms?

The dipstick strategy and the delayed antibiotic groups had the lowest antibiotic use (~75%). Immediate prescription had the highest antibiotic use (96%).

But differences lacked statistical significance.

3 WOMEN'S VIEWS ABOUT MANAGEMENT AND CAUSE OF URINARY TRACT INFECTION

BMJ 2010;340:c279 First author G M Leydon, University of Southampton, Southampton, UK

This study was based on periodic interviews on the same cohort of 309 women.

"Women with signs/symptoms of urinary tract infection prefer to avoid taking antibiotics." They valued the opportunity to avoid unwanted side-effects associated with antibiotics.

But most women presenting with UTI in primary care are prescribed an antibiotic.

Women were open to alternative management strategies, But, some of those who were asked to delay antibiotics felt a lack of validation, or that their primary care clinician had not listened to them.

The clinician needs to address the particular worries that women might have and explain the rationale for not using antibiotics immediately.

A delayed prescription seemed to reassure them and validate the experience of their symptoms and reason for their visit. But, some women might be particularly vulnerable to feelings of not being taken seriously if the clinician proposes a strategy of no antibiotics or delayed antibiotics.

Satisfaction of women who receive delayed prescription might be enhanced if the rationale for this management is clearly presented.

4 PRESENTATION, PATTERN, AND NATURAL COURSE OF SEVERE SYMPTOMS, AND THE ROLE OF ANTIBIOTIC AND ANTIBIOTIC RESISTANCE AMONG PATIENTS PRESENTING WITH SUSPECTED UNCOMPLICATED URINARY TRACT INFECTION

IN PRIMARY CARE BMJ 2010;340:b5633 First author P Little, University of Southampton School of Medicine, Southington, UK

This observational study was based on 839 non-pregnant women presenting with suspected urinary tract infection.

Antibiotic resistance, as well as not prescribing antibiotics, is associated with prolonged, more severe symptoms.

Women with a past history of cystitis, and severe symptoms at presentation, are likely to have severe symptoms for more than 3 days.

Moderately bad symptoms and resistant infections lasted longer than milder symptoms when no antibiotics were prescribed, and also lasted longer in women who had frequent somatic symptoms.

Duration of symptoms was shorter when the doctor was perceived to be positive about diagnosis and prognosis.

Low And High HbA1c Values Were Associated With Increased Mortality And Cardiac Events.2-2 SURVIVAL AS A FUNCTION OF HbA1c IN PEOPLE WITH TYPE 2 DIABETES

The main objective for care of patients with diabetes is to keep the risk of *micro*-vascular and *macro*-vascular complications to a minimum by returning BP, lipid profiles, and HbA1c to normal.

The specific goal for control of glycemia is to return HbA1c to normal range to reduce long-term *micro*-vascular complications.

The ADVANCE trial¹ and the ACCORD study², in patients with diabetes and microor macro-vascular disease, failed to show that achievement of good control was associated with reductions in cardiovascular risk.

Researchers have suggested that hypoglycemia contributes to heightened mortality.

This retrospective cohort study assessed the association between all-cause mortality and HbA1c levels in patients with type-2 diabetes (**DM-2**) in a primary care setting.

STUDY

- 1. The UK General Practice Research Database (GPRD, established in 1987) gathers data in a non-interventional way from computerized records.
- 2. Identified 2 cohorts of elderly patients who had a diagnosis of DM-2, whose treatment included oral drugs and insulin. All had their treatment intensified before baseline.
 - Over 27 000 patients whose treatment had been intensified from oral mono-therapy to combinations of oral drugs. (metformin + sulfonylureas)
 - 2) Over 20 000 who had changed regimens to include insulin.
- 3. Calculated HbA1c as the mean of all observations recorded between the first prescription for intensified drug therapy and death or large vessel disease.
- 4. Divided cohorts into deciles of HbA1c
- 5. Primary outcome = all-cause mortality. Mean follow-up = 5 years.

RESULTS

- 1. Cohort 2 (Insulin treated; n > 20000)
 - A. Baseline characteristics (after treatment intensified with insulin)

Means: age 65; total cholesterol 212; weight 194 pounds (men) 169 (women); creatinine

1.47 mg/dL; duration of diabetes 8 years.

Ever smokers 62%; previous large vessel disease 30%; vision problems 22%

(Ie, a high-risk group.)

2. Deciles of HbA1c at baseline:

Cohort 1 (n > 27 000)

1	2	3	4	5	6	7	8	9	10
6.42	6.94	7.27	7.54	7.82	8.11	8.44	8.85	9.41	10.47
Cohort 2	(n > 20 00	0)							
1	2	3	4	5	6	7	8	9	10
6.3	6.95	7.28	7.55	7.83	8.11	8.45	8.87	9.42	10.56

3. Mortality (unadjusted) over 5 years = 27 per 1000 person years.

4. Hazard ratios (**HR**) of all-cause mortality varied by HbA1c decile. Decile 4 = referent) Cohort 1

1	2	3	4	5	6	7	8	9	10
1.30	1.07	1.03	1.00	1.06	0.99	1.12	1.09	1.23	1.93

cohort 2

1	2	3	4	5	6	7	8	9	10
1.79	1.45	1.35	1.00	0.98	1.15	1.21	1.21	1.46	1.80

- 5. Decile 4 (HbA1c = 7.5 %) had the lowest hazard of all-cause mortality across all deciles.
- 6. HRs fell between decile 1 and decile 4; then rose between decile 4 and decile 10 in a "U" shaped manner.
- 7. Consistent with all-cause mortality, insulin treatment was associated with an increased likelihood of progression to a first large-vessel disease event.
- Cohort 1 (oral drug intensification with metformin + sulfonylurea) followed same "U" shaped path, but with lower mortality rates than cohort 2. The U shape was much flatter, with HRs only deciles 1, 9, and 10 varying much from referent.

DISCUSSION

- 1. "We have shown that an HbA1c of approximately 7.5% was associated with the lowest all-cause mortality and lowest progression to large-vessel disease."
- 2. The U-shaped pattern of risk association was sufficiently similar in the two treatment cohorts to suggest that risk of mortality with respect to HbA1c was independent of treatment regimen.
- 3. Insulin treatment was associated with greater mortality.
- 4. These results support the findings of the ACCORD trial, which showed that patients with cardiovascular disease (**CVD**) or risk factors for CVD and an HbA1c of 7.5% who were submitted to intensive glucose control had increased mortality.
- 5. Decreased survival in patients achieving low mean HbA1c might be related to hypoglycemia, a common complication of intensive control.
- 6. In this study, mortality was 3 times higher in patients who had severe hypoglycemia. In the VA study, more than one episode of severe hypoglycemia was associated with an 88% rise in relative risk of death.
- 7. Lower survival reported in the group given insulin could suggest that insulin might heighten mortality risk.
- 8. "These data imply for oral combination therapy that a wide HbA1c range is safe with respect to all-cause mortality and large vessel events, but for insulin therapy a more narrow range might be desirable."
- 9. This does not mean that there is no value in achievement of present glycemic targets for *micro*-vascular disease.

10. Guidelines might need revision.

CONCLUSION

Low and high HbA1c values were associated with increased all-cause mortality and cardiac events.

Lancet February 6, 2010; 375: 481-89 Original investigation, first author Craig J Currie, Cardiff University, Cardiff, Wales, UK

Sponsored by Eli Lilly

- 1 ADVANCE Collaborative Group "Intensive Blood Glucose Control and Vascular Outcomes in Patients with Type-2 Diabetes NEJM 2008; 358: 2560-72
- ACCORD Action to Control Cardiovascular Risk in Diabetes Study Group, "Effects of Intensive Glucose-Lowering in Type-2 Diabetes" NEJM 2008; 358:2545-59

Go to DOI 10.233/dc10-S004 for a comprehensive summary of standards of medical care in diabetes--2010 published January 2010 by the American Diabetes Association

Glycemic goals in adults:

"Lowering A1C to below or around 7% has been shown to reduce microvascular and neuropathic complications of type 1 and type 2 diabetes. Therefore, for microvascular disease prevention, the A1C goal for nonpregnant adults in general is < 7%.

"In type 1 and type 2 diabetes, randomized controlled trials of intensive versus standard glycemic control have not shown a significant reduction in CVD outcomes during the randomized portion of the trials. Long-term follow-up of the DCCT and UK Prospective Diabetes Study (UKPDS) cohorts suggests that treatment to A1C targets below or around 7% in the years soon after the diagnosis of diabetes is associated with long-term reduction in risk of macrovascular disease. Until more evidence becomes available, the general goal of <7% appears reasonable for many adults for macrovascular risk reduction.

"Conversely, less stringent A1C goals than the general goal of <7% may be appropriate for patients with a history of severe hypoglycemia, limited life expectancy, advanced microvascular or macrovascular complications or extensive comorbid conditions and those with longstanding diabetes in whom the general goal is difficult to attain."

Also, the summary includes in the criteria for diagnosis of diabetes an A1C of 6.5% and above, provided the test is done under specified standardized conditions.

"Prognosis Associated With A Given Level Of eGFR Varies Substantially Based On The Presence And Severity Of Proteinuria."

2-3 RELATION BETWEEN KIDNEY FUNCTION. PROTEINURIA AND ADVERSE OUTCOMES

Current guidelines classify chronic kidney disease (**CKD**) into 5 stages¹, based mainly on estimates of estimated glomerular filtration rates (**eGFR**).

The guidelines have been criticized because they do not incorporate information about the presence of proteinuria. (Proteinuria is an important marker of CKD that is associated with adverse outcomes.)

However, only 25% of Americans with proteinuria have overtly reduced eGFR (< 60 mL.min/1.73 m2). A similar proportion of those with low eGFR have proteinuria.

"Low eGFR and proteinuria do not always coexist."

eGFR and proteinuria could be used together to identify individuals at high risk.

This study determined the association between reduced eGFR and proteinuria, and adverse clinical outcomes. The researchers postulated that patients with both reduced eGFR and proteinuria would be at higher risk of adverse outcomes.

STUDY

- Community-based outpatient cohort identified patients (n = over 920 00) with laboratory
 reports of both proteinuria and eGFR between 2002-2007. All had at least one outpatient
 measurement. None required renal replacement at baseline. Proteinuria was assessed by urine
 dipstick. A subset was also assessed by urine albumen-creatinine ratio.
- 2. Estimated the GFR for each patient using the 4-variable Modification of Diet in Renal Disease (MDRD) Study equation.²
- 3. Categorized GFR as mL/min /1.73m²: 1) 60 or greater, 2) 45-59.9, 3) 30 to 44.9, 4) 15 to 29.9
- 4. Protein was determined by random dipstick measurements: 1) normal (negative), 2) mild (trace or 1+), 3) heavy (2+ or greater).
- 5. Followed for a mean of 35 months.
- 6. Main outcomes = all-cause mortality, myocardial infarction, and progression to renal failure.

RESULTS

- 1. The great majority (89%) had an eGFR of 60 or greater.
- 2. Three % died over the study period; 0.6% hospitalized for myocardial infarction; 0.08% initiated

renal replacement therapy. 0.04% experienced a doubling of serum creatinine. The rates of these outcomes were all increased at lower levels of eGFR and at heavier proteinuria.

3. Adjusted likelihood of clinical outcomes by level of eGFR and proteinuria.

All cause mortality per 1000 person-years:

Proteinuria	Normal	Mild	Heavy
eGFR 60 or greater	2.7	5.8	7.2
45-59	2.9	5.2	7.2
30-44	4.0	5.8	7.5
15-29	6.7	9.1	10.4

- 4. Within each stratum of eGFR, there was substantial variability in risk. Participants who had heavier proteinuria had markedly increased rates of all 4 adverse outcomes.)
- 5. Similar relative increases were evident in myocardial infarction and end-stage renal disease.
- 6. The adjusted mortality risk was more than 2-fold higher among individuals with heavy proteinuria and an eGFR of 60 or greater as compared with those with eGFR of 45-59.9 and normal protein excretion.
- 7. Significant interactions between eGFR and proteinuria were observed for death, initiation of renal replacement, and doubling of serum creatinine.
- 8. The difference in risk associated with moderate or heavy proteinuria (as compared with those without proteinuria) appeared clinically relevant within every eGFR stratum and for all outcomes.

DISCUSSION

- 1. "We demonstrated that prognosis associated with a given level of eGFR varies substantially based on the presence and severity of proteinuria."
- 2. Heavy proteinuria without overtly abnormal eGFR appeared to have worse outcomes than those with moderately reduced eGFR but without proteinuria.
- 3. Present guidelines for the classification and staging of CKD are based on eGFR without explicit consideration of the severity of commentate proteinuria.
- 4. These findings suggest that risk stratification performed in terms of eGFR alone is relatively insensitive to clinically relevant gradients in risk.
- 5. The age-adjusted rates of all-cause mortality and kidney failure appear to vary up to 4-fold and 50-fold (depending on the severity of proteinuria) within a given stage as defined by the current scheme.
- 6. A patient with an eGFR of 80 mL/min/ $1.73m^2$ and 3+ proteinuria on dipstick would be assigned

to a stage 1 CKD under the current system--even though the age-adjusted risks of death and need for renal replacement would be approximately 2 to 10 times higher than a similar patient with an eGFR of 50 but no evidence of proteinuria.. This is particularly striking given the high prevalence of stage 3 CKD (defined as eGFRs of 30-59.9) with or without proteinuria, which accounts for the large majority of individuals with CKD in North America. Risk is heterogeneous within this stage when it is defined by eGFR alone.

- 7. Current practice emphasizes the use of albumen / creatine ratio rather than dipstick. Although dipstick has less favorable diagnostic properties than A/C ratio, it is considerably less expensive. The magnitude of excess risk observed with heavy proteinuria appeared similar, whether assessed by dipstick or A/C ratio.
- 8. Future revisions of the classification system for CKD should incorporate information about proteinuria.

CONCLUSION

The risks of death, myocardial infarction and progression to kidney failure at a given level of eGFR were independently increased in individuals with higher levels of proteinuria.

JAMA February 3, 2010; 303: 423-29 Original investigation, first author Brenda R Hemmelgarn for the Alberta Kidney Disease Network, University of Calgary, Calgary, Alberta, Canada
1 Stages of CKD based on eGFR: 1 90 and above, 2 60-89. 3 30-59, 4 15-28, under 15 (kidney failure)
2 http://www.nkdep.nih.gov/professionals/gfr_calculators/orig_con.htm

"There Is No Safe Dose Of Tobacco Smoke"

2-4 TOBACCO SMOKE BY ANY OTHER NAME IS STILL AS DEADLY [Editorial]

Use of tobacco products such as cigars and pipes, and smokeless tobacco is common.

Data show that , although cigarette consumption has declined substantially, consumption and sales of other tobacco products, most notably cigars, has increased.

Over ten years ago, the American Cancer Society convened a conference of experts to review evidence for disease caused by cigar smoking. Since then, we have known that all tobacco products are harmful.

"We are still trying to convince the public that these products are not safe alternatives to cigarettes."

In this issue of *Annals*¹, a study reports that smokers of pipes and cigars have substantial nicotine absorption as well as measurable lung damage. The results are especially important because the tobacco industry is actively promoting product substitution and use as an alternative to complete cessation.

Why do so many persons believe that cigar and pipe smoking is safe? The smoke is more alkaline and irritating and thus inhalation is less, relative to cigarette smoke. Some believe that smoke from these products is not inhaled at all, contributing to misguided perceptions of reduced harm.

In fact, pipe and cigar smokers do inhale, especially former cigarette smokers.

The study showed that smokers of these products are exposed to sufficient levels to affect their pulmonary health. The measured reduction in pulmonary function clarifies the substantial harm.

Although smoking pipes and cigars may carry intermediate levels of harm between never smoking and cigarettes, we need to understand that there is no safe dose of tobacco smoke exposure. Compared with cigarette smoke, cigar smoke contains higher levels of N-nitrosamines, The higher pH of the smoke aids absorption of nicotine.

Other studies have reported that cigar and pipe smokers, compared with non-smokers, have higher risk of cardiovascular disease (RR = 1.22), COPD (RR = 1.45), lung cancer (RR = 2,14), and overall mortality (RR = 1.44).

Life-years lost have been estimated at 5 years compared with cigarette smokers 7 years.

As changes in public health policy have made cigarettes less socially acceptable, a distinct set of characteristics are associated with cigar and pipe use: sophistication, affluence, education, and celebration. These images, largely fostered by the tobacco industry, perpetuate the idea that these products play a suitable role in our society.

Annals Internal Medicine February 16, 2010; 152: 259-60 Editorial, first author Michael B Steinberg, University of Medicine and Dentistry of New Jersey, New Brunswick, NJ 1 "The Association of Pipe and Cigar Use with Cotinine Levels, Lung Function, and Airflow Obstruction" The Multi-Ethnic Study of Atherosclerosis (MESA) Annals Internal Medicine February 16, 2010; 201-210 First author Josanna Rodriguez, Columbia University, New York

This population-based cross-sectional study determined whether pipe and cigar smoking is associated with elevated cotinine levels, decrements in lung function, and increased odds of airflow obstruction.

Entered men and women (n = 3500) age 48-90 without clinical cardiovascular disease at enrollment.

Measured spirometry and urine cotinine levels.

Calculated pipe-years and cigar-years from self-reports.

Of the 3500, 9% reported pipe smoking (median 15 pipe-years) and 11% reported cigar smoking (median 6 cigar-years). 52% also reported smoking cigarettes.

Self-reported current pipe and cigar smokers had elevated cotinine levels compared with never-smokers.

Pipe-years were associated with decrements in FEV1. Cigar-years were associated with decrements in FEV1/FVC ratio.

Both groups had increased odds of airflow obstruction, whether or not they had smoked cigarettes (odds ratio = 3.4) or not (odds ratio = 2.3) compared with participants with no smoking history.

Conclusion: Pipe and cigar smoking increased urine cotinine levels and was associated with decreased lung function and increased odds of airflow obstruction, even in participants who had never smoked cigarettes.

Funded by the National Institutes of Health

"A Disconnect With the Existing Evidence Of Their Effectiveness." 2-5 HOSPITAL CHARACTERISTICS ASSOCIATED WITH FEEDING TUBE PLACEMENT IN NURSING HOME RESIDENTS WITH ADVANCED COGNITIVE IMPAIRMENT

Dementia is now a leading cause of death in the US.

The decision to place a feeding tube (**FT**) in a patient with advanced dementia is one of the sentinel decisions that family members and health care professionals grapple with, in the nursing home (**NH**) environment.

Many patients with advanced cognitive impairment have a FT inserted during an acute-care hospitalization (usually for an infection).

Two widely cited literature reviews conclude that use of FT does not improve survival, prevent aspiration pneumonia, prevent decubitus ulcers, or improve other clinical outcomes.

The objective of this study was to show the variation and to identify the characteristics of acute care hospitals associated with rates of FT insertion among patients admitted with advanced cognitive impairment.

STUDY

- 1. Defined the study population from the 1999-2007 US Nursing Home Minimum Data Set, which contains federally mandated data on every resident living in a Medicare-certified NH.
- 2. Used a random 20% of all beneficiaries to approximate national rates.
- 3. Included over 163 000 NH patients with advanced cognitive impairment (mean age 84;

2/3 women;12% black) admitted to a hospital between 2000 and 2007. None had FT in place on admission; all were severely functionally impaired. A total of 19 847 FT insertions occurred in the hospital (94% by percutaneous gastrostomy).

RESULTS

- 1. The hospital rate of FT insertions per 100 eligible patients declined over the years from a high of 7.9 in 2000 to a low of 6.2 in 2007.
- 2. The rate of FT insertions varied from 0 to 39 per 100 hospitalizations (Median 5.3); 12% of hospitals did not insert any FT. These hospitals tended to be smaller, more likely to be located in rural regions, and less likely to be associated with a medical school. And were less likely to have intensive care units.
- 3. A higher rate of FT insertions was independently associated with for-profit hospitals vs hospitals owned by state or local governments. (Absolute difference = 3 insertions per 100 admissions.)
- 4. Hospitals with a greater number of beds also had higher rates of insertions.
- 5. Blacks experienced nearly a 2-fold increase in the likelihood of FT insertions compared with whites.
- 6. Written advanced directives, do not resuscitate orders, and orders to forego artificial hydration and nutrition were independently associated with a *lower* likelihood of FT insertion.

DISCUSSION

- 1. "Feeding tube insertion in persons with advanced cognitive impairment demonstrates a disconnect with the existing evidence of their effectiveness."
- 2. The rate of FT insertions varied widely between hospitals.
- 3. "Our research findings call for multifaceted interventions to ensure the insertion of feeding tubes during acute care hospitalizations is consistent with patient preferences after thorough discussion of the risks and benefits."
- 4. Hospital characteristics associated with higher rates of FT insertions during the last 6 months of life include large size, for profit, and more ICU days.
- 5. Blacks and Hispanics were more likely to receive FT.
- 6. Written advanced directions, do not resuscitate orders, and orders to forego artificial hydration and nutrition were associated with *lower* use of FT. One study reported that most NH residents would "rather die" than live in a state of advanced dementia. But, prevalence of advanced directions in nursing home resident is low. Improving advanced care planning is essential to ensure that FT insertions is based on informed patient preferences.

CONCLUSION

Among nursing home residents with advanced cognitive impairment, those admitted to larger hospitals, and hospitals with for-profit ownership and greater ICU use were associated with increased rates of FT insertion.

JAMA February 10, 2010; 303: 544-50 Original investigation, first author Joan M.Teno, Brown University, Providence, Rhode Island.

Superficial Venous Thrombosis Is Not Benign

2-6 SUPERFICIAL VENOUS THROMBOSIS AND VENOUS THROMBOEMBOLISM

Superficial venous thrombosis (**SVT**) has been thought to have a benign prognosis. This perception may be changing.

This large observational study assessed: 1) the prevalence of concurrent SVT and venous thromboembolism (**VT**), 2) how providers are treating SVT, 3) the 3-month incidence of thromboembolic (**TE**) complications.

STUDY

- 1. The POST study was a French national, multicenter, prospective, observational study of a cohort of consecutive patients with symptomatic SVT of the lower limbs.
- In France, patients with lower extremity SVT generally consult their primary care physician, who then refers them to a vascular specialist for compression ultrasonography to confirm the diagnosis of SVT and to exclude concomitant deep venous thrombosis (**DVT**).
- 3. This study enrolled patients with symptomatic SVT of the lower extremity, defined as a subcutaneous non-compressible hypoechoic area in the course of an identified superficial vein (appearing circular in cross-sectional view, and rectangular in longitudinal view) more than 5 cm in length on compression ultrasonography.
- 4. No patient had surgery in the past 10 days.
- 5. AT presentation, determined the prevalence of DVT or symptomatic pulmonary embolism (**PE**) in patients with a diagnosis of SVT.
- 6. Followed patients with SVT (without DVT of PE at presentation) for 3 months to assess TE complications. All received a second ultrasound of both lower limbs within 2 weeks, and an

assessment of symptomatic events at 3 months.

7. Primary outcome = confirmed TE complications at 3 months.

RESULTS

1. Enrolled 844 patients with SVT (mean age = 61; 21% over age 75; women 65%):

Most SVTs involved the long saphenous vein.

2 Patient characteristics at inclusion (SVT n = 844)

Risk factors %

Varicose veins	81%
History of:	
SVT	34
DVT or PE	22
Cancer (active)	6

3 Of the 844:

a. 210 (25%) had DVT or symptomatic pulmonary embolism (4%) at inclusion.

b. 634 had SVT alone. Of these, the study followed 586 for 3 months.

4. Of the 586 with SVT alone: (without DVT or PE at inclusion) 58 developed thromboembolic complications by 3 months:

Symptomatic	Number				
Pulmonary embolism	3 (one probable death)				
DVT	5				
Extension of SVT	18 (despite almost all receiving anticoagulants)				
Recurrence of SVT	10				
Asymptomatic	12				

5. Almost all received anticoagulation. Other treatment: compression stockings (47%); topical and oral NSAIDs (55%); venous surgery (stripping or ligation 10%)

DISCUSSION

- 1. "In our large observational study, we found that venous thromboembolism accompanied symptomatic SVT in nearly 25% of patients."
- 2. At presentation, many patients had DVT; 4% had symptomatic pulmonary embolism.
- 3. In patients with isolated SVT at inclusion, 8% developed at least one thromboembolic event at 3 months:

Symptomatic DVT	3
Pulmonary embolism	0.5
Symptomatic extension of SVT	3
Symptomatic recurrence of SVT	2

4. This despite more than 60% receiving anticoagulants and nearly all receiving elastic stockings.

5. There is variation by country in routine practice for treating SVT. This emphasizes the uncertainty regarding the best treatment. There is an urgent need to determine the optimal treatment

CONCLUSION

Symptomatic SVT of the lower extremities is not benign. Many patients have complications at presentation. Others are at risk of complications within 3 months.

Compression ultrasonography might be considered for patients with symptomatic SVT at presentation. Close follow-up of patients with isolated SVT might be advisable.

Annals Internal Medicine February 16, 2010; 152: 218-24 Original investigation by The POST (Prospective Observational Superficial Thrombophlebitis) study, First author Herve Decousus, Hopital Nord, Saint-Etienne, France

"People With A History Of Depression Are More Likely To Get CFS/ME, And Vice-Versa"2-7 CHRONIC FATIGUE SYNDROME

Chronic fatigue syndrome or myalgic encephalomyelitis (now commonly, if unsatisfactorily, called **CFS/ME**) has been termed by the UK media as a progressive, paralyzing, and commonly fatal illness. Little has been said in the media about the uncertainties and controversies that this diagnosis has attracted.

Data clearly show that mortality is not increased. The greatest risk to life is likely to be suicide.

Clinicians should consider alternative diagnoses to CFS/ME that would better explain the symptoms.

Assuming these alternatives have been ruled out, what is the excess mortality associated

with CFS/ME?

Suicide is associated with depression. Depression is associated with CFS/ME People with a history of depression are more likely to get CFS/ME, and vice-versa. Whatever the direction of causality, depression can be treated, whether it occurs alongside life-limiting cancer, motor neuron disease, or a diagnosis of CFS/ME. Any patients with CFS/ME who talks about suicide should be reviewed by a psychiatrist,. Ninety % of suicides are associated with a psychiatric diagnosis.

Treatment of depression should be comprehensive: pharmacotherapy and appropriate psychotherapy. There is some evidence that cognitive-behavior therapy and graded exercise therapy are helpful in CFS/ME. The National Institute for Health and Clinical Excellence (NICE: UK) recommends both. "Clinical experience indicates that in patients with severe CFS/ME, such programs may need to be adapted and prolonged, but that they can be the trigger for improvement and sometimes dramatic recovery. The alternative is no-treatment, which can be disastrous."

Unfortunately, an air of defeatism exists within the medical professing, particularly for those severely afflicted. Doctors are uncertain about what they are dealing with, they are reluctant to get involved, and perhaps inevitably a breakdown in trust between the doctor and the patients and families often occurs.

"There is even a view that emphasizing the incurable and even fatal nature of CFS/ME is the only way to persuade the medical profession that it is real illness."

Undoubtedly, our current treatments could be improved, recovery may not be complete, and access to services needs to be improved.

BMJ February 13, 2010;340:328 BMJ 2010;328:c738 Editorial, first author Alastair M Smarthouse, Guy's Hospital, London, UK
