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Effect of patient payment status on antibiotic prescribing. Antibiotics are widely believed to be overused and misused. Approximately 80% of all prescriptions for antibiotics are written by GPs. There are many potential factors that may influence a GP's decision to prescribe antibiotics. A recent study compared antibiotic prescribing in General Medical Service (GMS) card holders with private patients throughout Ireland (*BJGP 2011; 61: 552-3*). Participating GPs (n=171) each gathered anonymised patient

data on 100 consecutive consultations using a predefined data collection proforma (age, sex, payment status, reason for consultation / diagnosis and prescription details of any antibiotic prescribed). Results were available for 16,899 consultations. The median age of GMS patients was 54 years compared with 34 years for private patients. **Antibiotics were prescribed at 3,407 consultations (=20.16/100 consultations). Private patients were 23% more likely to receive a prescription for antibiotics overall (47% more likely if presenting with respiratory symptoms) compared with GMS card holders. Of interest, private patients were 36% more likely to receive a delayed or deferred prescription compared with GMS patients.** The age-adjusted rate/100 persons receiving antibiotics was similar in both groups with the highest prescribing recorded in the 1-4 year age group. In general, patients ≥ 65 years old were less likely to receive a prescription for an antibiotic compared with those aged < 65 years. The authors note that older patients are more likely to develop complications with infections and a higher rate of antibiotic prescribing might have been expected in this group. The results suggest that inappropriate antibiotic prescribing may be occurring more in the younger (and healthier) population. The increased antibiotic prescribing noted in the private patient group could be due to presentation at a later (and therefore worse) stage of disease - duration of symptoms of each patient was not recorded. Or it may be due to their unwillingness to return for a second visit due to cost - the increased rate of delayed prescriptions issued to this group supports this latter view. Patient pressure has been quoted as a factor in unnecessary antibiotic prescribing and this is likely to be a pertinent factor in this study, where payment takes place at the point of a private consultation. The authors suggest that the findings indicate that diagnostic uncertainty has a significant role in antibiotic prescribing decisions in primary care. **An accompanying editorial** notes that the study couldn't provide data on the severity of symptoms, therefore the appropriateness of antibiotic use cannot be evaluated (*BJGP 2011; 61: 542*). However, the author suggests that the differences in antibiotic prescribing patterns between GMS and private patient groups may represent differences in the way in which patient expectations are managed; therefore, strategies aimed at reducing excessive antibiotic prescribing would need to take such factors into account.



Updated Immunisation Guidelines available online. The National Immunisation Advisory Committee has issued updates to certain chapters of the 2008 Immunisation Guidelines for Ireland. These include an update of the epidemiology of meningococcal infection in Ireland, and information on the recently authorised conjugate quadrivalent (ACW₁₃₅Y) vaccine. There is a new chapter (13A) dealing with **Rotavirus, the commonest cause of community-acquired gastroenteritis in children worldwide**, and a notifiable disease in Ireland since 2004. There is a wide spectrum of symptoms associated with

rotavirus infection, ranging from none through mild diarrhoea to severe gastroenteritis with dehydration, electrolyte imbalance and shock; rarely, encephalitis and meningitis may occur. Severe illness is more likely in those aged 4-24 months. Up to 1/3 of children have a temperature of $> 39^{\circ}\text{C}$. Vomiting usually lasts < 48 hrs, but may persist for 8-10 days. Other GI symptoms generally resolve in 3-7 days. Occasionally diarrhoea may last for up to 3 weeks. Asymptomatic infections are common among neonates, older children and adults. Rotavirus vaccines are indicated for the prevention of rotavirus gastroenteritis when given to infants aged between 6 and 32 weeks. **Rotavirus vaccination is not included as part of the routine childhood immunisation schedule, however parents may choose to have their healthy children immunised.** No dose should be administered after 32 weeks of age (even if the course is incomplete) because of lack of safety and efficacy data in those > 32 weeks. Check out: <http://www.immunisation.ie/en/HealthcareProfessionals/ImmunisationGuidelines2008/> for full details of all September 2011 revisions to the 2008 immunisations guidelines.

[Editor's Note: Don't forget the **annual influenza vaccine should be given in Sept/ Oct each year** although it can be given throughout the year. The **influenza chapter** contains **updated recommendations on immunisation** to include those > 50 years at increased risk of influenza complications, those with a BMI ≥ 40 and all pregnant women and gives guidance on vaccination for those with egg allergy. Check out the website for full details]



Length of anticoagulant treatment and risk of recurrent venous thromboembolism.

Venous thromboembolism (VTE) encompasses deep vein thrombosis (DVT) and pulmonary embolism (PE). VTE is usually treated with a short course of a parenteral heparin, followed by a longer course of therapy with oral anti-coagulation (OAC). The duration of OAC is based on the physician's clinical assessment of benefit vs. risk of continuing treatment as well as patient preference. Several studies have shown the effectiveness of such treatment (achieving an INR of 2.5) in preventing recurrent VTE; however, results have not provided clear data relating to the optimal

length of OAC for VTE. **A recent study sought to identify the optimal duration of OAC post VTE** using the pooled data of individual patients with VTE from seven randomised controlled trials (*BMJ 2011; 342.d3036*). A total of 2,925 patients (mean age 60.5 years, 52% male) who had confirmed VTE (but no known cancer at diagnosis) were included in the study. Over half (52%) had proximal DVT, 29% had PE and 20% isolated distal DVT; provoking risk factors were identified for 40% of cases. Duration of OAC was classified as 1 or 1.5 months, 3 months, 6 months and ≥ 12 months with a follow-up of up to 24 months post treatment (mean follow-up of 1.4 years per patient).

The pooled results showed a recurrent VTE rate of 7.8/100 patient years. **The overall risk of VTE was greater in the first 6 months post treatment discontinuation, compared with subsequent months** (12.2 vs. 5.5/100 patient years). In addition, for the duration of the follow-up, the risk of recurrence was doubled in those who had had an unprovoked VTE compared with those with an identified provoking factor. **In patients with provoked VTE, the risk of recurrent VTE** in the first 6 months post treatment discontinuation was significantly higher in those treated for 1 or 1.5 months compared with those receiving OAC for ≥ 3 months. There was no difference in risk between the rest of the treatment regimens. **In patients with unprovoked VTE the risk of recurrent VTE** in the first 6 months post treatment discontinuation was significantly higher in those treated for up to 3 months compared with treatment regimens of ≥ 6 months; in subsequent months of follow-up only the 1 and 1.5 month treatment regimen showed a significantly increased risk compared with the other treatments. The study also looked at the **impact of location of the initial episode of VTE** and noted that patients with an isolated distal DVT had approximately half the risk of recurrence compared with those who had presented with PE or proximal DVT. The authors' recommendations can be summarised as follows:

1. If the risk of recurrent VTE is not high enough to justify indefinite anticoagulation, treatment can be stopped after 3 months in most patients
2. The risk of recurrence after stopping anticoagulation is doubled if the VTE was a proximal DVT or a PE, compared with an isolated distal DVT
3. The risk is also doubled if thrombosis was unprovoked (risks 2 and 3 are additive)

Psychoactive medications increase crash risk in older drivers.



The role of alcohol in road traffic accidents (RTA) has been firmly established; however there is limited evidence-based information available for prescription drugs. A recent retrospective case-crossover study evaluated the association between psychoactive medicines and RTA risk in drivers aged ≥ 60 years, using a population database (n=2.2 million) (*J Am Geriatr Soc 2011; 59: 1575-80*). Hospital admissions due to RTA in the target population were identified (= study group) and their pharmaceutical records were used to identify usage patterns of benzodiazepines, antidepressants and opioid analgesics during the review period. Time

intervals of up to 4 months prior to onset of use of one of the test medicines were used as controls to compare its usage within the so-called hazard interval in relation to the RTA (the hazard interval was calculated according to prescription period and half-life of each individual drug). Results identified 616 drivers (60.7% female, mean age 75 years), prescribed 6,671 psychoactive medicines, who had been involved in a RTA requiring hospitalisation, during the 6-year review period. A prescription for a **benzodiazepine within the hazard period was associated with a 5.3 fold increased risk of hospitalisation with RTA compared with the control periods**; the risk was greater in men and in older age groups. A prescription for an **antidepressant was associated with an overall increased risk of 1.8 fold**; risk was greater in men, older age groups and in those with a chronic condition. However, a prescription for an opioid analgesic within the hazard interval was just marginally associated with a 50% greater likelihood of a RTA, with only females showing a significantly increased risk (1.8 fold increased risk compared to control periods). The authors conclude that the study supports a relationship between use of such psychoactive medicines and risk of RTA. They suggest that inclusion of such medicines on medical reporting forms for older drivers would enable ongoing surveillance by the licensing authorities and possibly provide a more comprehensive evidence-base of the need for stricter regulatory policies in this area.