

提昇用藥品質芻議



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醫療效益研究中心
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用藥流程

醫師處方



藥師調劑



病人用藥

- ❖ 診察
- ❖ 已用藥品
- ❖ 處方選擇
- ❖ 用藥說明

- ❖ 藥品準備
- ❖ 處方判讀
- ❖ 調劑
- ❖ 諮詢

- ❖ 了解用藥
- ❖ 依說明使用
- ❖ 生活調整

資訊整合與知識傳遞的流程



用藥品質的問題

- ❖ 資訊整合與知識傳遞的流程：依病人需求給予適當，且符合效益的處置
- ❖ 用藥：該用而用、正確用、不該用則未用
- ❖ 用藥的問題：該用而未用、不當使用、不該用而用



沒用到的藥

一百零一年一月十五日
聯合報 第B02版

藥物回收 平均1個月1公噸

胃藥占最大宗 其次是心血管疾病藥物 固體藥品占一半 浪費逾億 僅三成六民衆做到回收

中華民國100年8月28日/星期日

E-mail: baby0547@mail2000.com.tw

健康照過來

11

中國時報



生活保健

國人愛吃藥 更愛丟藥

去年廢棄10噸浪費上億

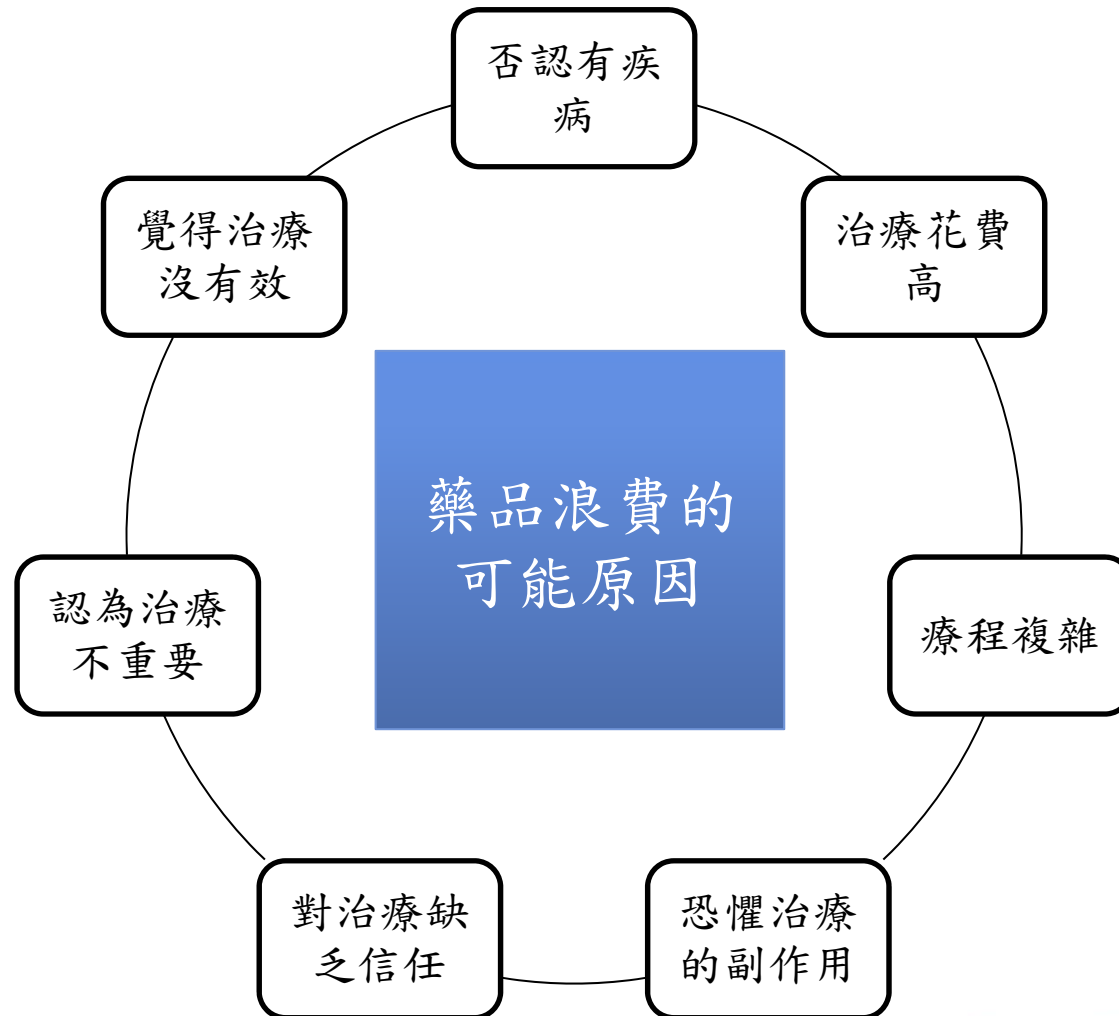
健保局總支出5千億，藥費高占四分之一，居家剩藥都是民眾自覺症狀改善或忘記服藥。



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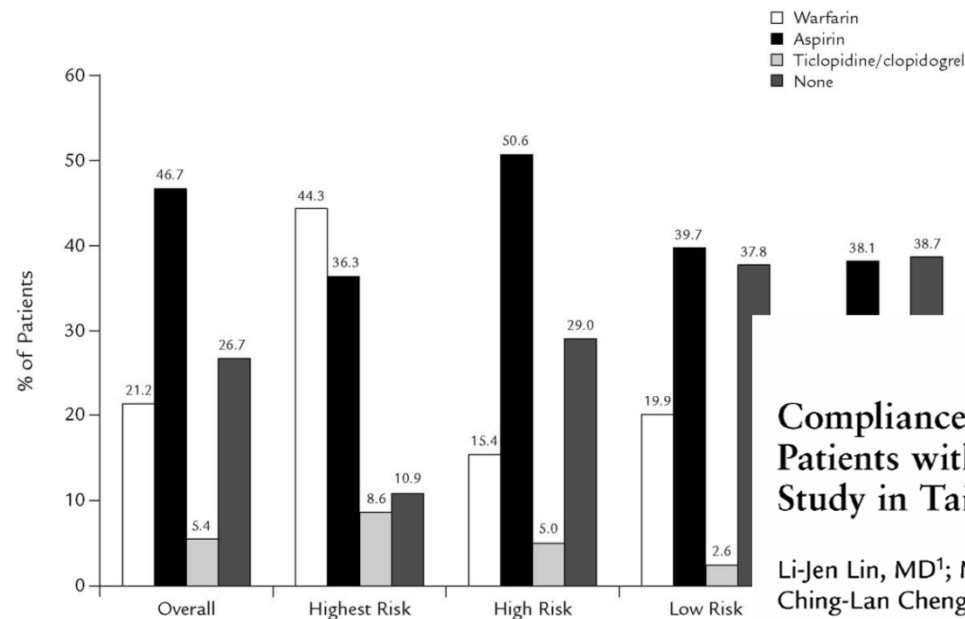
病人沒用藥的原因





該用而未用的問題（例一）

❖ 抗血栓劑符合準則之比例偏低



Clinical Therapeutics/Volume 30, Number 9, 2008

Compliance with Antithrombotic Prescribing Guidelines for Patients with Atrial Fibrillation—A Nationwide Descriptive Study in Taiwan

Li-Jen Lin, MD¹; Ming-Hui Cheng, MS²; Cheng-Han Lee, MD^{1,3}; Der-Chang Wung, MS²; Ching-Lan Cheng, MS^{2,4}; and Yea-Huei Kao Yang, BS^{2,4}

¹Department of Internal Medicine, College of Medicine, National Cheng Kung University, Tainan City, Taiwan;

²Institute of Clinical Pharmacy, College of Medicine, National Cheng Kung University, Tainan City, Taiwan;

³Institute of Clinical Medicine, College of Medicine, National Cheng Kung University, Tainan City, Taiwan;

and ⁴Institute of Biopharmaceutical Science, College of Medicine, National Cheng Kung University, Tainan City, Taiwan



該用而未用的問題（例二）

出院後使用藥品	人數 N	(%)
Antiplatelet agents	27752	(87.64%)
Aspirin	23272	(73.49%)
Clopidogrel	22051	(69.64%)
Ticlopidine	327	(1.03%)
Beta-blockers	16333	(51.58%)
ACEI/ARBs	19040	(60.13%)
Statins	13408	(42.34%)
No drug	2923	(9.23%)

共納入31666位患者, 觀察出院後30天內使用次級預防藥品的情形
Secondary Prevention in Post-MI cases



該用而未用的問題（例三）

Alendronate Adherence and Its Impact on Hip-Fracture Risk in Patients With Established Osteoporosis in Taiwan

T-C Lin¹, C-Y Yang², Y-H Kao Yang^{1,3} and S-J Lin⁴

Table 3 Results from time-dependent Cox regression to assess factors associated with hip-fracture risk

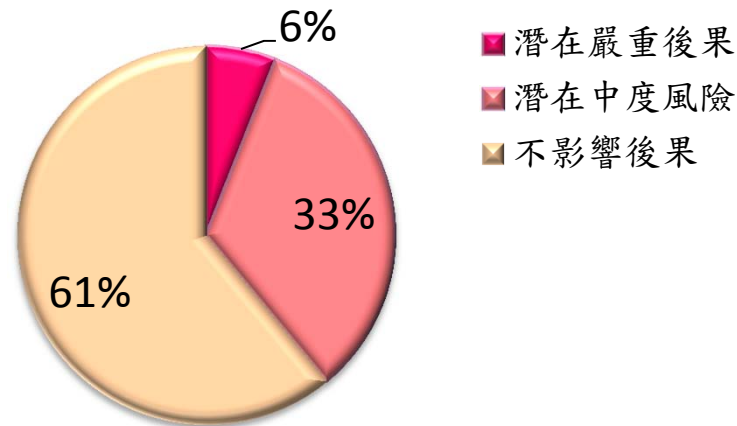
Factor	Unadjusted		Adjusted	
	HR	95% CI	HR ^a	95% CI
MPR \geq 80 vs. MPR $<$ 80	0.29	0.21–0.40	0.30	0.22–0.42
Age	1.07	1.06–1.09	1.07	1.06–1.09
<i>Index fracture</i>				
Vertebral fracture	Reference		Reference	
Hip fracture	1.32	1.02–1.69	0.82	0.62–1.07
<i>Gender</i>				
Male	Reference		Reference	
Female	0.79	0.59–1.06	0.94	0.69–1.27



藥品治療落差

❖ 53.6% 的病人在入院時會發生用藥不一致的情況

不一致之類型	次數	不影響後果	潛在中度風險	潛在嚴重後果
藥品遺漏	65 (46%)	3 (4.6%)	18 (27.7%)	3 (4.6%)
劑量不一致	35 (25%)	0	13 (37.1%)	0
頻次不一致	24 (17%)	1 (4.2%)	8 (33.3%)	1 (4.2%)
藥品不正確	16 (11%)	4 (25%)	7 (43.8%)	4 (25%)
合計	140	8 (5.7%)	43 (32.9%)	8 (5.7%)





國內藥品治療落差之情況

- ❖ 研究對象：65歲以上合併三種以上共病症、四種以上住院醫囑藥物之新住院患者。
- ❖ 共收錄118位病人
 - 55.1%會發生用藥不一致的情況。
 - 82.4%為藥品遺漏
 - 28.4%需加上使用
- ❖ 藥師評估用藥不一致對後果的影響
 - 14.1%為潛在嚴重後果
 - 0.5%可能危及生命



正確用藥：處方資訊（一）

❖ 處方資訊的依據：歐美是瞻？

Alteplase at 0.6 mg/kg for Acute Ischemic Stroke Within 3 Hours of Onset Japan Alteplase Clinical Trial (J-ACT)

Takenori Yamaguchi, MD; Etsuro Mori, MD; Kazuo Minematsu, MD; Jyoji Nakagawara, MD;
Kazuo Hashi, MD; Isamu Saito, MD; Yukito Shinohara, MD;
for the Japan Alteplase Clinical Trial (J-ACT) Group

Background and Purpose—Based on previous studies comparing different recombinant tissue plasminogen activator (rt-PA) doses, we performed a clinical trial with 0.6 mg/kg, which is lower than the internationally approved dosage of 0.9 mg/kg, aiming to assess the efficacy and safety of alteplase in acute ischemic stroke for the Japanese.

Methods—Our prospective, multicenter, single-arm, open-label trial was designed with a target sample size of 100 patients. The primary end points were the proportion of patients with a modified Rankin Scale (mRS) score of 0 to 1 at 3 months and the incidence of symptomatic intracranial hemorrhage (sICH) within 36 hours. Thresholds for these end points were determined by calculating 90% CIs of weighted averages derived from published reports. The protocol was defined according to the National Institute of Neurological Disorders and Stroke (NINDS) rt-PA stroke study with slight modifications.

Results—Among the 103 patients enrolled, 38 had an mRS of 0 to 1 at 3 months; this proportion (36.9%) exceeded the predetermined threshold of 33.9%. sICH within 36 hours occurred in 6 patients; this incidence (5.8%) was lower than the threshold of 9.6%.

Conclusions—In patients receiving 0.6 mg/kg alteplase, the outcome and the incidence of sICH were comparable to published data for 0.9 mg/kg. These findings indicate that alteplase, when administered at 0.6 mg/kg to Japanese patients, might offer a clinical efficacy and safety that are compatible with data reported in North America and the European Union for a 0.9 mg/kg dose. (*Stroke*. 2006;37:1810-1815.)

Key Words: stroke, acute ■ thrombolytic therapy ■ tissue plasminogen activator

Stroke. 2006 Jul;37(7):1810-5.



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正確用藥：處方資訊（二）

Journal of Thrombosis and Haemostasis, 8: 1515–1523

DOI: 10.1111/j.1538-7836.2010.03873.x

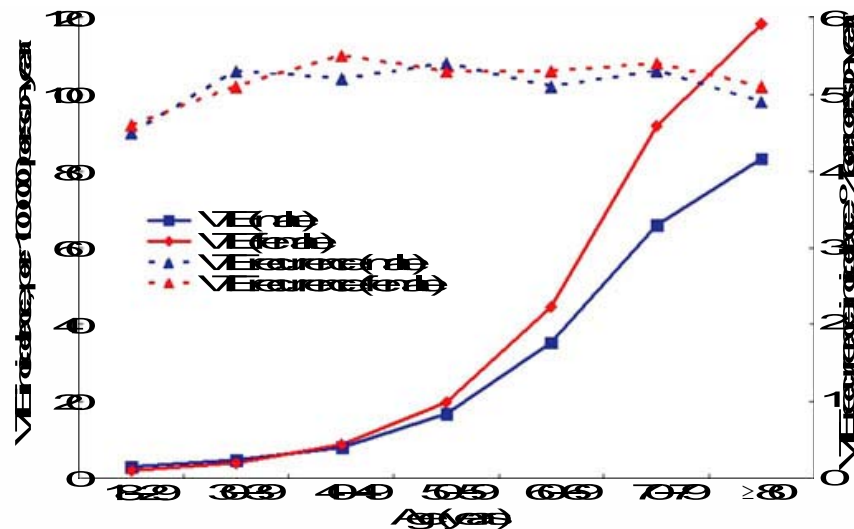
ORIGINAL ARTICLE

Incidence and cumulative recurrence rates of venous thromboembolism in the Taiwanese population

C.-H. LEE,*†¹ L.-J. LIN,*¹ C.-L. CHENG,†‡ Y.-H. KAO YANG,†‡ J.-Y. CHEN* and L.-M. TSAI*

*Department of Internal Medicine, National Cheng Kung University Hospital; †Institute of Biopharmaceutical Science, College of Medicine, National Cheng Kung University; and ‡Institute of Clinical Pharmacy, College of Medicine, National Cheng Kung University, Tainan, Taiwan

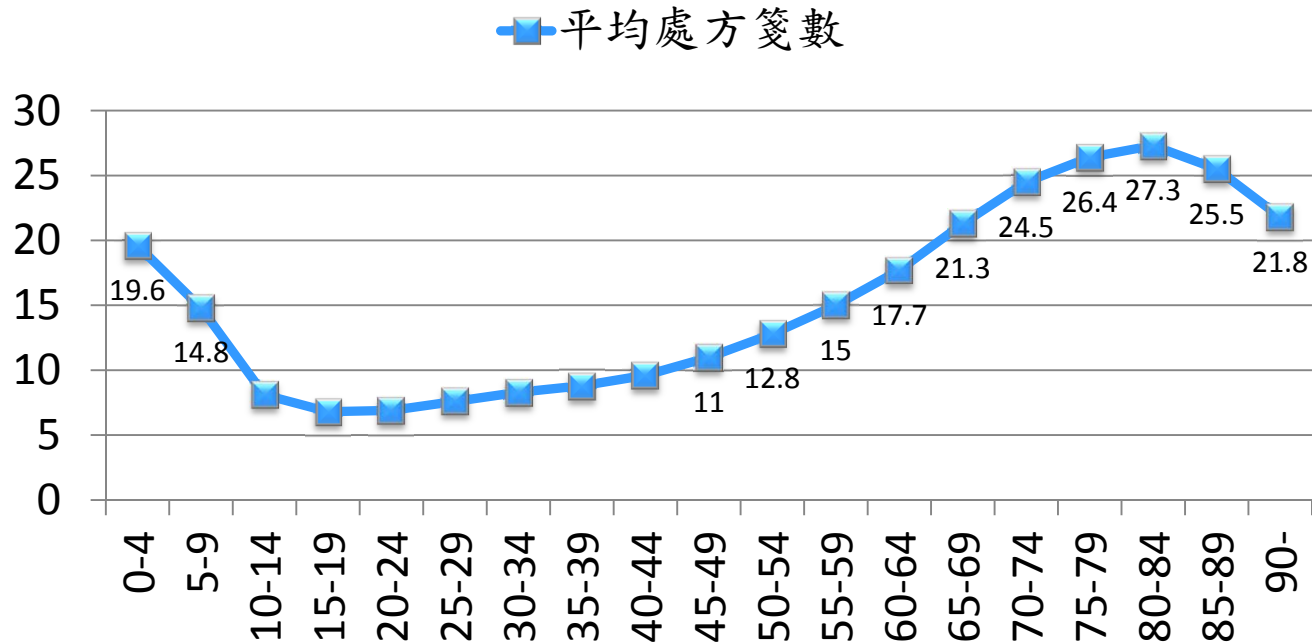
- ❖ Crude incidence of VTE
Taiwan: 15.9/100,000
Caucasians: 71–117/100 000
- ❖ Recurrence rate similar with Caucasians:
6–10% at 6 months vs.
7–13% at 1 year





國人門診平均處方箋數

- ❖ 一年平均處方箋數: 12.4張/人
 - 2010年百萬抽樣歸人檔



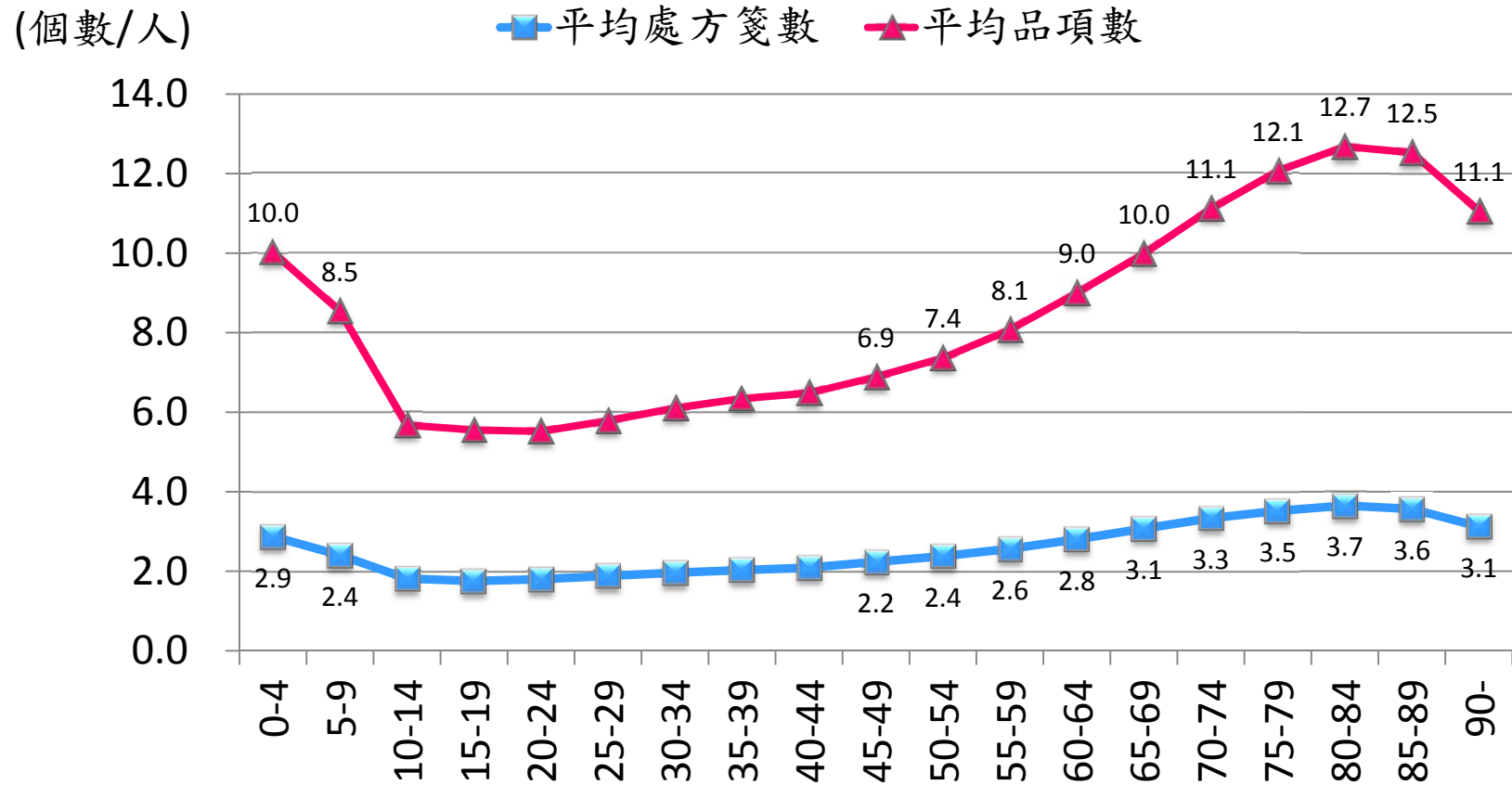


國人用藥情況(30天)

- ❖ 2010年國人門診平均處方箋數及藥品數
 - ❖ 資料來源: 2010年百萬抽樣歸人檔
 - ❖ 一個月(30天)
 - ❖ 平均被處方箋數: 2.3張/人
 - ❖ 眾數: 1張/人 (43%)
 - ❖ 最大值: 56 張/人
 - ❖ 平均藥品品項數: 7.4項/人
 - ❖ 眾數: 2項/人 (12%)
 - ❖ 最大值: 217 項/人



國人30天平均處方箋數及藥品數— 年齡別



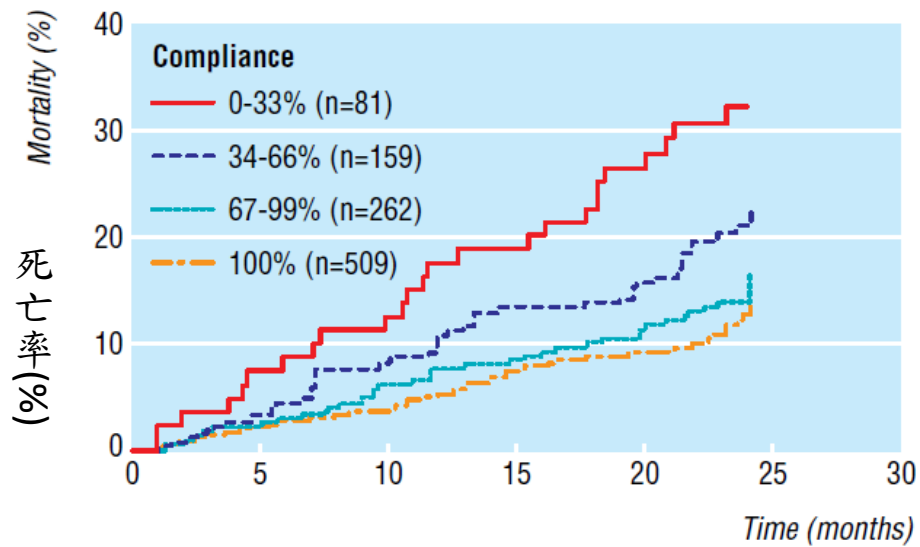
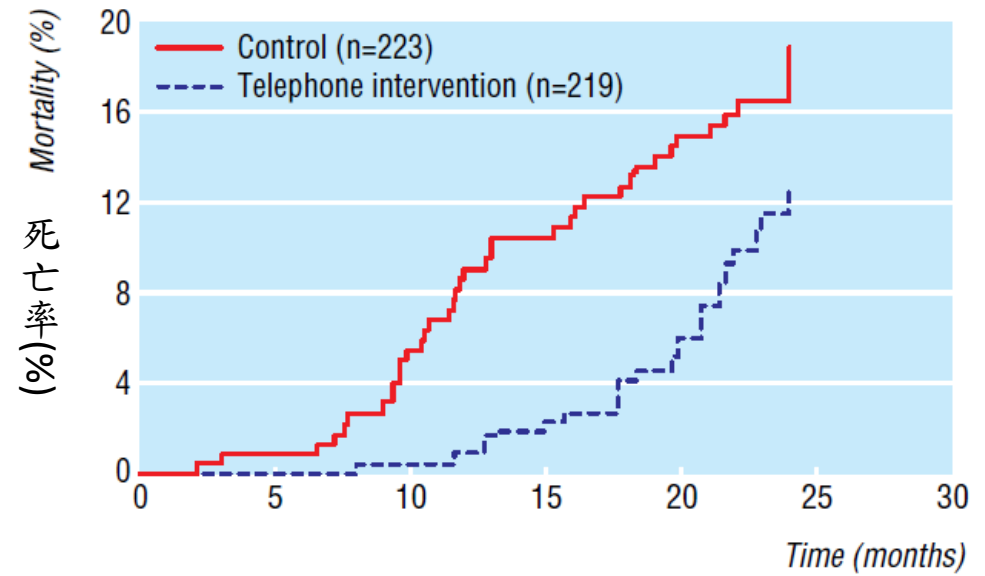


提昇用藥品質的思維

- ❖ 落實用藥指導
 - 僅提供書面資訊時，效果有限
 - 口頭的說明才能改變行為
- ❖ 用藥整合與諮詢
 - 專業知識與時間的價值
- ❖ 讓醫師、藥師與民眾有充分的資訊
 - 健保藥品處方集
 - 屬於國人的實證醫學研究



藥師電訪減少多重用藥病人的死亡率



BMJ. 2006 Sep 9;333(7567):522. Epub 2006 Aug 17.



充足透明的處方資訊來源

BNF

British National Formulary

BNF for children



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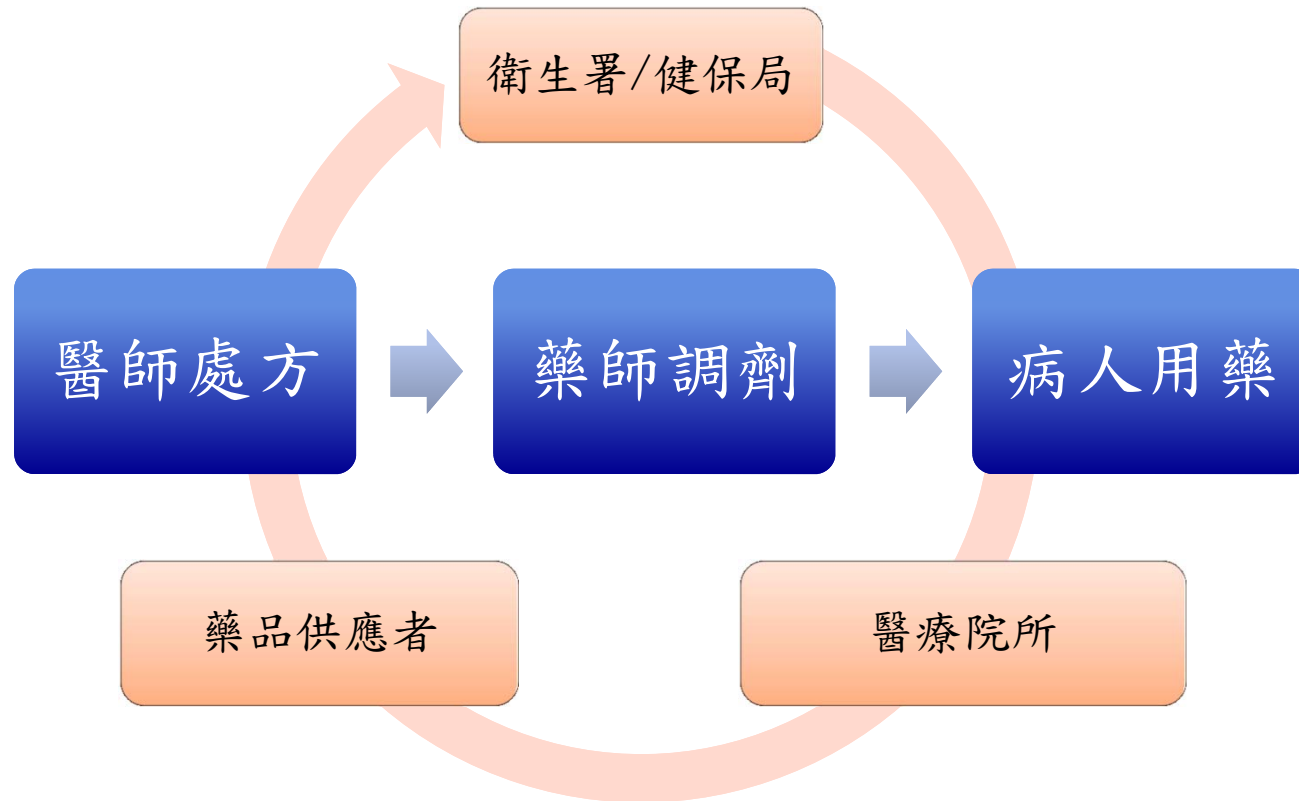
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建構用藥品質的夥伴關係





可以討論的做法

- ❖ 考慮藥品的經濟效益，以實證醫學做為依據，建立藥品的退場機制，並以系統化的方式，積極建立收集病人團體意見的公民參與機制。
- ❖ 藉由知識有價、專業有價、帳目透明等機制，讓民眾在診所與藥局也有相同的用藥品質。
- ❖ 強化用藥安全與醫療品質的合理誘因，例如鼓勵原包裝給藥、病人看得懂的用藥說明、合理的處方整合與調劑人力等。
- ❖ 依法推動合理的分帳制度，降低利益衝突的風險。
- ❖ 從提昇兒童、老年人與慢性病患的用藥品質與效益著手，例如推廣有效的醫藥合作模式、醫院合理調劑量、公佈院所別處方釋出率與藥事人力資訊等策略。



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謝謝!敬請指教!



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