



临床路径和临床指南应用进展



甄肯 Kenneth Weng

美国 - 480 678 8559

Harris 集团医疗卫生产品研发总监

kweng@harris.com

Kenneth.Weng@gmail.com

临床路径和临床指南应用进展

- ▶ 临床路径和临床指南介绍
- ▶ 临床路径和临床的实际应用及进展
- ▶ 美国案例
- ▶ 英国案例
- ▶ 协作机构及工具
- ▶ 方向
- ▶ 总结与思考

临床路径和临床指南－早期

▶ 美国

- ▶ 第一使用： 1985 at the New England Medical Center in Boston
- ▶ 灵感来自工业质量管理及标准作业
- ▶ 更好利用资源，及按时完成
- ▶ 如今遍布超过80%的医院

▶ 英国

- ▶ 1990早期才引入
- ▶ 围绕： 临床管理，提高质量， 合理化护理及护理基于最新的研究

▶ 1990 后期全球已经普遍使用

临床路径和临床指南－要点

- ▶ 提高医疗质量
- ▶ 提高循证医疗
- ▶ 提高多学科使用
- ▶ 提高医疗效率
- ▶ 助于医护人员及患者沟通
- ▶ 规范医疗
- ▶ 效果导向

临床路径和临床指南 - 多样表述

多样表述：

- ▶ De Luc et al. (8) 列出17 种不同的表述 其中就常见的是：
 - 临床路径Clinical Pathway, 关键路径Critical Pathway, 集成护理路径Integrated Care Pathway, 及护理图Care Map

临床路径和临床指南 - 指南

- ▶ 临床路径和临床指南是不同的
- ▶ 指南：在每个医疗情况下提供一般性、原则性、方向性的信息
 - ▶ 临床指南
 - 基础， 范围
 - ▶ 临床路径
 - 实施， 步骤

临床路径和临床指南 - 指南

- ▶ 指南要能提供判断性
- ▶ 指南要通用过系统性临床验证
- ▶ 指南也是循证医疗的主要信息来源
- ▶ 指南的要点与路径有不同：
 - ▶ 描述现有最新，最好的医疗方法
 - ▶ 减轻不该的医疗分歧
 - ▶ 提倡有效利用资源
 - ▶ 质量监控的依据
 - ▶ 提供进修，及创新医疗的依据

临床路径和临床指南 - 指南

糖尿病成人疑似病例确诊流程：背景信息

涉及的范围：

成人疑似糖尿病包括：

诊断

管理：血糖控制、结构化教育、自我监控

并发症管理：糖尿病足并发症、糖尿病肾病、视网膜疾病、心血管疾病

不包括的范围：

儿童或青少年糖尿病

妊娠期糖尿病

年轻人得成年型糖尿病和新生儿糖尿病

糖尿病急诊治疗

无症状糖尿病的群体筛查

定义：

胰岛素生成或胰岛素抵抗缺陷，导致碳水化合物、蛋白质和脂肪新陈代谢受损；

1型糖尿病是由于病毒性感染、自身免疫和基因问题导致胰腺B（beta）细胞被破坏；

2型糖尿病是由于机体组织对胰岛素的敏感性缺陷（胰岛素抵抗）或胰岛素分泌不足造成的。

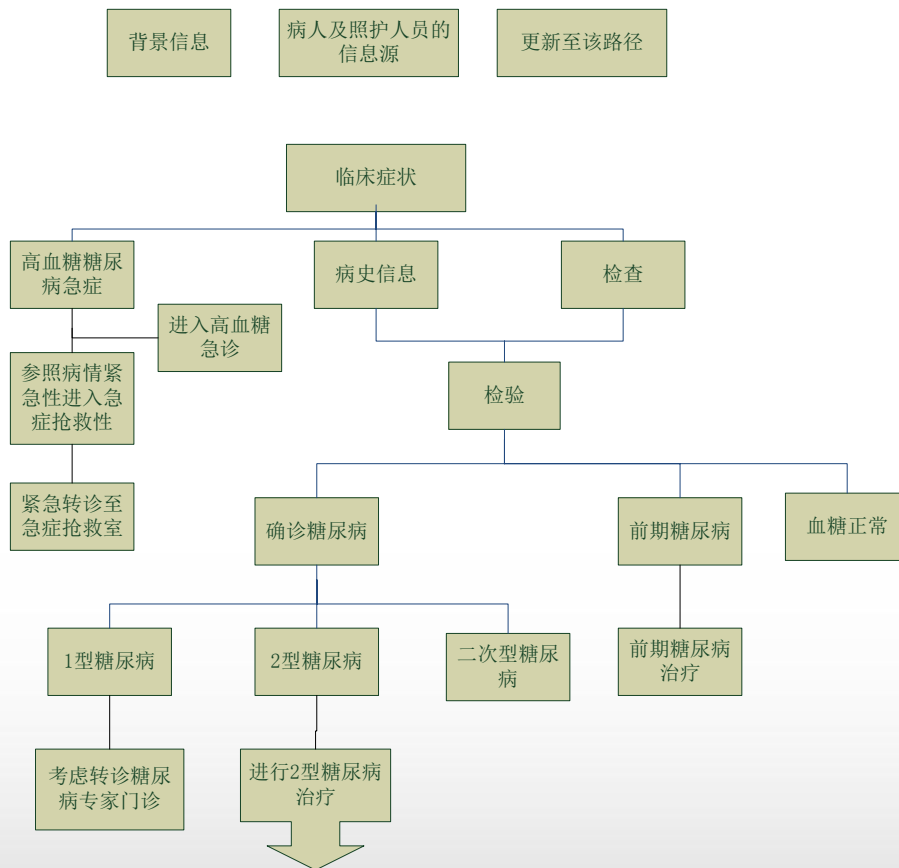
成年型糖尿病是由于单个基因变异导致血糖升高

二次型糖尿病是由于胰岛素分泌不足（联合其他胰腺的疾病、损失及手术）或由于胰岛素拮抗物过度，如柯兴氏综合征、肢端肥大症

发病和传播

在英国和威尔士将近2百万人被诊断患有糖尿病，并且预计存在着75万未诊断糖尿病患者

到2010，英国糖尿病人口总是预计将达到300万



临床路径和临床指南 - 指南

- ▶ USA US National Guideline Clearinghouse™ - listing of national and international guideline development organizations
- ▶ USA National Guideline Clearing House™ (USA) (a public resource for evidence-based clinical practice guidelines) USA Clinical Practice Guidelines Online - Agency for Healthcare Research and Quality (AHRQ)
- ▶ GB Scottish Intercollegiate Guidelines Network
- ▶ GB NICE published guidelines (National Institute for Clinical Excellence - England & Wales)
- ▶ GB NICE Guidance - published appraisals
- ▶ GB Guidelines Finder - index to to over 1200 UK national guidelines. National electronic Library for Health in collaboration with Sheffield Evidence for Effectiveness and Knowledge (SEEK).
- ▶ GB PRODIGY guidance (NHS England and Wales)
- ▶ GB Royal College of Nursing (UK) - Clinical Guidelines
- ▶ GB Clinical Effectiveness and Evaluation Unit (CEEu), of the Royal College of Physicians, UK

临床路径和临床指南应用进展－问卷

▶ 欧盟组织对23国家做了一次问卷

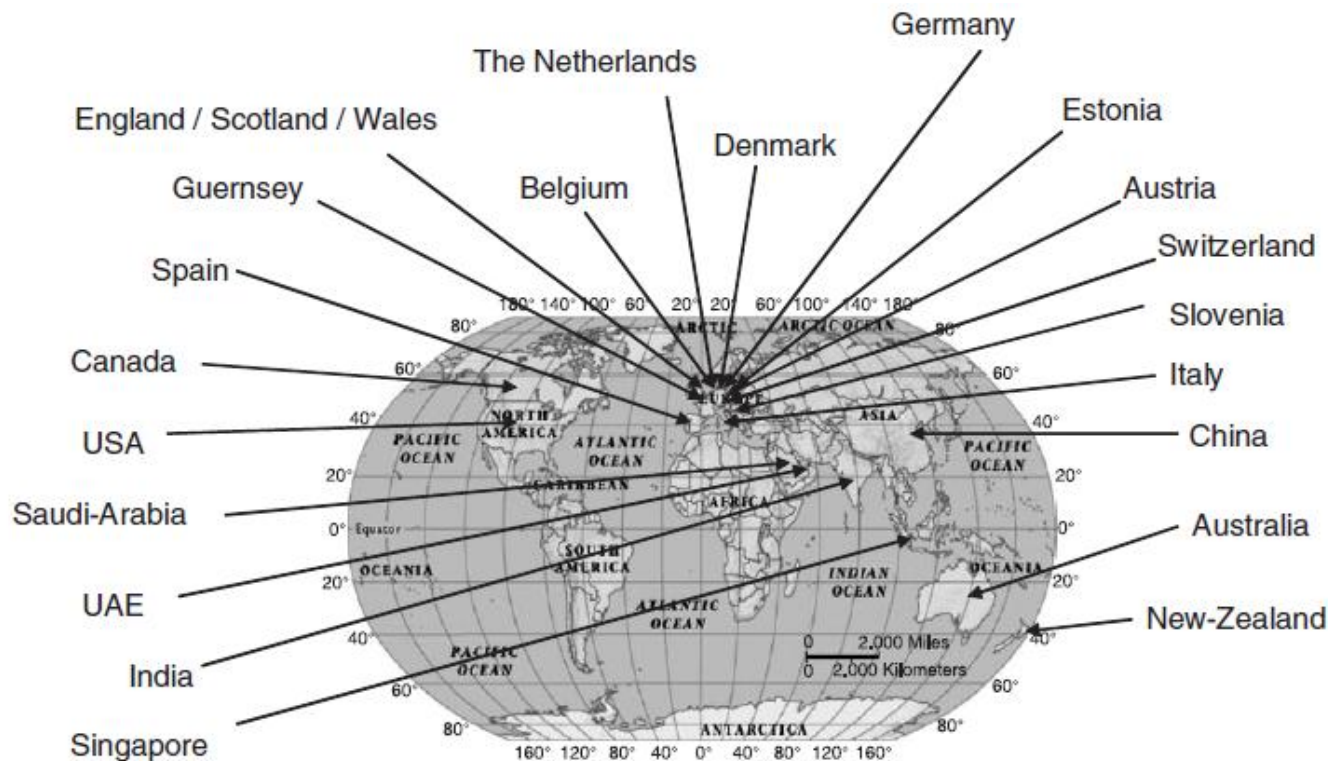


Figure 1 Twenty-three countries involved in the European Pathway Association survey

临床路径和临床指南应用进展 - 实际接受度

Table 1 Present and future dissemination of clinical pathways in 23 countries (approximate estimations by contact persons)

	Patients receiving pathway-based treatment during last year? (%)	Patients eligible for pathway-based treatment? (%) ^a	Patients who will receive pathway-based treatment in five years? (%)
81–100%	—	—	—
61–80%	—	Australia, Canada, England, Estonia, Saudi Arabia, Scotland, USA, Wales	Estonia, UAE
41–60%	—	Austria, Belgium, Germany, Netherlands, Singapore, Switzerland, UAE	Australia, Canada, Saudi Arabia, Singapore, USA, Wales
21–40%	Estonia, Singapore, USA	Guernsey, India, Italy, Spain	Austria, Germany, Netherlands, Scotland, Slovenia, Switzerland, England
16–20%	—	China, Denmark, New Zealand, Slovenia (1–20)	Belgium, China, Denmark, Guernsey, Italy, New Zealand (11–20)
11–15%	Australia, Canada, England		
6–10%	Austria, Saudi Arabia, Scotland, Wales		India, Spain (1–10)
1–5%	Belgium, China, Denmark, Germany, Guernsey, Italy, Netherlands, New Zealand, Slovenia, Spain, Switzerland		
0%	India, UAE	—	—

UAE, United Arab Emirates; USA, United States of America

^aPercentage of patients that would have received pathway-based treatment if pathways were available

临床路径和临床指南应用进展 - 实际应用

● 应用地方：

- ▶ 医学院
- ▶ 医院 65%
- ▶ 康复中心 43%
- ▶ 精神科医疗中心 43%，
- ▶ 家庭医生诊所 39%.

● 大部分的临床路径系统开发及应用在单一的机构

● 只有10%的系统是跨机构

临床路径和临床指南应用进展 - 实际应用

资料共享

- ▶ 65% 在机构里共享临床资料
- ▶ 52% 跨机构共享临床资料
- ▶ 48% 达到国内共享临床资料
- ▶ 30% 达到国际共享临床资料

协作机构的推动

临床路径和临床指南应用进展 - 实际研发参与方

▶ 产品开发参与方

- ▶ 96% 护士
- ▶ 85% 医生
- ▶ 69% 医疗专业人士
- ▶ 48% 管理阶层
- ▶ 27% 医护人员

临床路径和临床指南应用进展 - 实际评估

为临床指南的5个领域来分析：

- ▶ 75% 用到临床指标为依据
 - 死亡率， 回诊率
- ▶ 78% 用到财务指标为依据
 - 总费用， 住院日期
- ▶ 78% 用到服务指标为依据
 - 满意度
- ▶ 70% 用到流程指标为依据
 - 等待时间，
- ▶ 26% 用到团队指标为依据
 - 团队效率， 工作满意度

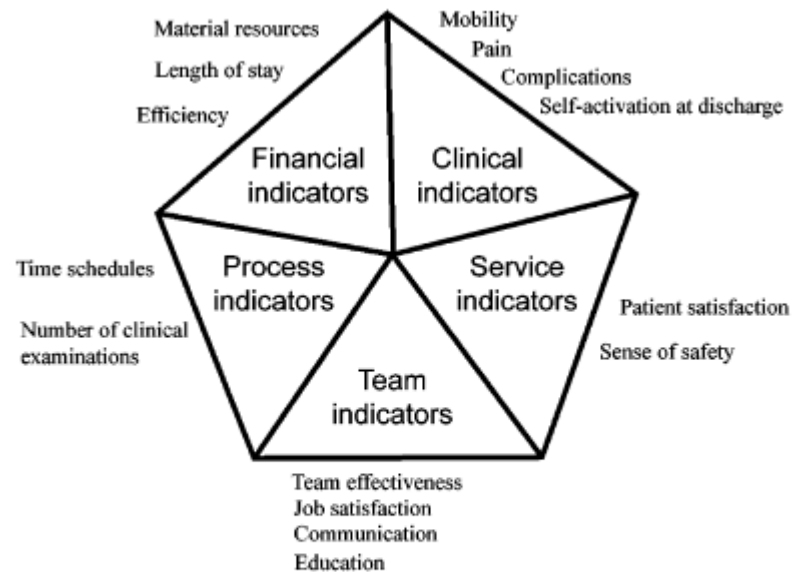


Fig. 1 – Clinical pathway compass. (Source: Van Herck P et al. Effects of clinical pathways; do they work? J Integr Care Pathways 2004;8:95–100.)

临床路径和临床指南应用进展 - 实际研发参与方

- ▶ 83% 用到自定指标
- ▶ 30% 用到国家及国际指标
- ▶ 13个国家包括澳大利亚，新加坡他们的临床路径80%以上依据循证医疗进行开发(按指南做)

临床路径和临床指南应用进展－实际效果

- ▶ 效率的提高
- ▶ 质量的提高
- ▶ 医疗费用的降低
- ▶ 团体精神及员工培训

临床路径和临床指南应用进展—美国案例

- ▶ 美国建议了非常多的临床路径
- ▶ 实施推动有对影响和效果经过严格评估路径
- ▶ 实施通常具备如下特点：
 - ▶ 具有普遍性的病种
 - ▶ 对患者来说有显著风险的病种
 - ▶ 治疗成本高的病种
 - ▶ 可预测的临床过程
 - ▶ 能明确界定的病种，并能包含类似的病种
 - ▶ 不明原因的变异
 - ▶ 存在推荐的做法和专家建议

临床路径和临床指南应用进展—美国案例

- ▶ 美国采用财务指标为依据
- ▶ DRG(Diagnosis-related group) 新型的病例分类法 共分467组
- ▶ 医疗保险则根据患者DRG分类对本次住院进行支付
- ▶ 美国联邦医疗保险与医疗补助服务中心（CMS）从2003开始了分阶段的规章制度来提高医疗质量
- ▶ 从2003年至2005年，CMS在美国政府指导下启动了医院质量改进示范项目（HQIP）
 - ▶ 急性心肌梗死，CABG（冠状动脉旁路移植手术），肺炎，心力衰竭，和髋关节和膝关节手术

临床路径和临床指南应用进展—美国案例

- 从2005年至2007年，CMS进一步将医院临床路径的基本步骤执行情况 and 奖励机制挂钩
 - 表现最好的前10%的医院会得到2%的奖金而表现最差的10%的医院将从偿付款项中扣除2%。
- 2007年末期美国心脏学会通过对临床路径质量管理进行效益分析
 - 对临床路径主要步骤的完成能够降低平均住院日（ALOS）与死亡率，提高病人对服务的满意
 - 提高医院的知名度与病人流量
- 临床路径更多地演生成了DRGs

临床路径和临床指南应用进展—英国案例

- ▶ 英国采用服务指标为依据
- ▶ 国家医疗系统的关系，全民医保，以患者为中心
- ▶ **From Good to Great**（从优秀到卓越）
- ▶ 全生命周期
 - ▶ 出生临床路径（Birth Clinical Pathway Group）
 - ▶ 儿童临床路径（Children's Clinical Pathway Group）
 - ▶ 健康生活临床路径（Staying Healthy Clinical Pathway Group）
 - ▶ 急救临床路径（Urgent Care Clinical Pathway Group）
 - ▶ 计划护理临床路径（Planned Care Clinical Pathway Group）
 - ▶ 精神健康临床路径（Mental Health Clinical Pathway Group）
 - ▶ 护理临床路径（Long Term Conditions Clinical Pathway Group）
 - ▶ 死亡临床路径（End Of Life Clinical Pathway Group）

临床路径和临床指南应用进展—英国案例

- ▶ 英国医疗健康系统
- ▶ 成立专题小组研究主要病种
 - 癌症科 (Cancer)
 - 听力诊断 (Diagnostics – Audiology)
 - 心脏科 (Heart)
 - 肺科 (Lung)
 - 中风 (Stroke)

临床路径和临床指南应用进展—英国案例

2010-11 ACHIEVEMENTS

Working with health sector partners over the past year NHS Improvement has helped to deliver a number of patient-centred improvements and identified many future benefits. These are just some:

1 million women

received cervical cancer screening test results within two weeks at 16 pilot sites

this has removed 10m waiting days and saved **£1.6m**

Up to **£10.5m**

could be saved by halving the length of stay for those patients having day case/one night stay breast surgery

Over **123,000 bed days**

could be saved each year if the Accelerating Stroke Improvement aim for 40% of stroke patients leaving hospital to have access to early supported discharge is achieved.

290,000 patients

now waiting less time for test results, saving 655,940 waiting days, with up to

£300,000 saved at some sites

£45m

could be saved nationally on home oxygen services based on a minimum reduced spend of £600k across nine project sites.



If every trust applied the Winning Principles we promote, which includes: reducing length of stay; enhanced recovery; and averting admissions, this one initiative has the potential to reduce bed utilisation by 20%, saving the NHS

1m bed days

£1.8m could be saved by increasing access to psychological support for stroke patients by 30%. Approximately **£64k** per stroke clinical network

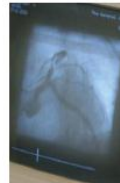
£5.9m per year could be saved by giving nearly 66,000 patients direct access to a tinnitus audiologist or hearing therapist

Over **650** health staff have been trained to use the Discovery Interview™ technique to engage with patients and carers

1.2m outpatient appointments for cancer survivors could be released over the next five years thanks to testing on four tumour pathways



£3.25m could be saved over the next five years by using safe risk stratified pathways for Children and Young People cancer survivors



8,000 strokes every year could be prevented by using the GRASP-AF detection tool. This could save the NHS **£96m**

£106m of savings could be released by working with local hospitals to free up avoidable bed days for non-elective cardiac patients

临床路径和临床指南应用进展—英国案例

► 癌症案例

- 2006 - 2007 收集资料
- 2007 - 2008 验证构想
- 2008 - 2009 试点
- 2009 - 2011 应用及推广

Figure 1: Progress from baseline to spread

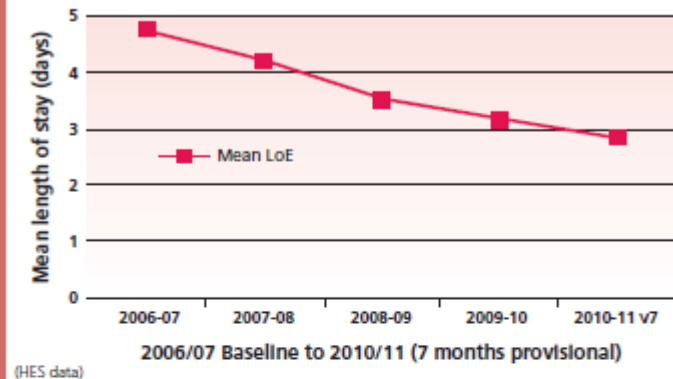
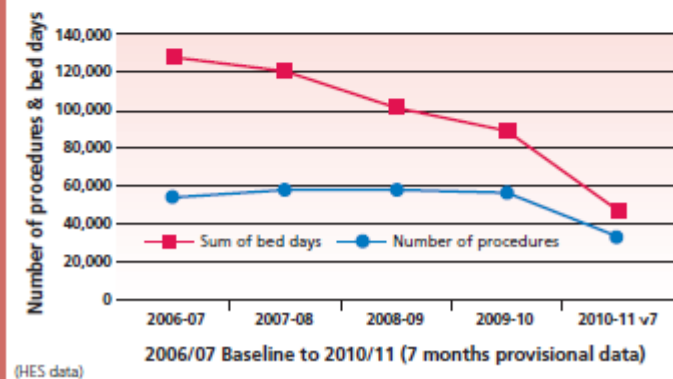


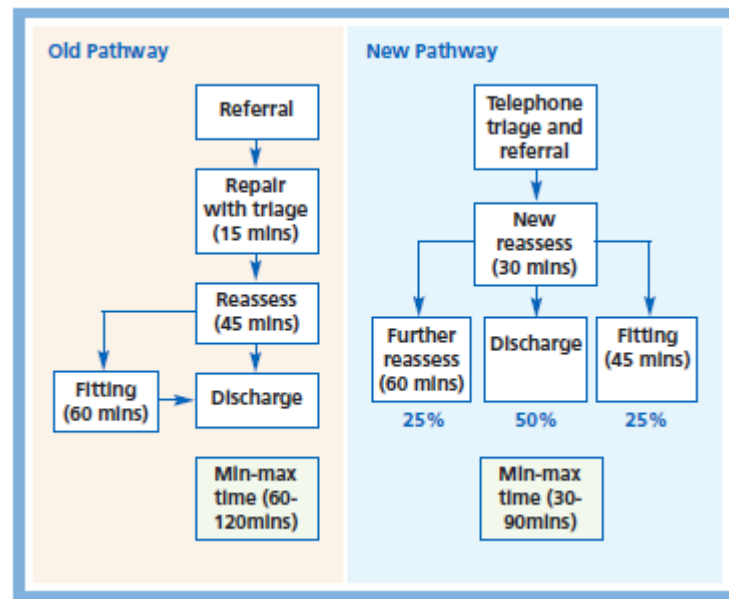
Figure 2: Progress from baseline to spread: 2006 - 2010 potentially 39,483 beds saved



临床路径和临床指南应用进展—英国案例

听力诊断

- ▶ 变动不是坏事情
- ▶ 减少患者门诊量
- ▶ 缩短门诊时间
- ▶ 提高患者满意度



临床路径和临床指南应用进展—协作机构

- 在2000年比利时和荷兰的八家医院合作建立临床路径传播网，2007年这传播网已经有106多个机构加入 (www.nkp.be)
- 在2004年，欧盟建立 E-P-A组织，以协助机构建立欧盟国家里及其他国家临床路径传播网。现在已经有25个国家参与这组织 (www.E-P-A.org)

临床路径和临床指南应用进展 – 评审工具

● 评估临床路径工具的效果及对长远目标的支持：15个

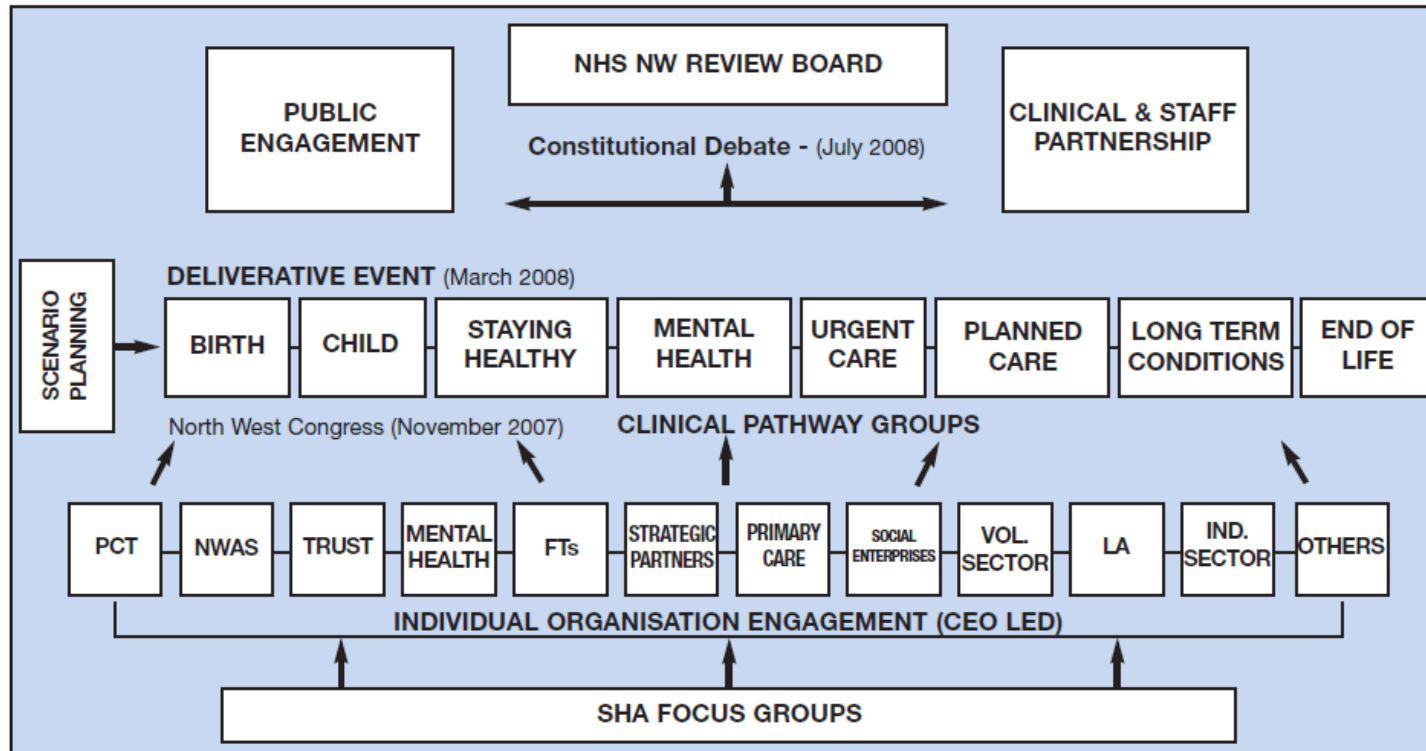
- ▶ the Integrated Care Pathway Appraisal Tool
- ▶ the Quality Assurance Template (QAT) – Pathway Development/Practice Standard
- ▶ the Integrated Care Pathway Key Elements Checklist
- ▶ Clinical Path Assessment
- ▶ Template for Clinical Pathway Design
- ▶ ICP Analysis Sheet
- ▶ ICP Evaluation Form

临床路径和临床指南应用进展—评审工具

Clinical pathway audit tool	Reference	Country or locality of origin	Year of development	Source	No. of domains *	Total no. of items*	Validation	Scoring system	Total score	Pathway score compared with patient outcomes
Clinical Path Assessment	Bower & Zander, 2000 [33]	USA	2000	EPA	11	44	No	1-4 scale	score per domain	no
ICP Analysis Sheet	Bryson & Browning, 1999 [20]	Scotland	1998	Smartgroup	28	101	No	Yes/No/ Not Applicable	score per item	no
ICP Evaluation Form	Jones, 2002 [28]	Wales	2002	Smartgroup	5	38	No	Yes/No	score per domain	no
ICP Key Elements Checklist	Croucher, 2005 [26]	England	2005	Literature	14	14	No	Yes/No	overall score	no
ICPAT	Whittle et al., 2004 [24]	England	1999	Literature	6	99	Yes	Yes/No/ Not Sure /Not Applicable	score per domain	no

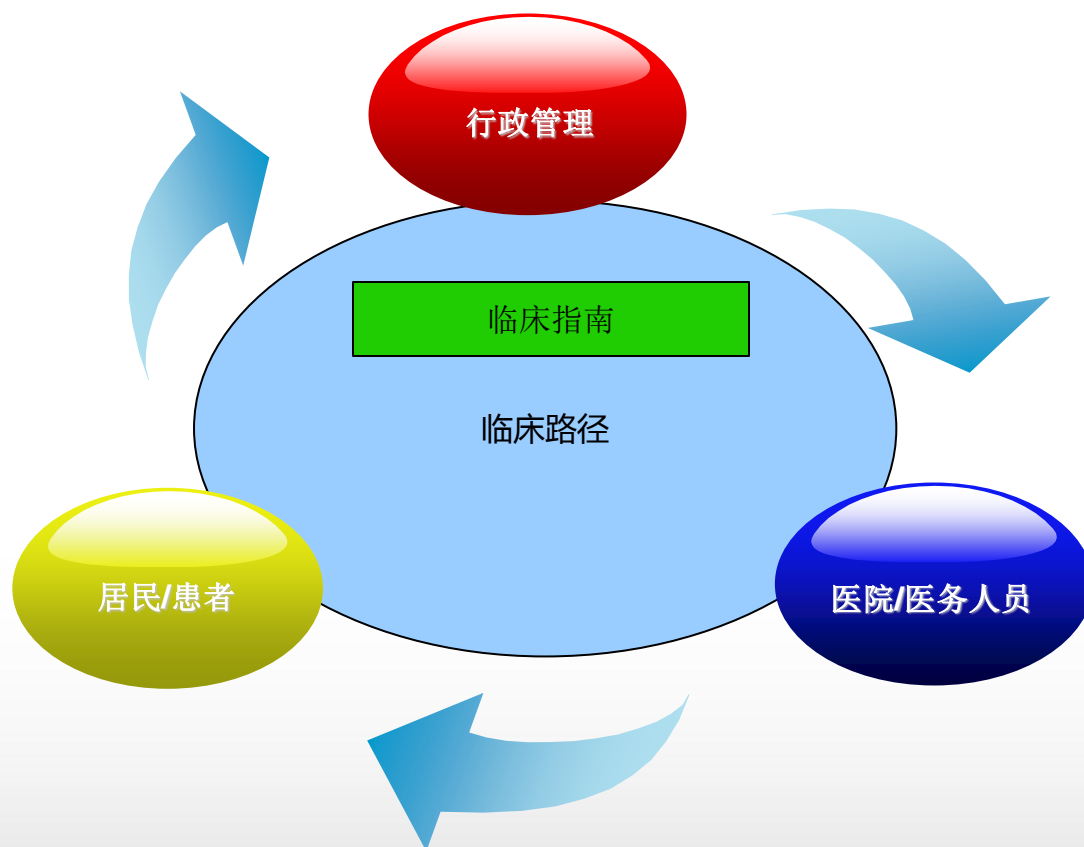
临床路径和临床指南应用进展－互动

NHS North West NHW Review Programme Structure



NHS North West Clinical Pathway Group Reports 2008

临床路径和临床指南应用进展 - 互动



临床路径和临床指南应用进展 - 方向

不同的角色、
不同的期望、
不同的需求

- 规范临床诊疗行为
- 提高医疗质量
- 控制医疗费用
- 提高了医疗资源的有效利用率



- 提高满意度
- 缓解“看病难、看病贵”
- 得到“人性化服务”

- 提高工作效率
- 提高医疗水平 - 知识共享
- 提高服务质量
- 提高管理水平

总结与思考

- ▶ 临床路径不可或缺的工具
- ▶ 临床指南的推广和成熟及在临床路径中的实际应用
- ▶ 临床路径规范管理及监控组织
- ▶ 如何提高临床路径系统/消息在机构与机构之间的共享
- ▶ 现在重点用户还是行政管理,医院/医务人员，如何提高患者的参与度
- ▶ From Good to Great（从优秀到卓越）

Thank You

甄肯 Kenneth Weng
美国 - 480 678 8559
Harris 集团医疗卫生产品研发总监
[**kweng@harris.com**](mailto:kweng@harris.com)
[**Kenneth.Weng@gmail.com**](mailto:Kenneth.Weng@gmail.com)

参考资料:

1. 2009年卫生部《临床路径管理指导原则（试行）》
2. 2011年卫生部《单病种临床路径》
3. 国内外临床路径及其费用结构影响因素分析 《2011年卫生部课题》
4. Prevalence and use of clinical pathways in 23 countries – an international survey by the European Pathway Association
5. Clinical pathways in 17 European Union countries: a purposive survey
6. Step by step development of clinical care pathways for older cancer patients: Necessary or desirable?
7. NHS North West Clinical Pathway Group Reports 2008
8. NHS Improvement The best of clinical pathway redesign Practical examples delivering benefits to patients