NICE National Institute for Health and Care Excellence

NICE International

What priorities have to be set for a National Health Assurance benefits package?

international Decision Support Initiative

Priority setting is a complicated business

CVD	HIV	Diabetes	RTAs	HIV	MCH	Cancer
Primary prevention	Primary prevention	Primary prevention	Primary prevention	Primary prevention	Primary prevention	Primary prevention
Secondary prevention	Secondary prevention	Secondary prevention	Secondary prevention	Secondary prevention	Secondary prevention	Secondary prevention
Primary care	Primary care	Primary care	Primary care	Primary care	Primary care	Primary care
Secondary care	Secondary care	Secondary care	Secondary care	Secondary care	Secondary care	Secondary care
Tertiary care	Tertiary care	Tertiary care	Tertiary care	Tertiary care	Tertiary care	Tertiary care
Long term care	Long term care	Long term care	Long term care	Long term care	Long term care	Long term care
EOL care	EOL care	EOL care	EOL care	EOL care	EOL care	EOL care

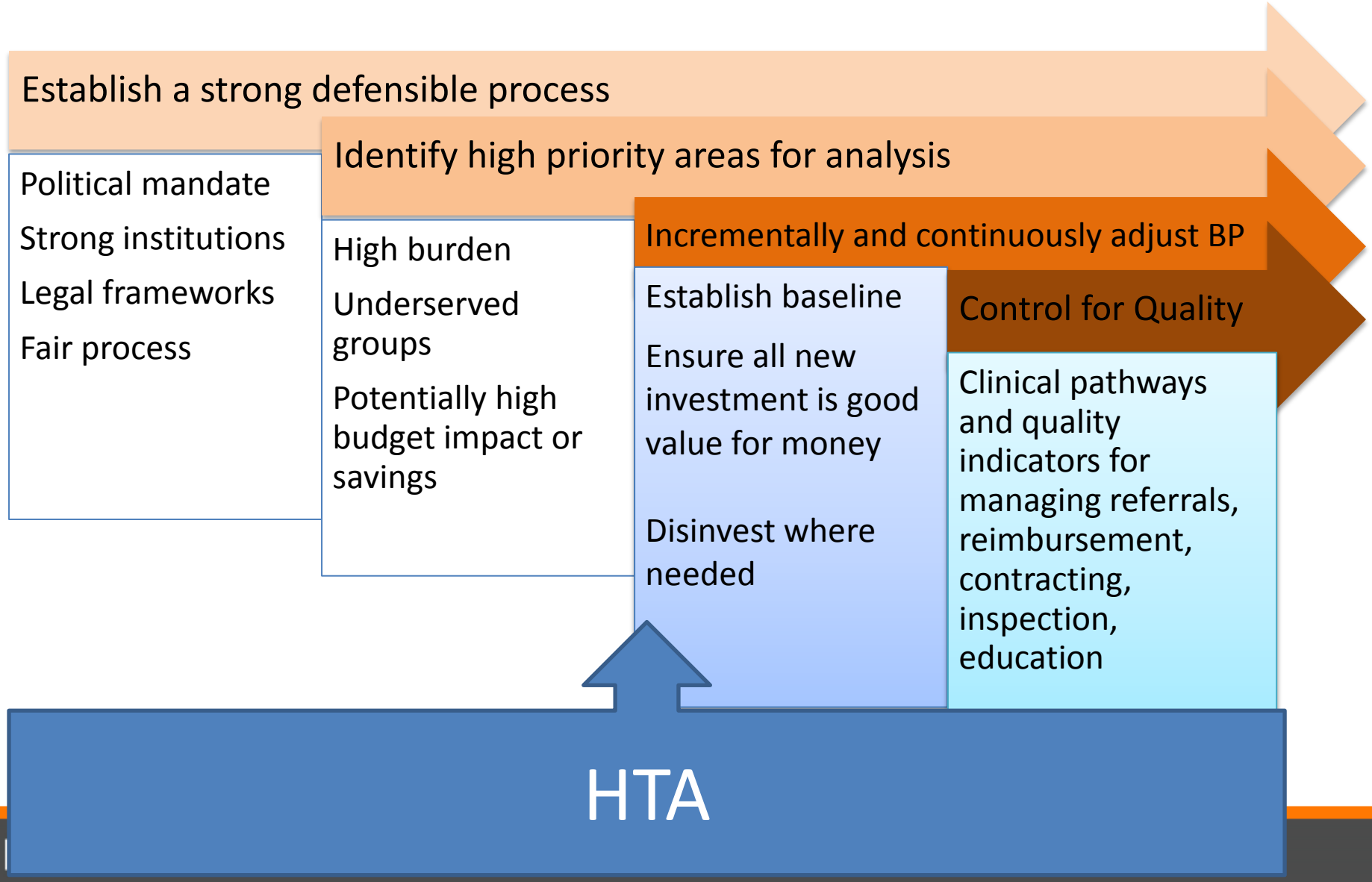
Populations

- Children
- Pregnant
- Poor
- Ethnic
- Old
- Disabled
- Rural
- Employed

Interventions

- Education
- Public awareness
- Diagnostics
- Screening
- Vaccines
- Drugs
- Surgery

How can HTA help with benefits package design?



Being scientific…Can You?

Identify what you ARE doing?

- Describe everything available as part of our healthcare system (drugs, devices, services, salaries, buildings…)
- Determine the setting (1º/3º); clinical indication; population subgroup, where these are made available
- Estimate utilisation volumes and unit costs for every item

Decide what you SHOULD be doing?

- Estimate health gain per item based on clinical evidence adapted to your country
- Estimate budget impact per item, based on your costs
- *Establish exceptions*
- Only pay for best buys…stop paying when healthcare budget runs out

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In theory, you can, using league tables

1. List all possible health care interventions for all groups of patients
2. Estimate cost & health gain (e.g. QALY/DALY) for each intervention
3. Eliminate any options where an alternative costs more and gives smaller health gain
4. Rank remaining options in order of decreasing value for money (e.g. cost per QALY gained)

https://research.tufts-nemc.org/cear

This limit is imposed by the constrained health care budget

Cost-saving (e.g. polio-sabin vaccination)

Very cost-effective (e.g. U$D 1,000 per QAL)

Relatively good cost-effectiveness (e.g. U$D 5,000 per QALY)

Cost-effective (e.g. U$D 7,500 per QALY)

Cost-effective (but at the limit, e.g. U$D 8,000 or 10,000 per QALY)

Is the benefit gain from the new treatment greater than the benefit foregone through displacement?

No. Displaced technologies offered better "value for money" (the healthcare system loses "health" and efficiency

Health benefit plan (basket of services) of an imaginary country where the Ministry of Health (many years ago) defined a cost-effectiveness threshold of U$D 10,000 per QALY in order to consider a technology as cost-effective and allow its incorporation into the benefit plan.

New Technology

Cost USD: 5,000/QALY

New health technology with a cost-effectiveness ratio of U$D 25,000/QALY

Technologies that will be displaced offered less "value for money". The benefit gain from the new treatment is greater than the benefit foregone

Source: Andrés Pichon-Riviere , 2013. La aplicación de la evaluación de Tecnologías de Salud y las evaluaciones económicas en la definición de los Planes de Beneficios en Latinoamérica

The fixed budget approach

Selected interventions	$/QALY
Warfarin vs. aspirin in 65 year-old with nonvalvular atrial fibrillation and high risk for stroke	Cost-saving
Thrombolytic therapy with intracoronary streptokinase vs. conventional therapy in patients with ECG evidence of AMI and duration of symptoms < 4 hours	$4,800
Warfarin vs. aspirin in 65 year-old with nonvalvular atrial fibrillation and medium risk for stroke	$8,800
Captopril therapy vs. No captopril in 60 year-old patients surviving myocardial infarction	$11,000
Thrombolytic therapy with tissue plasminogen activator vs. streptokinase in patients presenting within 6 hours after onset of symptoms of AMI	$32,000
Captopril therapy vs. No captopril in 50 year-old patients surviving myocardial infarction	$73,000
Warfarin vs. aspirin in 65 year-old with nonvalvular atrial fibrillation and low risk for stroke	$410,000

Shadow price

Healthcare budget fixed

The Willingness To Pay approach

Selected interventions	$/QALY
Warfarin vs. aspirin in 65 year-old with nonvalvular atrial fibrillation and high risk for stroke	Cost-saving
Thrombolytic therapy with intracoronary streptokinase vs. conventional therapy in patients with ECG evidence of AMI and duration of symptoms < 4 hours	$4,800
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Healthcare budget needed

WTP threshold

The threshold approach

Selected interventions	$/QALY
Warfarin vs. aspirin in 65 year-old with nonvalvular atrial fibrillation and high risk for stroke	Cost-saving
Thrombolytic therapy with intracoronary streptokinase vs. conventional therapy in patients with ECG evidence of AMI and duration of symptoms < 4 hours	$4,800
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Estimated threshold

Budget impact

The reallocation approach

Selected interventions	$/QALY
Warfarin vs. aspirin in 65 year-old with nonvalvular atrial fibrillation and high risk for stroke	Cost-saving
Thrombolytic therapy with intracoronary streptokinase vs. conventional therapy in patients with ECG evidence of AMI and duration of symptoms < 4 hours	$4,800
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Estimated threshold

Budget neutral

Incrementally and continuously update the BP

- Designing/updating the BP is an *ongoing process,* not a one-off technical exercise
- Refining the BP takes time, and must be *responsive* to changing needs, new technologies and new prices/costs
- Any addition MUST be paid for and made available, to ensure trust is maintained in the process

Establish a strong and defensible process: core principles of HTA

Principles	Putting them into practice…
Independence	Arm's length from government, payers, industry and professional groups; strong and enforced conflict of interest policies
Transparency	Meetings open to the public; material placed on the web; decision criteria and rationale for individual decisions made public
Consultation	Wide and genuine consultation with stakeholders; willingness to change decision in light of new evidence
Scientific basis	Strong, scientific methods and reliance on critically appraised evidence and information
Timeliness	Decisions produced in reasonable timeframe; minimise delays in publishing decisions
Consistency	Same technical and process rules applied to all cases
Legal framework	Reference in country's legal framework; institutional role in informing coverage and payment decisions
Regular review	Regular updating of decisions and of methods

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How do others do it? (i)

Country	Model	Scope
England	NHS; negative list for drugs; emphasis on clinical guidelines; Quality and Outcomes Framework for GPs; Payment by Results (DRG) for hospitals	Incremental; entitlement to positive NICE guidance
Thailand	3 health insurance schemes; Essential Drugs List for Universal Coverage Scheme; targeted approach re screening, vaccines, and other technologies and services	Incremental; explicit drugs list and national screening and vaccination
Australia	Medicare; positive list for drugs and technologies (+risk sharing + price negotiation); FFS for GP services; DRGs for hospitals; Medicare Benefits Schedule (Fee Schedule) contains all subsidised services offered by Medicare	Comprehensive, but targeted evaluation of new techs/drugs (not of MBS)

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How do others do it? (ii)

Country	Model	Scope
Chile	Health insurance system with public and private payers and providers; concerns on equity and access; single package of services – disease-based; right to access (waiting times, quality standards) but hard to review	Comprehensive explicit package but not regularly updated or costed
US: Medicare	Access to most drugs (incl. off-license cancer drugs) but copays; Part B (insurance) for outpatients: extensive fee schedule	Comprehensive but used as fee schedule for billing (not entitlement)
EU	Insurance systems (France, Germany, the Netherlands) have explicit packages but high level taxonomy (OECD – HCFC – health accounts)	Comprehensive but high level – fee schedules instead of benefits packages
New Zealand	PHARMAC: positive list for drugs + competitive tendering + PxV agreements…	Comprehensive for pharmaceuticals

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Australia

- Single payer system with purchaser provider split
- Universal drug coverage via Pharmaceutical Benefits Scheme (PBS) since 1948
- HTA applied to decision-making since late 1980s (4th hurdle process)
- Now extended to other health technologies (vaccines devices, diagnostics, procedures, prostheses, blood products)
- PBS today – comprehensive formulary covering most medicines dispensed in the community and hospital outpatients

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MBS Online
Medicare Benefits Schedule

Australia

Abscess

- anal, drainage of (32174,32175)
- Bartholin's, incision of (35520)
- appendiceal, laparotomy for drainage (30394)
- breast, exploration and drainage (31551)
- deep, percutaneous drainage (30224)
- drainage tube, exchange of (30225)
- extradural, laminectomy for (40309)
- intra-orbital, drainage of (42572)
- intracranial, excision of (39903)
- ischio-rectal, drainage of (32174,32175)
- laparotomy for drainage of (30394)
- large, incision and drainage, with GA (30223)
- liver, open abdominal drainage of (30431)
- middle ear, operation for (41626)
- pancreatic, laparotomy, external drainage (30575)
- pelvic, laparotomy for drainage of (30394)
- peritonsillar, incision of (41807)
- prostate, drainage of (37212,37221)
- retroperitoneal, drainage of (30402)
- small, incision without drainage *
- small, incision, drainage, without GA (30219)
- subperiosteal (43500-43524)
- subphrenic, laparotomy for drainage (30394)
- deep, percutaneous drainage (52058)
- drainage tube, exchange of (52059)
- large, incision with drainage,requiring admission (52057)

ACB

(71180)

Accessory bone

- osteotomy or osteectomy of (48400)

ACE

(66758)

Acetabular dysplasia

- pelvis, bone graft/shelf procedure (50393)

ZIDOVUDINE
S100 HSD Private

ZIDOVUDINE
S100 HSD Public

ZINC OXIDE
Repatriation Pharmaceutical Benefits

ZINC OXIDE with STARCH and CHLORPHENESIN
Repatriation Pharmaceutical Benefits

ZIPRASIDONE HYDROCHLORIDE
General Schedule

ZOLEDRONIC ACID
General Schedule

ZOLEDRONIC ACID
S100 HSD Private

ZOLEDRONIC ACID
S100 HSD Public

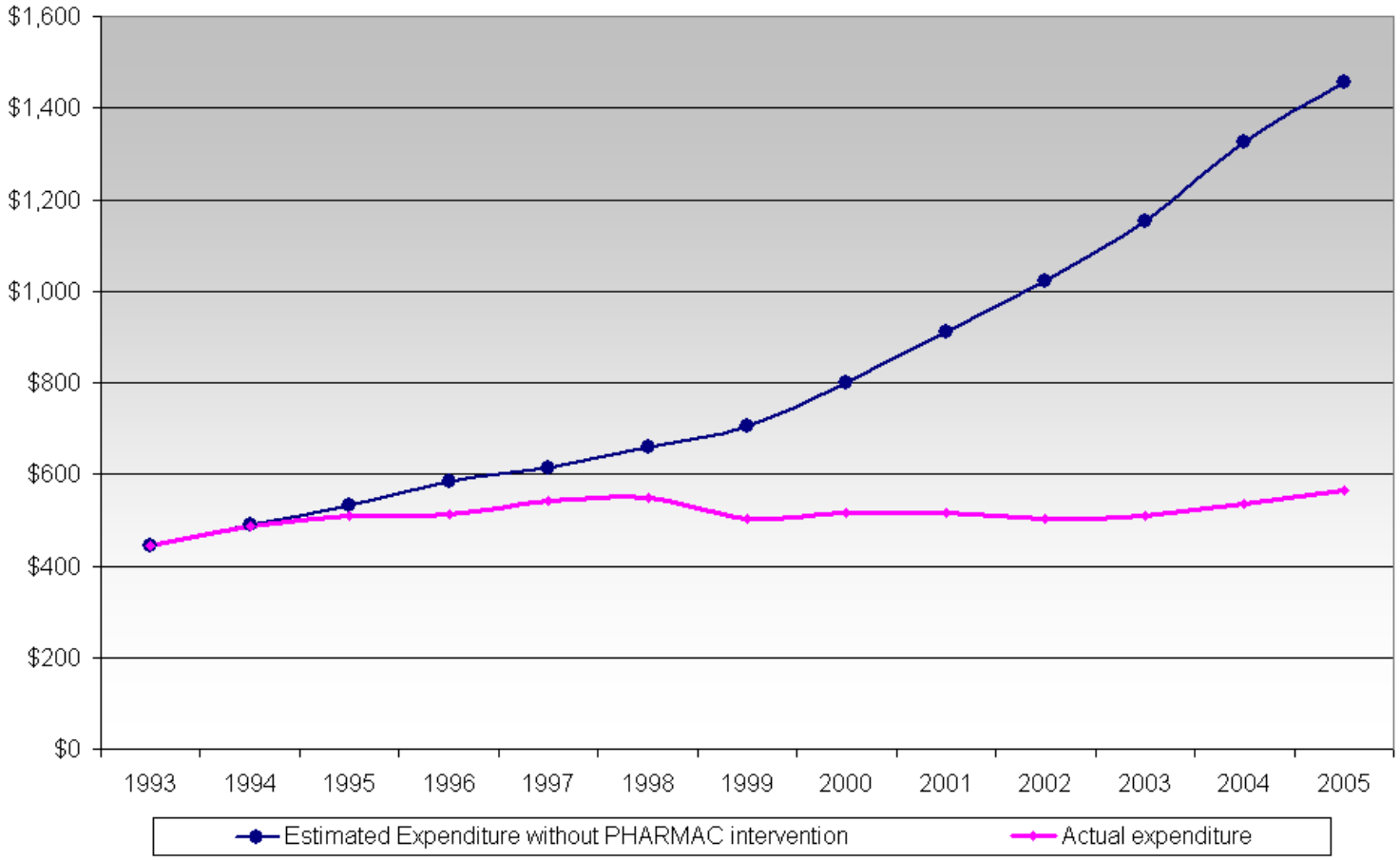
ZOLMITRIPTAN
Special Pharmaceutical Benefits

ZONISAMIDE
General Schedule

ZOPICLONE
Repatriation Pharmaceutical Benefits

ZUCLOPENTHIXOL DECANOATE
General Schedule

NZ community pharmaceutical expenditure



Chile

Problema de salud	Tipo de Intervención Sanitaria	Prestación o grupo de prestaciones	Periodicidad	Arancel $	Copago %	Copago $
DIABETES MELLITUS 2	Diagnóstico	*Confirmación Pacientes con DM tipo 2*	*cada vez*	5.040	20%	1.008
		Evaluación Inicial Paciente con DM tipo 2	*cada vez*	20.410	20%	4.082
	Tratamiento	*Tratamiento 1° año Pacientes con DM tipo 2*	*mensual*	5.190	20%	1.038
		Tratamiento a partir del 2° año Pacientes con DM tipo 2	*mensual*	8.460	20%	1.692
		Control Paciente DM tipo 2 Nivel Especialidad	*mensual*	7.060	20%	1.412
		Curación avanzada de herida pie diabético (no infectado) DM tipo 2	*por tratamiento completo*	94.080	20%	18.816
		Curación avanzada de herida pie diabético (infectado) DM tipo 2	*por tratamiento completo*	205.150	20%	41.030

- Resource intensive to update
- Spending on non AUGE services growing as fast as spending on AUGE ones

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Outpatient benefi		
Country	Name of ta	)
Denmark	Health Car ment Sche Schedule	ther) with 589 DRG, and radiotherapy. procedures, sex, age,
France	Common C of Medical (CCAM)	ded medical proce- gative list; Grouping edical specialties
Germany	SHI-EBM, S SHI-BEL-II	ther) with 876 DRG, 71 vices (in 2005). Group- dures, age, comorbidi-
Hungary	Governme and reimbu alogues	ther) with 786 DRG. procedures, age,
Italy	National co primary ca specialist o services	ther) with 489 to 506 nd bone marrow trans- n diagnosis, se of discharge

MDCs in the Australian Refined Diagnosis Related Groups (AR-DRG) Classification

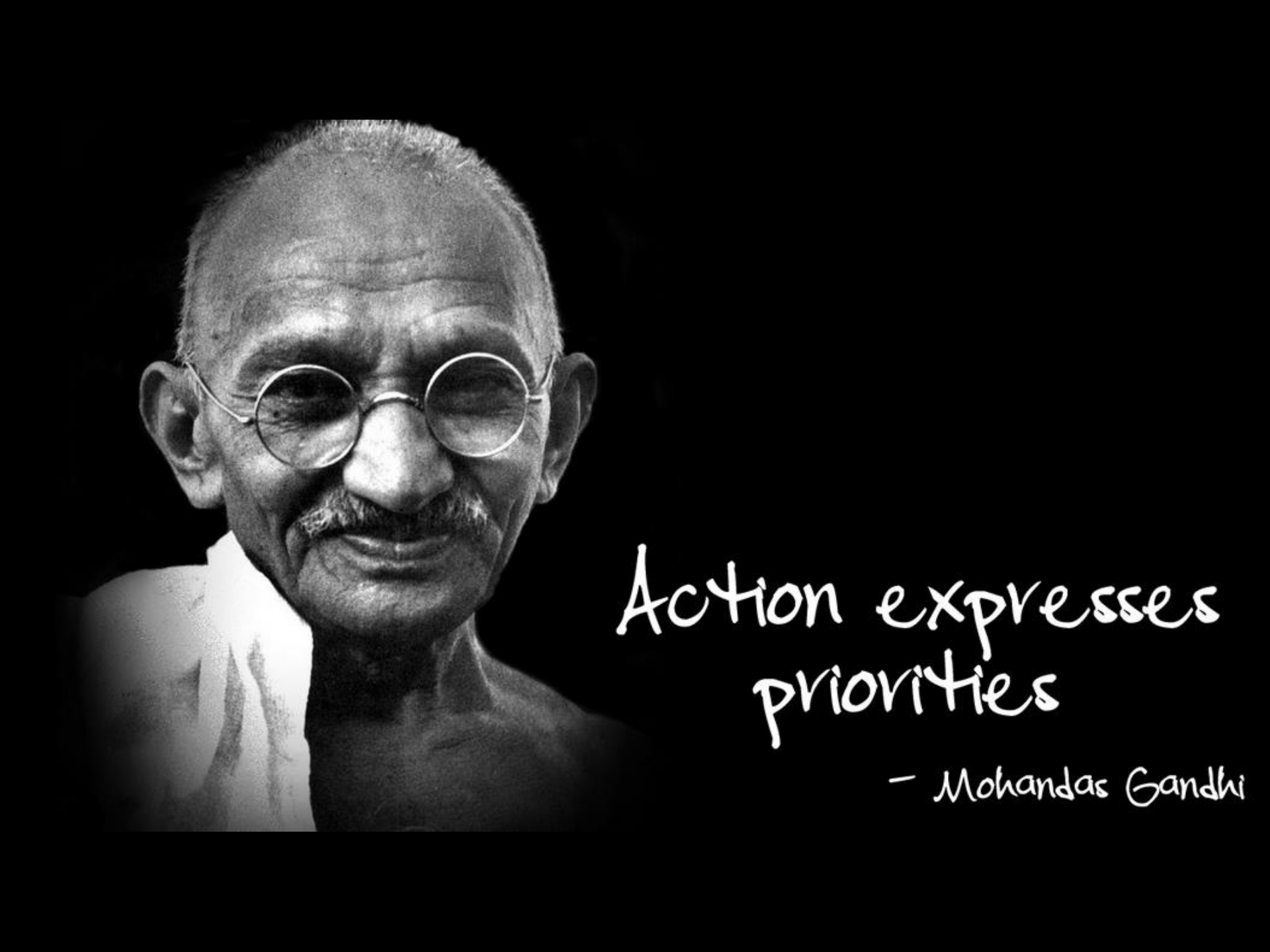
MDC 1:	Diseases and Disorders of the Nervous System
MDC 2:	Diseases and Disorders of the Eye
MDC 3:	Diseases and Disorders of the Ear, Nose, Mouth and Throat
MDC 4:	Diseases and Disorders of the Respiratory System
MDC 5:	Diseases and Disorders of the Circulatory System
MDC 6:	Diseases and Disorders of the Digestive System
MDC 7:	Diseases and Disorders of the Hepatobiliary System and Pancreas
MDC 8:	Diseases and Disorders of the Musculoskeletal System and Connective Tissue
MDC 9:	Diseases and Disorders of the Skin, Subcutaneous Tissue and Breast
MDC 10:	Endocrine, Nutritional and Metabolic Disorders
MDC 11:	Diseases and Disorders of the Kidney and Urinary Tract
MDC 12:	Diseases and Disorders of the Male Reproductive System
MDC 13:	Diseases and Disorders of the Female Reproductive System
MDC 14:	Pregnancy, Childbirth and the Puerperium
MDC 15:	Newborns and Other Neonates
MDC 16:	Diseases and Disorders of the Blood and Blood Forming Organs and Immunological Disorders
MDC 17:	Neoplastic Disorders
MDC 18:	Infectious and Parasitic Diseases
MDC 19:	Mental Diseases and Disorders
MDC 20:	Alcohol/Drug Use and Alcohol/Drug Induced Organic Mental Disorders
MDC 21:	Injuries, Poisonings and Toxic Effects of Drugs
MDC 22:	Burns
MDC 23:	Factors Influencing Health Status and Other Contacts with Health Services

Source: *Commonwealth of Australia, Department of Health and Ageing.*

NICE: a negative list for technologies

TA007	2000	MTA	Rabeprazole	Dyspepsia	Recommended	Guidance has been incorporated in CG17. Recommendation in line with marketing authorisation.
TA008	2000	MTA	Digital hearing aids	Deafness	Not Recommended	The Department of Health made digital hearing aid technology available across the NHS after TA008 was published which made guidance obsolete. Guidance withdrawn from May 2003.
TA008	2000	MTA	Analogue hearing aids	Deafness	Recommended	The Department of Health made digital hearing aid technology available across the NHS after TA008 was published which made guidance obsolete. Guidance withdrawn from May 2003.
TA009	2000	MTA	Rosiglitazone	Type 2 diabetes	Recommended	Guidance has been replaced by TA63 and incorporated in CG66. Recommendation in line with marketing authorisation.
TA010	2000	MTA	Dry powder inhalers (DPI)	Asthma (children under 5 years)	Recommended	Recommendation in line with marketing authorisation.
TA010	2000	MTA	Nebulised therapy	Asthma (children under 5 years)	Recommended	Recommendation in line with marketing authorisation.
TA010	2000	MTA	Pressurised metered dose inhalers (pMDI) and spacer system	Asthma (children under 5 years)	Recommended	Recommendation in line with marketing authorisation.
TA011	2000	MTA	Implantable cardioverter defibrillators (ICDs)	Arrhythmias	Recommended	Guidance has been replaced by TA95. Recommendation in line with clinical practice.
TA012	2000	MTA	Abciximab (intravenous)	Acute coronary syndromes	Recommended	Guidance has been replaced by TA47. Recommendation in line with marketing authorisation.

announced in Dec 2011 for automatic inclusion in local formularies


Action expresses priorities
– Mohandas Gandhi

If you were responsible for designing the NHAM benefits package…

1. What criteria, processes and mechanisms would you have in place for updating the health benefits package?
2. How would you ensure that the benefits package gets implemented in practice, i.e. that listed services are actually reimbursed, high quality, **and** provided only when clinically appropriate?