Retingslinjer, der kan implementers i praksis – Time Needed to Treat (TNT)

Karsten Juhl Jørgensen

Professor of evidence synthesis and screening

Systematiske reviews og evidensbaserede kliniske guidelines - kort

- Grundstenen i EBM - sammen med klinisk erfaring og hensyn til patientens ønsker og værdier.
- Systematisk indhentning af studier og standardiseret vurdering af evidensens styrke er nøglebegreber.
- Formålet er at minimere bias og sikre transparens og konsistens, ikke at eliminere subjektive bedømmelser.
- Reviews, guidelines og klinik som ikke opfylder disse betingelser kan principielt ikke danne grundlag for EBM.

NKR-projektet

- 80 millioner kroner afsat til at producere evidensbaserede, nationale kliniske guidelines.
- Byggede på Cochrane-metoder til systematisk evidensindsamling og vurdering, samt GRADE til formulering af anbefalinger.
- Uafhængig formand, fast metodekonsulent, tid frikøbt til dataindsamling og syntese.
- Regler om uvildighed.
- Bredt sammensat faglighed.
- Patientinddragelse.

Udfordringer

- Ressourcekrævende.
- Kontinuerlig indsats.
- Implementering af anbefalingerne.
- Inddrager ikke økonomi.
- Inddrager ikke tidsforbrug.
- Vurderer hver enkelt intervention for sig.

Problemet med guidelines: fordelingsretfærdighed og de tabte muligheder

Prioritering bliver suboptimal, når hver behandling ses i isolation

Minna Johansson

- Praktiserende læge, Uddevalla.
- Lektor, Göteborgs Universitet, School of public health and community medicine.

Frustrationer

- Manglende ret til faglig prioritering ud fra den enkelte patients behov og ønsker.
- At blive målt på parametre med tvivlsom relevans.
- Økonomisk tilskyndelse til ineffektiv brug af tid.
- Dårlig patientkontakt og skuffede patienter.
- Stress og følelse af utilstrækkelighed ift. behandling.
- Ikke at kunne prioritere tid til dem med størst behov.

[1] Global Center for Sustainable Healthcare, School of Public Health and Community Medicine, Sahlgrenska Academy, University of Gothenburg, Sweden

[2] Department of Health Research Methods, Evidence, and Impact, McMaster University, Canada

[3] Knowledge and Evaluation Research Unit, Mayo Clinic, USA

Correspondence to: M Johansson

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Published: 03 January 2023

Guidelines should consider clinicians' time needed to treat

Minna Johansson, **Gordon Guyatt**, and **Victor Montori** argue that assessing the implementation time of guidelines would help make best use of clinical resources

Minna Johansson, [1] Gordon Guyatt, [2] Victor Montori[3]

Clinical practice guidelines aim to contribute to efficient and high quality care.[1] Efforts are already made to overcome barriers to implementation such as lack of credibility because of financial or intellectual conflicts of interests, and clinicians' inability to change habits or keep up to date with new recommendations. However, what is rarely acknowledged is that implementing guidelines may require appreciable clinician time and therefore have quality metrics or pay-for-performance schemes. However, since clinician time is finite and scarce, the chosen interventions and patient groups will inevitably be prioritised at the expense of other interventions and other patient groups.[6 7] Thus, time spent implementing a particular guideline may carry a substantial opportunity cost, and the element of clinical care that is lost might be of more benefit than what is gained.

TNT

Box 1: Factors affecting the time needed to treat

Time needed to provide the recommendation to each eligible individual

- Complexity and time intensity of the task
- Frequency with which the task needs to be completed
- Tools and technology available to facilitate the intervention

Fraction of the population eligible

- Prevalence of the condition
- Threshold of eligibility

Clinician time available

- The number of clinicians available in the relevant practice setting
- Who will implement the recommendation
- The proportion of clinician hours available for patient care in the practice

1 Department of Family Medicine and Community Health, UMass Chan Medical School, Barre Family Health Center, Barre, MA, USA

2 General Practice, School of Public Health and Community Medicine, Institute of Medicine, Sahlgrenska Academy, University of Gothenburg, Gothenburg, Sweden

3 Global Center for Sustainable Healthcare

4 Royal College of General Practitioners, London, UK

5 University of Birmingham, Birmingham, UK

6 Department of Family Medicine, University of Alberta, Alberta, Canada

Correspondence to: M Johansson
minna.johansson@vgregion.se

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Sacrificing patient care for prevention: distortion of the role of general practice

Expansion of preventive clinical recommendations in primary care has had the unintended consequence of destabilising this foundation of the healthcare system, argue Minna Johansson and colleagues

Stephen A Martin, [1] Minna Johansson, [2,3] Iona Heath, [4] Richard Lehman, [5] Christina Korownyk[6]

For thousands of years, clinicians cared exclusively for people who were sick. Only over the past five decades has primary care's focus been increasingly redirected towards risk, not symptoms.[1] The change to medical prevention was ushered in during the late 1960s, when diuretic treatment of diastolic blood pressures of 115-129 mm Hg was found to prevent cardiovascular events with a number needed to treat (NNT) of 6 people a year.[2-4]

This beneficial intervention was targeted at a high risk population. However, today primary care is increasingly asked to prevent disease in lower risk

This expansion of medical territory—without a commensurate benefit or an impossible expansion of time—is a major contributor to the primary care crisis in many high income countries. To save primary care from collapse, the enthusiasm for minimally beneficial clinical preventive services in asymptomatic, low risk populations must be curbed and responsibility for primary disease prevention returned or reassigned to public health.

Reconciling competing demands with patient needs

"Because time cannot proportionally increase, each extra act of prevention should create improved health outcomes beyond the status quo of caring for sick people. But prevention recommendations are rarely (if ever) evaluated with this perspective."

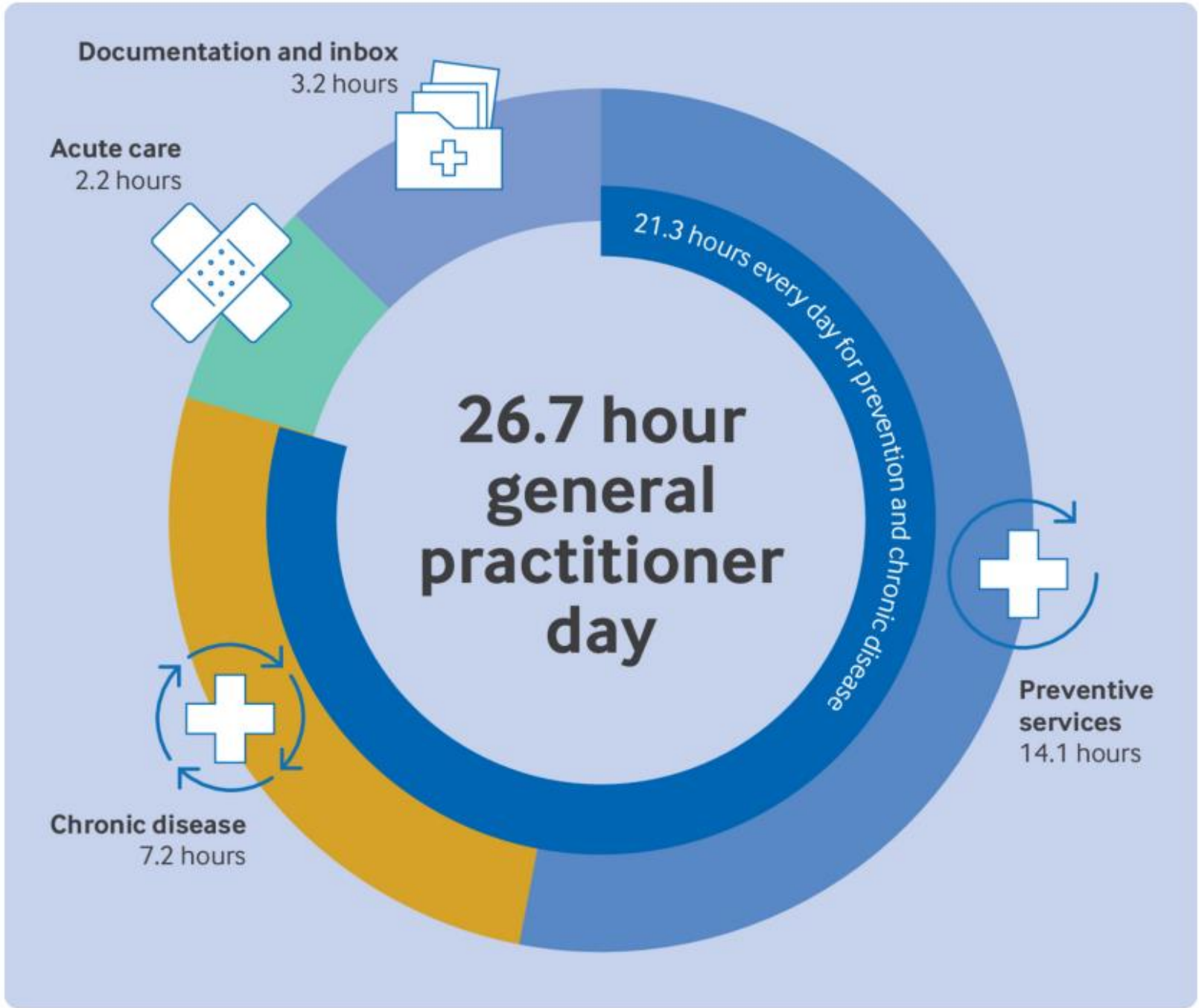


Fig 1 | Time needed to provide adult primary care per clinical day. Data from Porter et al, with permission[7]

"For example, US primary care physicians require 27 hours each workday to follow guideline recommendations, with more than half of that time directed to prevention interventions (fig 1).[7]"

“One reason for this dynamic is that prevention recommendations often reflect “specialty bias,” when physicians recommend interventions specific to their area of expertise, often resulting in greater use of healthcare services and inducing neglect of other primary care responsibilities. Another reason is that preventive services are only added, never subtracted.”

Population-health impact of new drugs recommended by the National Institute for Health and Care Excellence in England during 2000–20: a retrospective analysis

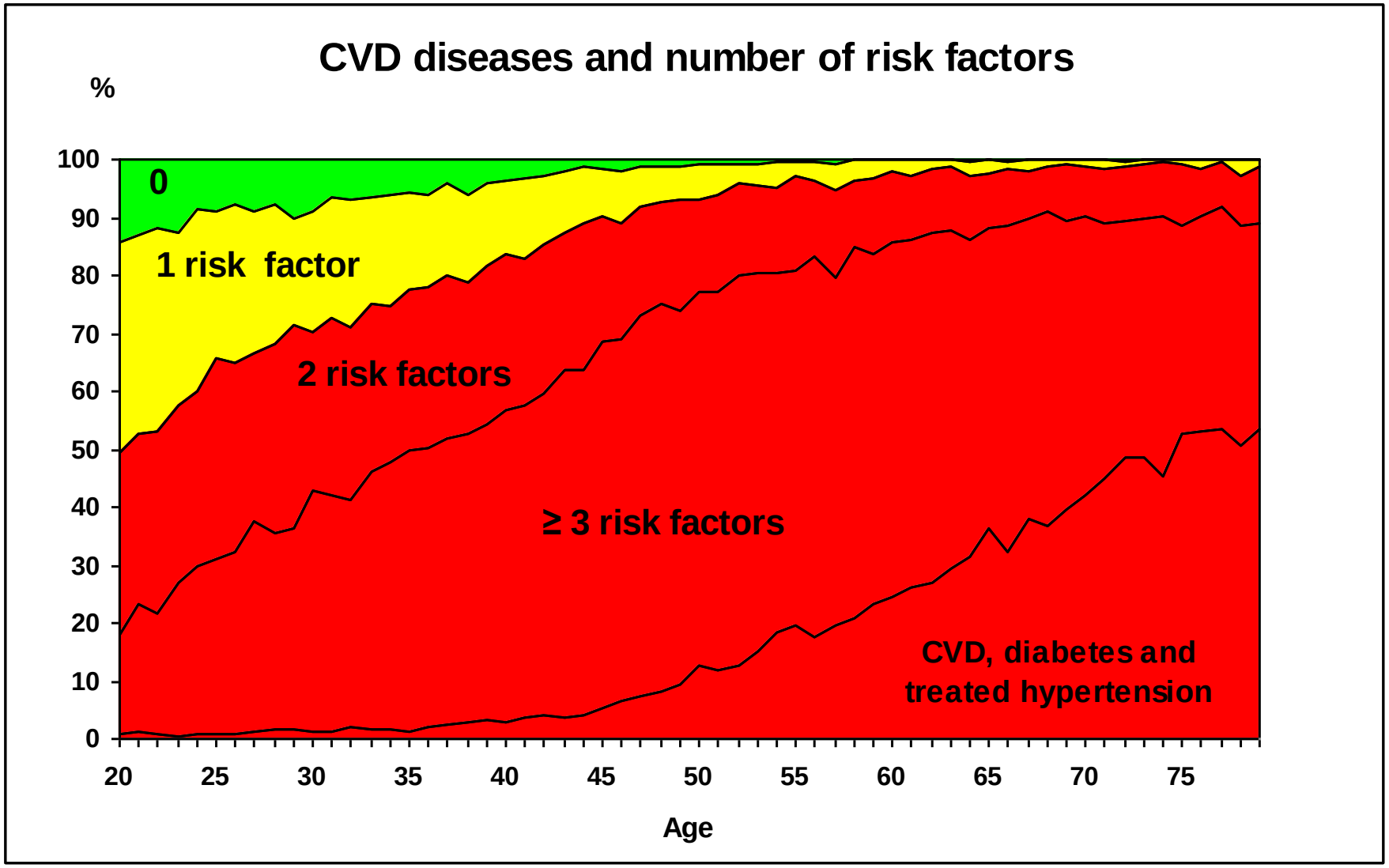
Huseyin Naci, Peter Murphy, Beth Woods, James Lomas, Jinru Wei, Irene Papanicolas

Lancet 2025; 405: 50–60
Published Online December 12, 2024
https://doi.org/10.1016/S0140-6736(24)02352-3

Summary

Background Health systems experience difficult trade-offs when paying for new drugs. In England, funding recommendations by the National Institute for Health and Care Excellence (NICE) for new drugs might generate health gains, but inevitably result in forgone health as the funds cannot be used for alternative treatments and services. We aimed to evaluate the population-health impact of NICE recommendations for new drugs during 2000–20.

Interpretation During 2000–20, NHS coverage of new drugs displaced more population health than it generated. Our results highlight the inherent trade-offs between individuals who directly benefit from new drugs and those who forgo health due to the reallocation of resources towards new drugs.



Petursson, et al. J Eval Clin Pract 2009;15:103-9

European Heart Journal

Article Contents

JOURNAL ARTICLE

Outcomes of cardiovascular screening in men aged 60–64 years: the DANCAVAS II trial

Jes S Lindholt, Anne Mejldal, Lars M Rasmussen, Jess Lambrechtsen, Flemming H Steffensen, Lars Frost, Kenneth Egstrup, Grazina Urbonaviciene, Martin Busk, Marek Karon ... Show more

European Heart Journal, ehaf704, https://doi.org/10.1093/eurheartj/ehaf704
Published: 30 August 2025 **Article history**

Conclusions

Invitation to a comprehensive CT-based screening for subclinical CVD did not decrease death over 7 years among men aged 60–64 years but did increase severe bleeding. Because the trial was powered for events over 10 years, further follow-up is needed.

Severe bleeding: 6,0% vs 5,1%; HR = 1,18 (95% CI: 1,05 til 1,32%)

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Analysis

Less is more for patients, practitioners, public and planet: a taxonomy for the harms of too much medicine

Emma Grundtvig Gram [1, 2], Romi Haas [3], Amanda Niklasson [4, 5], Steven Woloshin [2, 6], Barnett Kramer [2], John Brodersen [7], Karsten Juhl Jørgensen [2, 8], Minna Johansson [2, 4, 5], Timothy Wilt [2, 9], Katy Bell [2, 10] on behalf of the Preventing Overdiagnosis Research Day group

Correspondence to Professor Timothy Wilt; tim.wilt@va.gov

https://doi.org/10.1136/bmjebm-2025-113874

McCracken et al. BMC Medicine (2023) 22:1
https://doi.org/10.1186/s12916-023-03187-w

BMC Medicine

RESEARCH ARTICLE Open Access

NHS Health Check attendance is associated with reduced multiorgan disease risk: a matched cohort study in the UK Biobank

Celeste McCracken[1*], Zahra Raisi-Estabragh[2,3], Liliana Szabo[2,3,4], John Robson[5], Betty Raman[1], Anya Topiwala[6], Adriana Roca-Fernández[7], Masud Husain[8,9,10,11], Steffen E. Petersen[2,3,12,13], Stefan Neubauer[1] and Thomas E. Nichols[5,11]

Risk reductions after 9 years in people attending a 15 minute NHS Health Check at least once:

The authors found that those participants who attended an NHS Health Check appointment had significantly lower diagnosis rates for several diseases, including a 19% lower rate of dementia diagnosis, a 23% lower rate of acute kidney injury diagnosis, and a 44% lower rate of liver cirrhosis diagnosis. NHS Health Check recipients also had a 23% lower risk of death from any cause.

https://www.eurekalert.org/news-releases/1031724

Free NHS health check offer could help cut your risk of early death by up to 23%

Story by Joseph Gamp • 3mo • 2 min read

Taking the NHS' free mid-life health MOT could help cut your risk of an early death by up to 23%, according to a new study.

> Dr Claire Fuller, NHS medical director for primary care, said: "As this study shows, these free mid-life MOTs are a superb way of spotting the early warning signs of potentially life-threatening conditions such as high blood pressure, heart disease or type 2 diabetes. If you are between 40 and 74, and haven't had your NHS Health Check, I strongly encourage you to come forward and take advantage of an offer which could help you enjoy a healthier and longer life."

Problemer

- 15 randomiserede studier nævnes ikke.
- Skadevirkninger, direkte eller indirekte, nævnes ikke.
- Sundhedsmyndigheder bruger studiet til stærkt at opfordre raske borgere til at deltage, hvilket bryder med krav om informeret valg.

NEWSPAPER OF THE YEAR

THE TIMES

Tuesday August 20 2013 | thetimes.co.uk | No 70968

The woman behind that M&S campaign Times2

NHS checks on over-40s condemned as 'useless'

Call for £300 million scheme to be scrapped

Name, set and match to Miss Sugarpova

IN THE NEWS

Mubarak to be freed | Anti-fracking arrests | Crimefighter resigns | Schools in gay row | Emerging markets hit | Blues go sky high

20 Aug 2013

Health check check

Interview and Letter
by Krogsbøll et al.

Outcomes	Illustrative comparative risks* (95% CI)		Relative effect (95% CI)	No of participants (studies)	Certainty of the evidence (GRADE)
	Assumed risk[a]	Corresponding risk			
	Without health checks	With health checks			
Total mortality Follow-up: 4-30 years	**68 per 1000**	**68 per 1000** (66 to 70)	**RR 1.00** (0.97 to 1.03)	233,298 (11)	⨁⨁⨁⨁ **high**
Cancer mortality Follow-up: 4-22 years	**26 per 1000**	**26 per 1000** (24 to 29)	**RR 1.01** (0.92 to 1.12)	139,290 (8)	⨁⨁⨁⨁ **high**
Cardiovascular mortality Follow-up: 4-30 years	**32 per 1000**	**34 per 1000** (30 to 37)	**RR 1.05** (0.94 to 1.16)	170,227 (9)	⨁⨁⨁⊖[b] **moderate**
Fatal and non-fatal ischaemic heart disease Follow-up: 4-30 years	**66 per 1000**	**65 per 1000** (62 to 68)	**RR 0.98** (0.94 to 1.03)	164,881 (4)	⨁⨁⨁⨁ **high**
Fatal and non-fatal stroke Follow-up: 4-30 years	**29 per 1000**	**30 per 1000** (28 to 34)	**RR 1.05** (0.95 to 1.17)	107,421 (3)	⨁⨁⨁⊖[c] **moderate**

*The basis for the **assumed risk** is provided in footnotes. The **corresponding risk** (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI).
CI: confidence interval; **RR:** risk ratio

Krogsbøll L, Jørgensen KJ, Gøtzsche PC. *Cochrane Database Syst Rev* 2019.

A Department of Health representative told BBC News: "By spotting people who are at risk of heart attacks, diabetes, stroke and kidney disease we can help prevent them. The NHS Health Check programme is based on expert guidance."[1]

"...jeg har lagt vores oprindelige forslag om regelmæssige helbredstjek på is. For de har ikke den effekt vi håbede på."
Astrid Krag, daværende sundhedsminister[2]

1: http://www.bbc.co.uk/news/health-19964600
2: Journal of the Danish Medical Association, October 24th 2012

Hvad kan vi lære?

- Svag evidens som underbygger intuition og en politisk agenda accepteres uden forbehold mens stærkere evidens ignoreres (confirmation bias).
- Sundhedsmyndigheder overholder ikke altid sundhedslovens krav om informeret valg.
- Det er meget svært at trække en anbefaling tilbage.

Jørgensen *et al. BMC Medicine* (2025) 23:242
https://doi.org/10.1186/s12916-025-04081-3

BMC Medicine

MATTERS ARISING Open Access

What evidence is required to justify the NHS Health Check programme?

Karsten Juhl Jørgensen[1,4*], Minna Johansson[2,4] and Steven Woloshin[3,4]

Hvad siger evidensen?

- Generelle helbredstjek har evidensen imod sig.
- Screening og vejledning om alkohol nedsætter ikke forbruget.
- Samtaler om rygestop kan være effektive til at nedsætte forbruget.
- Anbefalinger af fysisk aktivitet forbedrer ikke patientrelevante outcomes.
- Selv for forebyggelse med dokumenteret effekt skal 1000 ofte følges regelmæssigt gennem 10 år for at undgå ét dødsfald.

OPEN ACCESS ORIGINAL RESEARCH

bmjmedicine

Check for updates

Evaluation of evidence supporting NICE recommendations to change people's lifestyle in clinical practice: cross sectional survey

Loai Albarqouni [1], Martin Ringsten,[2,3] Victor Montori [4], Karsten Juhl Jørgensen [5], Helen Bulbeck,[6] Minna Johansson [3,7,8]

- 397 anbefalinger omkring individuelt orienterede livsstilsinterventioner.
- 374 (99%) var positive.
- 7 (2%) var understøttet af moderat til stærk evidens for patientrelevante outcomes.
- 181 (48%) af anbefalingerne var underbygget af evidens af tvivlsom relevans for interventionen.
- 71 (19%) refererede kun til evidens der viste, at folk med tilstanden (fx overvægt) klarede sig dårligere end folk uden.
- 123 (32%) henviste ikke til evidens.
- 49 (13%) henviste til evidens der talte mod en effekt, men anbefalede alligevel interventionen.
- 25% af anbefalingerne ville omfatte >25% af befolkningen.

Letter

Applying the time needed to treat to NICE guidelines on lifestyle interventions

Loai Albarqouni ,[1,2] Victor Montori ,[1,3]
Karsten Juhl Jørgensen,[1,4] Martin Ringsten,[5,6] Helen Bulbeck,[7]
Minna Johansson [1,8]

BMJ Evidence-Based Medicine October 2023 | volume 28 | number 5 |

"Seven times as many GPs (42/6), or 1.5 times as many physicians from all specialties (42/28) and 4.8 times as many nurses (271/57) than currently available in the NHS may be needed to implement all IOLIs recommended by NICE."

Annals of Internal Medicine

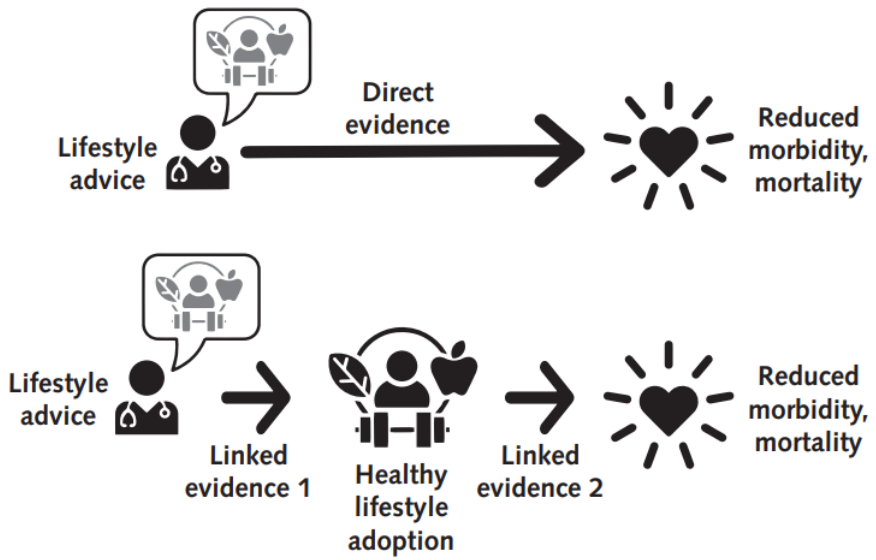
IDEAS AND OPINIONS

Guidelines Recommending That Clinicians Advise Patients on Lifestyle Changes: A Popular but Questionable Approach to Improve Public Health

Minna Johansson, MD, PhD; Amanda Niklasson, MD; Loai Albarqouni, MD, PhD; Karsten Juhl Jørgensen, MD, DrMedSci; Gordon Guyatt, MD, MSc; and Victor M. Montori, MD, MSc

Annals of Internal Medicine • Vol. 177 No. 10 • October 2024

Figure. Direct versus linked evidence.



Top. Confidently implementing an intervention to change lifestyle requires trustworthy direct evidence of a causal effect of the lifestyle intervention on patient-important outcomes. **Bottom.** If direct evidence is unavailable, guidelines need trustworthy linked evidence supporting the causal link between both intervention and behavior (linked evidence 1) and between behavior and outcome (linked evidence 2).

Hvad kan vi lære?

- Helbredstjek og individuelt orienterede livsstilsinterventioner lyder intuitivt fornuftigt men har direkte og indirekte skadevirknigner.
- At forbedre livsstil én person af gangen er ineffektivt.
- Flytter focus fra samfundsproblemer til individet.
- Strukturel forebyggelse kan være meget effektiv men skal også være evidensbaseret.
- Individuelt orienteret forebyggelse er populært, strukturel forebyggelse ofte upopulært.
- Proportionalitet: hvorfor screene for lungekræft (USA: 12.000 liv reddet/år) mod højere tobakspriser (USA: 160.000 liv reddet/år)?

Hvad er løsningen?

- Holde fast i principperne for evidensbaserede guidelines (NKR).
- Bygge bro mellem 'siloerne': struktureret evaluering af værdien af den enkelte intervention ift. interventioner på andre felter.
- Overveje at benytte fx QUALYs og TNT til denne proces.
- Prioritere strukturel forebyggelse frem for individorienteret.
- National, evidensbaseret prioritering på tværs af specialer.
- Evidensbaseret deimplementering.

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Too much medicine

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Right Care

Published: January 8, 2017

Executive Summary

Many countries struggle with the question about sustainability, fairness, and equity of their health systems. With the focus firmly on universal health coverage as a central part to the UN Sustainable Development Goals, there is an opportunity to examine how to achieve optimum access to, and delivery of, health care and services. Underuse and overuse of medical and health services exist side-by-side with poor outcomes for health and wellbeing. This Series of four papers and accompanying comments examines the extent of overuse and underuse worldwide, highlights the drivers of inappropriate care, and provides a framework to begin to address overuse and underuse together to achieve the right care for health and wellbeing. The authors argue that achieving the right care is both an urgent task and an enormous opportunity.

THE LANCET

SERIES | RIGHT CARE | VOLUME 390, ISSUE 10090, P156-168, JULY 08, 2017

Evidence for overuse of medical services around the world

Shannon Brownlee, MSc • Kalipso Chalkidou, MD • Prof Jenny Doust, PhD • Prof Adam G Elshaug, PhD • Prof Paul Glasziou, FRACGP • Iona Heath, FRCGP † • et al. Show all authors • Show footnotes

Published: January 08, 2017 • DOI: https://doi.org/10.1016/S0140-6736(16)32585-5 • Check for updates